

## INFORMATION TO USERS

This dissertation was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.
2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.
3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.
4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

### University Microfilms

300 North Zeeb Road  
Ann Arbor, Michigan 48106  
A Xerox Education Company

72-23,092

CRAIN, Harold, 1923-  
AN ANALYSIS OF THE EFFECTS OF RACE,  
DESEGREGATION, AND FAMILY BACKGROUND ON THE  
ACHIEVEMENT OF TENTH GRADE STUDENTS IN THE  
OKLAHOMA CITY PUBLIC HIGH SCHOOLS.

The University of Oklahoma, Ed.D., 1972  
Education, general

University Microfilms, A XEROX Company, Ann Arbor, Michigan

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED.

THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

AN ANALYSIS OF THE EFFECTS OF RACE, DESEGREGATION, AND  
FAMILY BACKGROUND ON THE ACHIEVEMENT OF TENTH  
GRADE STUDENTS IN THE OKLAHOMA CITY  
PUBLIC HIGH SCHOOLS

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the  
degree of  
DOCTOR OF EDUCATION

BY

HAROLD CRAIN

Norman, Oklahoma

1972

AN ANALYSIS OF THE EFFECTS OF RACE, DESEGREGATION, AND  
FAMILY BACKGROUND ON THE ACHIEVEMENT OF TENTH  
GRADE STUDENTS IN THE OKLAHOMA CITY  
PUBLIC HIGH SCHOOLS

APPROVED BY

Phil B. C.  
Edward Kidd  
John J. Parker  
Allen R. Snider

DISSERTATION COMMITTEE

PLEASE NOTE:

Some pages may have

indistinct print.

Filmed as received.

University Microfilms, A Xerox Education Company

## TABLE OF CONTENTS

Chapter	Page
I INTRODUCTION. . . . .	1
Nature of the Problem . . . . .	1
Background. . . . .	3
Need for the Study. . . . .	11
Statement of the Problem. . . . .	12
Statement of Hypotheses . . . . .	12
Definition and Use of Terms . . . . .	13
Delimitations of the Study. . . . .	14
Basic Assumptions of the Study. . . . .	15
Design of the Study . . . . .	15
Method and Procedure of the Study . . . . .	16
Development of the Instrument . . . . .	18
Selection of the Sample . . . . .	18
Organization of the Study . . . . .	20
II REVIEW OF RELATED LITERATURE. . . . .	21
Introduction. . . . .	21
The Coleman Report. . . . .	22
A Profile of the Large City High School . . . . .	25
Suburb, Central City, and Education . . . . .	27
Intelligence. . . . .	30
III ANALYSIS OF DATA. . . . .	33
Level of Student Education Aspirations. . . . .	33
Perceived Quality of School . . . . .	37
Family Socio-Economic Status. . . . .	41
IV SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS . . . . .	44
Summary . . . . .	44
Findings. . . . .	46
Conclusions . . . . .	48
Recommendations . . . . .	49

	Page
APPENDICES. . . . .	51
Appendix A . . . . .	51
Appendix B . . . . .	52
Appendix C . . . . .	55
Appendix D . . . . .	58
Appendix E . . . . .	61
Appendix F . . . . .	64
Appendix G . . . . .	67
Appendix H . . . . .	68
Appendix I . . . . .	71
BIBLIOGRAPHY. . . . .	74

## CHAPTER I

### INTRODUCTION

#### Nature of the Problem

Probably the most important edict issued by the U. S. Supreme Court in the twentieth century, certainly the most important edict relative to the societal structure of our nation is the now famous decision in the case of "Brown versus the Board of Education of Topeka."<sup>1</sup> In this decision, the Court stated "the fundamental principle that racial discrimination in public education is unconstitutional," stating further "all provisions of federal, state, or local law requiring or permitting such discrimination must yield to this principle," and closing with "We conclude that in the field of public education, the doctrine of separate but equal has no place. Separate educational facilities are inherently unequal."

The effects of this decision were tremendous and far reaching, resulting in the public schools receiving much attention, nationally, since that time. A single

---

<sup>1</sup>Brown Vs Board of Education of Topeka, 347 U. S. 483 (1954).



effect of the decision has been to focus the nation's attention on the topic of desegregation since that date.

The Civil Rights Act of 1964 was enacted so that no person in the United States would, on the grounds of race, color, or national origin be denied the benefits of, or be subjected to discrimination under, any program or activity receiving federal financial assistance.

The operation of local schools, which includes compliance with decisions of the courts and legislation relative to desegregation, is a responsibility of local school districts within the respective states. The state received its educational mandate from the tenth amendment of the Constitution. With the Civil Rights Act of 1964 as its authority, the U. S. Office of Education initiated the establishment of guidelines under this law to end segregation. In public schools, the principal measure to make the Civil Rights Act of 1964 effective was the denial of federal funds wherever segregation was determined to exist as a result of de jure segregation. This measure became even more important with the passage of the Elementary-Secondary Education Act of 1964 and other federal legislation pertaining to education during the years 1964 through 1967, which made large sums of federal money available for education.

Section 402 of the Civil Rights Act of 1964 states that

The Commissioner shall conduct a survey, and make a report to the President and the Congress

within two years of the enactment of this title, concerning the lack of availability of equal educational opportunities for individuals by reason of race, color, religion, or national origin in public educational institutions at all levels in the United States, its territories and possessions, and the District of Columbia. This report was prepared and submitted to the President and to the Congress, entitled 'Equality of Educational Opportunity.'<sup>1</sup>

It is commonly referred to as the "Coleman Report" because James Coleman of Johns Hopkins University had major responsibility for the design, administration, and analysis of the survey.

Chapter three of the Coleman Report begins with the statement that

A broad comparative survey such as this one can obviously give only a partial view of the effects of school variations, and must be complemented by intensive studies of particular school settings.<sup>2</sup>

### Background

If a social system is defined as a complex of elements in interaction, which relate to and exchange matter with its environment and tending toward a steady state,<sup>3</sup> then the major social systems actively involved in the furtherance

---

<sup>1</sup>U.S. Department of Health, Education, and Welfare, Equality of Educational Opportunity, A Report prepared by the Office of Education (Washington: U.S. Government Printing Office, 1966).

<sup>2</sup>Ibid., p. 218.

<sup>3</sup>Morphet, Edgar L., Johns, Roe L., and Reller, Theo L., Educational Organization and Administration, Concepts, Practices and Issues (Englewood Cliffs, N.J.: Prentice Hall, 1967), pp. 61-62.

of, or in opposition to, integration or desegregation may be identified.

The principal social systems involved are the federal, state, and local governments; urban, suburban, and rural white and black southerners; urban and suburban black and white Northerners; churches of all denominations; schools of all types; and national, state, and local citizens' groups such as the National Association for the Advancement of Colored People, the Urban League, the White Citizens' Council, and the Parent Teachers Associations, as well as many others. All of these have played significant roles in an effort either to effect change or to maintain the status quo, depending on the behavior of the particular social system.

The geographic areas in which these social systems operate are broadly categorized as Northern States, Border States, and Southern States. The Southern States consist of all states that were members of the Confederacy, with the exception of Tennessee. The Border States are Delaware, Maryland, West Virginia, Kentucky, Tennessee, Missouri, Kansas, and Oklahoma. The remaining states constitute the category of Northern States.

Segregation has been broadly dichotomized into two non-mutually exclusive categories, de jure segregation and de facto segregation. De jure segregation has never been a responsibility of the federal government. The federal

government has never legislated segregation, although it was practiced for long periods of time in the military establishment and in other branches of the federal government. The termination of such segregation was accomplished by executive decree. De jure segregation was practiced on a large scale in the Southern and Border States by local and state governmental entities. For example, Oklahoma had statutes requiring segregation beginning with the Organic Act of 1890 and lasting until the decades of the 1960's. De facto segregation has existed primarily in urban areas and was caused by social manipulations which caused segments of the population to cloister into given areas, and also served to restrict those human segments from residing in any other areas of a particular municipality.

In 1954, de jure segregation did not exist in the Northern States, except for a few isolated cases. Because of this, the Brown versus Topeka Board of Education decision had little, if any, effect in those areas. Following this test case, the Border States moved toward changing state laws which were related to legislated segregation. This action included the abolishment of dual school systems, which were to be replaced by unitary systems. This process of developing unitary school systems has been a slow one, and is still a problem today in many of the Border States. The Southern States generally followed a pattern of removing laws relative to school segregation only after individual

court suits were filed which resulted in unconstitutional rulings. In this way, dual school systems in the South were gradually abandoned. Many devices were used to conceal the continued existence of dual school systems, but the method most commonly used was appropriation of state monies to establish and support private schools. Generally, these efforts have met with failure, and de jure segregation, in a formal sense, has almost disappeared.

Much progress has been made toward desegregation since 1954. Early civil rights leaders took the position that changing behavior should be the immediate goal, and attitude change the future goal of desegregation efforts. Black students are attending classes with white students in areas of the United States in 1972 where this condition would not have been tolerated a few years ago. On the other hand, groups such as the Black Muslims and the Black Panthers have emerged, and the new image of the brotherhood of all black Americans has produced large groups which no longer consider integration as a primary objective, or even a desirable one. Large groups of whites who favor, or do not object to, integration, balk at efforts to desegregate schools when it involves transporting their children to other sections of the community. The existence of large ghettos of blacks, such as Harlem, create islands of segregation that by their magnitude create problems that appear to defy solutions. In retrospect, the problems of desegregation that have been

solved appear to have been the small ones. The remaining difficulties are more complex, and groups opposing their solution have become sophisticated and unified in their activities.

Oklahoma has made efforts to comply with the federal mandates. The Constitution of Oklahoma has been purged of all provisions relating to segregation, and all segregation statutes have been repealed. All school districts now qualify as being desegregated within the meaning of the Civil Rights Act of 1964, but some difficulty is still being experienced, mostly in the southeastern area of the state which is referred to as "Little Dixie", relative to the token number of black and white students in the same classes. Oklahoma has managed to avoid confrontations receiving national attention such as the desegregation of Central High School in Little Rock, James Meredith entering the University of Mississippi, or the desegregation of the public high school in Clinton, Tennessee. It did receive some national attention when the Oklahoma City schools were placed under a court order, but enforcement of this order did not necessitate the presence of troops. This does not mean that black and white students are now attending the same classes throughout the state in an atmosphere of peace and harmony. But, they are attending classes in the same schools in most areas of the state. The problem is how to create conditions suitable for meaningful and effective integration concurrently with quality education.

In Oklahoma City before 1954, the races were segregated by law in the public schools from kindergarten through high school. Members of the Negro race were residentially restricted to an area east of the Santa Fe railroad tracks and north of the North Canadian River. All of the Negro students were enrolled in the Douglass High School and its feeder junior high and elementary schools. The first court action to desegregate the Oklahoma City public schools involved a student in attendance at Douglass High School who was seeking a transfer to Northeast High School. The basis for the transfer request was that he desired to take a course offered at Northeast that was not offered at Douglass High.<sup>1</sup> This was the first of several legal actions that led to the present conditions in the Oklahoma City public schools.

The Oklahoma City Board of Education has implemented a number of methods in common use nationally to meet legislative and court ordered mandates of integration. Schools have been paired in the instance of Harding High School pairing with Northeast High School while Central High School paired with Classen High School. Open enrollment was initiated which permitted a student to transfer from a school where his race was in the majority to a school where his race was in a minority. A boundary change of attendance areas was made that resulted in an interchange of white

---

<sup>1</sup>A. L. Dowell VS. Oklahoma City Board of Education, 9452 U.S. District Court, Western District of Oklahoma, (1963).

students in an all white high school and black students in a predominantly black high school. Finally, a "cluster" system was introduced wherein the eight metropolitan high schools were divided into two "clusters" of four high schools each, with each school offering certain specialty courses.

Oklahoma City is under a court order to implement a plan commonly referred to as the "Finger" plan for the school year 1972-1973. Basically, this plan states that students may attend a school of their choice in kindergarten. All students, black and white, will attend schools that were formerly all white, or near all white, in grades 1 through 4. All students, black and white, will attend schools that were formerly all black, or near all black, in the fifth grade. All junior high schools will become middle schools, with grades 6 through 8. All high schools will have grades 9 through 12. All secondary schools will be completely desegregated, with no high school or middle school having less than fifteen percent or more than thirty percent of its student body from the Negro race. This court order is under appeal by the Oklahoma City Board of Education to the Court of Appeals.

The Coleman Report introduced a different concept of what constituted quality education. The new concept embraced the idea that quality education could better be measured by the results of student exposure to the learning process of a school than by various measures of resource



inputs into the school. Heretofore, the traditional notion of what constituted quality educational opportunity was assumed to be such school factors as the teacher-pupil ratio, per pupil expenditure, laboratory facilities, number of volumes per student in the library, and several measures of quality of curriculum. These physical and economic school factors appeared to have a uniform effect on student achievement that may be unimportant insofar as their effect on the student's learning was concerned. The Coleman Report showed that differences in school facilities and curriculum are so little related to differences in student achievement that, with a few exceptions, their effects failed to appear in the study.

The Coleman Report suggested that the results of educational programs should constitute the basis for assessment of school quality rather than particular inputs into the programs being measures of quality, e.g., small classes are better than large classes, and high salaried teachers are better than low salaried teachers. The Coleman Report indicated that those who are asked to finance public education must increasingly evaluate school quality and equality of educational opportunity by the results of the school instruction instead of by arbitrary input measures.

The outcomes of school instruction studied were in the area of achievement in the Oklahoma City secondary schools.

The intellectual skills, which involve reading, writing, and calculation have become basic requirements for independence, for productive work, for political participation, and for wise consumer performance in the American society. Achievement tests are not "culturally fair"; often their design determines the degree to which a child has assimilated a culture that is appropriate to life in the United States. Cultural disadvantage should show up markedly in tests of this nature, because they have been designed to measure performance in a highly technical and sophisticated culture. Another element to be considered in examining scores on achievement tests is that the in-school learning is only one element affecting achievement in the schools. Differences in family background, and influences of the society in general also effect student achievement.

#### Need for the Study

The Coleman Report has been described as a broad comparative survey and it is partially responsible for the recent impetus among educators for "accountability" in the schools. A portion of the Report was devoted to the effects of family and community structure on a student's learning, and led this investigator toward a study of the effects of family influences on the achievement of students in the public schools of Oklahoma City. He believed that such a study would reveal information about why some groups have higher achievement levels than others.

The citizens of Oklahoma City constantly make comparisons between the predominantly black eastside high schools and the predominantly white westside high schools. It has been suggested that the difference in achievement between black students and white students is the difference in the educational opportunities of the students. These opportunities are both internal and external to the school, and they include the opportunities generated by family environments.

#### Statement of the Problem

The problem of this study was to determine and analyze the effects of race, desegregation, and family background on the achievement of tenth grade students in the Oklahoma City public high schools. The family background factors considered in this study were student education aspirations, perceived quality of their schools, and family socio-economic status. The Oklahoma City public high schools include both desegregated schools and segregated black and white schools.

#### Statement of Hypotheses

The hypotheses of this study were: There are no differences in standardized reading, writing, and mathematics achievement test scores of tenth grade students in Oklahoma City public high schools as related to each of the following factors:

- HO<sub>1</sub>: Black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same level of student education aspiration.
- HO<sub>2</sub>: Black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same perception of the quality of their schools.
- HO<sub>3</sub>: Black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same family socioeconomic status.

### Definitions and Use of Terms

All black or all white high schools. Each of the eight high schools in this study had members of both races as regularly enrolled students. Some of these high schools were predominantly black or white in their enrollment and have become accepted by the citizens of Oklahoma City, the Oklahoma City public school system, and the courts involved in desegregation litigation as being segregated schools, either black or white. Only three high schools, Classen, Northeast, and Northwest Classen had sufficient students from both races to be classified as desegregated high schools. Douglass was considered an all black high school. John Marshall, U. S. Grant, Capitol Hill, and Southeast were considered all white high schools.

Metropolitan high schools. The Oklahoma City public school system has ten (10) high schools. Two of these high schools, Star Spencer and Dunjee, are located at a considerable distance from Oklahoma City proper in an area best defined as

small town, or semi-rural. Since the community setting of the students served by these two high schools is different from the large city setting of the other eight high schools, they were not included in the study.

De jure segregation. That separation of the races resulting from the compliance with local and state laws requiring such separation.

De facto segregation. That separation of the races caused by patterns of residence, by economic considerations, and by social manipulations that serve to cloister segments of the population into given areas and serves to restrict them from residing in any other area of that municipality.

Cluster Schools. Four schools were grouped together (in a "cluster") so that they included in their total curriculum the following elective courses: advanced foreign language, advanced mathematics, advanced science, and certain specialty social science courses. Any such course offered in one school of the group would not be offered in any other school in the group, and students taking the course had to travel to the school where the course was offered. There were two such groupings of schools in the Oklahoma City public high school system.

#### Delimitations of the Study

This study was limited in that the problem was specific only to the public high schools of Oklahoma City;

therefore, the results are basically only of local value. Their value to other districts will be in the form of general knowledge, and useful as a basis of comparisons with other studies of this type in other areas of the United States.

#### Basic Assumptions of the Study

There is nothing biologically or in the innate ability of members of the black or white race so different as to provide the member of one race superiority in intelligence over members of the other race. This is based on the position taken by the American Psychological Association in 1961 wherein it stated:

There are differences in intelligence scores when one compares a random sample of whites and Negroes. What is equally clear is that no evidence exists that leads to the conclusion that such differences are innate. Quite to the contrary, the evidence points overwhelmingly to the fact that when one compares whites and Negroes of comparable cultural and educational background, differences in intelligence diminish markedly, the more comparable the background, the less the difference. There is no direct evidence that supports the view that there is an innate difference between members of different racial groups.<sup>1</sup>

#### Design of the Study

As earlier stated, this experiment was planned for the study of the effects of three family environmental factors upon the achievement of students in the Oklahoma

---

<sup>1</sup>Thomas F. Pettigrew, Negro American Intelligence. (Princeton, New Jersey: D. VanNostrand Company, Inc., 1964), p. 35.

City public high schools. The "crossbreak" paradigm was the statistical device utilized to collect the information relative to: (1) the status of the student's school as to whether it was segregated or desegregated, (2) the student's achievement on standardized tests for reading, writing, and mathematics, and (3) the student's level of education aspiration, his perceived quality of his high school, and his family socio-economic status.

Two paradigms were prepared for the frequency of scores for each of the three family conditions. One was for black students and the other for white students. Two paradigms were prepared for each of the three family conditions for the purpose of recording the mean scores of the sample. Again, one was for black students and the other for white students. Finally, two paradigms were prepared for each of the three family conditions to record the "Z" scores. Again, one was for black students and the other for white students. A total of fourteen paradigms were prepared. To compute the "Z" score, the population mean was subtracted from the cell mean, and this remainder was divided by the population standard deviation.

#### Method and Procedure of the Study

The experimental design consisted of a series of 2 X 3 X 3 "crossbreak" paradigms. A paradigm was completed for black students and another for white students for each of the three home environmental factors whose effects were

studied. The first variable in each paradigm reflected whether the school attended was all black or all white, or whether attendance was in a desegregated school. The second variable consisted of the three measures of academic achievement: reading, writing, and mathematics. The third variable consisted of the structure of the relevant home environmental factor.

The crossbreak was selected because it is a common and useful form of analysis that can be used with almost any kind of data. Two and three dimensional crossbreaks can be juxtaposed in a relatively simple and convenient way to give pictures of the relations involved. It is principally used with dichotomous and trichotomous nominal data. Of especial use to this survey was the capability of holding constant the three variables of reading, writing, and mathematics, enabling the studying and testing of the relations existing between the remaining two variables. This permitted an examination of unusual relationships between these two variables and allowed the investigation to determine the degree of their relationship at different levels or values.

Using information developed in the paradigms, a standardized score, the "Z" score was computed using the formula  $(X - \bar{X}) / \sigma$ , in which  $X$  equals the means of the values contained in each cell of the paradigm,  $\bar{X}$  equals the population means, and  $\sigma$  equals the population standard deviation.



The standardized score, the "Z" score, was selected as the principal measure of the differences between the variables undergoing test because it provides the best method that has been devised to make a comparison of the results of tests of a variety of subject matter by individual students. A most common method used by the makers and publishers of standardized tests for expressing and interpreting test results. The "Z" scores express in decimal form the difference between a score and a mean, and the standard deviation as a ratio. Since they are expressed in the same units of measure, "Z" scores may be compared directly and treated in the same manner as any other ratio scale data.

#### Development of the Instrument

An instrument was developed to elicit the desired background factors whose effects were tested by the hypotheses. A copy of the instrument is contained in Appendix A.

Because it was convenient, easily administered, and economically feasible, the instrument was administered to the entire population of tenth graders. It was administered through either the English or Social Studies classes of the various schools. The sample was selected from the completed student questionnaires.

#### Selection of the Sample

The tenth grade population of each of the eight metropolitan high schools in Oklahoma City were administered

a reading, writing, and mathematics Sequential Test of Educational Progress during the month of October, 1970. The test results were published in the form of an IBM listing of converted scores and percentile ratings for each student. From the total of these listings, a population mean and standard deviation was computed for the reading, writing, and mathematics test scores. These STEP tests provided a valid and reliable measure of the achievement of each tenth grade student who took these tests. The students who took each of these subject matter tests constituted the population for this study.

From the population of nearly four thousand students, using a table of random numbers, a sample of six hundred (600) test scores was collected to test each hypothesis. One hundred fifty (150) test scores were collected from Douglass, the only all black high school. A total of one hundred fifty (150) test scores were collected from the four all white high schools, John Marshall, Southeast, Capitol Hill, and U. S. Grant. Three hundred (300) test scores were selected from the three desegregated high schools, Classen, Northeast, and Northwest Classen. This constituted fifty (50) black student scores and fifty (50) white student scores from each of these three desegregated high schools.

Students who attended schools in the seventh and eighth grades with a different ethnic distribution from the school attended in the ninth grade were not included in the study.

Of the junior high schools in the Oklahoma City public schools, Moon and Kennedy are considered to be all black junior high schools. Harding, Capitol Hill, Eisenhower, and Central junior high schools are considered as being desegregated. Hoover, Webster, Taft, Jackson, and Jefferson junior high schools are classified as all white junior high schools.

#### Organization of the Study

This study was divided into four chapters. The first chapter introduced the study, identified the problem to be studied, delineated the general plan and described the procedures utilized in the study. The second chapter contained a review of literature from professional journals and other studies relative to the problem. In the third chapter the investigator has analyzed the data, and the fourth chapter consisted of the conclusions and recommendations formulated as a result of the study.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Introduction. The emergence of our nation from the depression era and the end of World War II was accompanied by a demand for increased educational opportunities by returning servicemen, by business and industries requiring educated employees, by our governments, and in general, by our entire society. The advent of Sputnik in 1957, combined with the writings of persons such as Admiral Hyman G. Rickover caused a dramatic shift in education to the physical sciences. During this same general period, the Brown Versus Topeka Board of Education decision gave a new dimension to the national educational programs. Namely, it resulted in the requirement of equality of educational opportunity for all persons regardless of race, creed, color, or country of national origin. Then, in the decade beginning in 1960, much attention was devoted to the topic of student achievement. The answers to some of the basic questions about achievement are still being sought. For example, two basic questions are "What causes students to achieve at different levels?" and "How can educational achievement best be

measured?" There is much to be learned about the subject of achievement at all levels of our educational structure.

This study concerned itself with the aspects of both achievement and equality of educational opportunity. There was much literature on these subjects, but current material has been difficult to maintain because it tended to become obsolete because of new legislation, court orders, or if there was some dramatic or traumatic event to occur such as the shooting of students by some organization of the law. The investigator sought to include in the Review of Literature a resume of representative articles that were of prominence and which were relevant to the study of student achievement. Also included were articles relative to the efforts in our country to create conditions that would result in a real equality of educational opportunity for all of its citizens.

The Coleman Report.<sup>1</sup> This report defines achievement as an outcome of schooling which shows the accomplishments of the school to date. This definition was in reference to the totality of students in the school, not to the individual student. In measuring achievement, achievement tests as predictors of future success in life differ from rural to urban environment, and from manual to non-manual occupations. This type of test is used extensively for college admission

---

<sup>1</sup>U. S. Department of Health, Education, and Welfare, Equality of Educational Opportunity, A report prepared by the Office of Education (Washington: U.S. Government Printing Office, 1966).

and increasingly for job placement. While such tests are not the only thing educators speak of when they speak of outcomes of schooling, they are a large and important part of it. Such tests are not in any sense culturally fair. On page 218, the Report states

Their very design is to determine the degree to which a child has assimilated a culture appropriate to modern life in the United States. Cultural disadvantage should show up markedly in tests of this sort, because they are designed to measure performance in a highly technical and sophisticated culture.<sup>1</sup>

The difference in achievement between whites and other ethnic groups is great. At the end of twelve years of schooling, nationally whites score about one standard deviation above that of the Negro. This means that about eighty five percent of the black students score below the average of the white students, whereas, by definition, fifty percent of the white students score below the average. If a school does not attempt, or fails in the attempt, to compensate for the cultural disadvantage of minority groups, the minority group member can expect to begin adult life with a handicap given to him by his culture, and one that is compounded by the opportunities in school of which he will be unable to avail himself because of this handicap.

Of notable interest in the report was the high level of interest, motivation, and aspiration reported by Negro students. These data are difficult to reconcile with their lower rate of finishing school and lower college going rate.

---

<sup>1</sup>Ibid., p. 218.

It does show one thing, that Negroes view the school as a path for upward social and economic mobility.

In the determination of self-esteem, Negro children reported about the same level of self-esteem as the white children, whereas black and other minority children show a much lower sense of control of their environment than the white children. Two factors most prominent in determining the sense of control of the environment were the family status, and their general position in the society.

Probably the most important result in the assessment of factors affecting the achievement of students, was that school to school variations in the achievement, from whatever sources, such as community differences, home background, or variation in school factors, are greater than individual variations within the school, at all grade levels for all racial and ethnic groups. This means that most of the variation in achievement could be accounted for by school differences, since most of it lies with the school. Further, a reasonable conclusion was reached by the Report that our schools have a great uniformity insofar as achievements of pupils are concerned. The data presented in the Report was sufficient to suggest that variations in school quality were only a minor part in the total achievement of the students. Poor students, from poor family backgrounds, started with the least achievement, and achieved significantly less than others throughout the entire period of their formal education.

The culturally disadvantaged at the beginning are the culturally disadvantaged at the end of school provided learning opportunities.

A Profile of the Large City High School.<sup>1</sup> In reviewing the literature, this article was significant in that it developed a typology of large city high schools, including their goals and objectives, their structure and organizations, curriculum, activities program, school-community relations and several other parameters of high schools serving communities, cities in this case, with populations in excess of three hundred thousand people.

The article stated

Our large city schools, and especially those at the secondary level, reflect a dangerous social pathology which we are trying to contain and cure, but with little success thus far. And we are by no means sure that anyone knows for certain what can and what ought to be done to cope with this continuing crisis so pervasively evident in all aspects of life in the very large American City.<sup>2</sup>

A basic problem which all of our large cities must contend is the segregation of its people in housing, education, income, and social activities. The outflow of the economic affluent, especially the white population to the peripheral rings of the urban center has left the remaining population to become a set of segregated areas, some so vast

---

<sup>1</sup>"A Profile of the Large-City High School," Bulletin of the National Association of Secondary School Principals, January, 1971, Volume 55, Number 351.

<sup>2</sup>Ibid., p. 4.



in size that children of a large city may grow up in an area of the city without coming into contact with anyone other than members of their own ethnic group, and only rarely associating with young people of their own age of a different socio-economic or other type status.

A result of these actions have created another problem for the cities. That is a stagnation of, or decline in the tax base. This happens at the time when just the opposite is needed the most. There is an increase in the demand for health, educational, transportation, and the other services so vital to any urban population.

According to the Bulletin, all of this has tended to leave many educators with a feeling of resignation and frustration in their efforts to offer quality education to inner city school pupils. It does not help their situation in any manner to know they are the target of many other social systems who look to their failures in public education, and feel that they are being required to bear the blame that rightfully belongs to the total society of the city.

What are the desirable types of school? The Bulletin states it to be the comprehensive type, which contains a cross section of youth according to socio-economic level and having a self-contained, varied, and comprehensive curriculum. These schools do exist, but in many cases are being overtaken by the inner city slums and offer racial and economic segregation a chance to grow. Many schools have gone from the comprehensive

category to the inner-city category within the past ten years.

Upper middle class schools still exist in the large cities but they are dwindling in number. In terms of achievement of its students, these are the "best" schools. Middle class parents look for this type of school and are willing to move their residence to insure their children's attendance in this kind of school. These schools lack a major ingredient of a democratic structure. They do not have students in any number from the low income brackets, nor do they enroll substantial numbers of minority group students.

The Bulletin concluded with a final observation that

It seems likely that there is more and deeper segregation and separation of high school students of different socio-economic and ethnic groups today than there was ten to twenty years ago. This process could conceivably continue on to the point of separating various groups into different schools or sections within schools. But that seems improbable in view of the conscious aims of the nation's social and political leaders to restore the central city and to bring the suburbs into closer interactions with it. The predictable goals of our large-city schools is the greater social integration of all kinds of students, with the development of the high schools of our cities into true systems of schools being a means to pursue this goal more effectively.<sup>1</sup>

Suburb, Central City, and Education.<sup>2</sup> Various occupations, incomes, and education cause people to share different norms,

---

<sup>1</sup>Ibid., p. 104.

<sup>2</sup>Raymond W. Mack. "Suburb, Central City, and Education". Metropolitanism, Its Challenge to Education. The Sixty Seventh Yearbook of the National Society for the Study of Education (Chicago: University of Chicago Press, 1968), pp. 71-87.

and to behave very differently. The existence of a culture will extend to the development of a subculture. A man's position in life is not only determined by how he earns his money, but how he spends it. These two main factors determine his life style, including his place of residence, whether it be urban or suburban, if his place in the social structure is dependent upon a metropolitan area.

The basic variables of social structure reinforce each other. People with high incomes and advanced education are more able and inclined to ascertaining that their children receive a college education which will lead to a high income. A person's vocation, to a large degree, will determine his class status, and it is most likely that a person who is highly educated, has considerable income and social status, will have things happen to him that are considered highly desirable in our society.

The things that will happen to such a person as described above is to increase the likelihood of staying alive the first year, to remain healthy and grow tall, to lessen the chance of getting sick and to increase the chances of getting well, the chance to avoid becoming a juvenile delinquent and a chance to view and appreciate fine art. The differences in access to and enjoyment of the products of our society include variations by class in family patterns, religious participation, vocational differences and by many other culture patterns.

Citizens of a large metropolitan area reside in either the central city or something fairly recent in our society, the suburb. The oldest, least desirable housing is located near the centers of our cities; the newest, most desirable has been located farther away, on the perimeter of the metropolis, and outside its corporate limits. An increasing proportion of middle-class housing has an incapable corollary, the ever increasing proportion of the people inside the city limits are members of the minority races.

It is understandable why citizens move to the suburbs. Suburbanites have the economic capacity and the desire to cluster in a sub-culture that will provide a higher standard of living. They consist of a high proportion of white collar workers, they spend more on schools, and in general maintain much of the values and attitudes of small town residents.

The author states that one of the functions of educational structures is to confer status.

When the systems of formal education in American society are examined, it is shown that the amount and quality of education one receives will vary with income, occupation, race, and religion. Each of these variables, therefore, has consequences for the stratification system, not only in its own right but also to the degree that it influences educational opportunity and, hence, life chances.<sup>1</sup>

---

<sup>1</sup>Ibid., pp. 84-85.

Intelligence.<sup>1</sup> Test constructors have generally sought to eliminate the effects of social class, ethnic races, and other sociological factors in the life of students. It is generally believed that in a mobile social system, social class is at least as important in the performance on tests as differences in intelligence, i.e., innate ability. Despite the efforts of test constructionists, most tests still yield substantial differences between members of different socio-economic classes, and between urban and rural children. Whatever the causes, differences in test scores cannot be regarded as reflecting differences in ability unless those for whom the test is intended have had equal opportunity, in its broadest form, to the experiential background and motivating attitudes desired to be tested.

Many psychologists contend that standardized educational tests systematically favor the middle class. As a consequence, efforts are made to eliminate this systematic bias, and to create culture-fair tests. However, differences still exist between the averages of groups of students from different socio-economic backgrounds, ethnic groups, and between rural and urban groups. Apparently, success on tests is attributed not only to the possession of intellectual skills but also to sets of values and attitudes, and values and attitudes themselves are culturally linked.

---

<sup>1</sup>Read D. Tuddenham, "Intelligence", Encyclopedia of Educational Research (London: The MacMillan Company, 1969), pp. 654-664.

The fact has been documented on a nationwide basis that Negro scores on standardized intelligence tests are lower than the scores of whites. The cause is still controversial, but much of it must be attributed to the systematic discrimination against the black citizen in education, job opportunities and social activities. In attempting to determine the cause, two main factors have been investigated with inconclusive results. They are heredity and environment. It has been estimated that impoverishment of the environment may serve to depress the IQ as much as twenty points. But intelligence as measured by tests is not a unitary, biological trait. It does not occur and develop in a void, nor does it progress along a predetermined course. An individual's intelligence differs from the intelligence of another to the extent of their different background. Environmental differences play a significant role in the development of an individual, with these differences playing a greater role the earlier they occur in the life of the individual.

In closing, the author states that although stable societies tend toward class rigidity, mobility is still the order of our own society. Mass education is one of the most powerful forces for effective upward mobility, and the minority groups in our country are as well aware of this as is the white population. Although cultural deprivation is one causal factor in creating differences in intelligence,

it does not normally follow that all differences in intelligence are thusly created as a consequence of environmental and cultural differences.

## CHAPTER III

### ANALYSIS OF THE DATA

In this study, the investigator was considering the effects of several factors on the achievement of black and white students in the Oklahoma City public high schools. These factors were (1) the level of student educational aspirations; (2) the students' perceived quality of his school; and (3) the students' family socio-economic status. Data was collected concerning these factors and comparisons were made among black and white students attending both segregated and desegregated schools. In the following sections, the investigator has evaluated the data collected pertaining to these various factors, and has compared the results in terms of the types of schools involved.

#### Level of Student Education Aspirations

Consideration of the data regarding the level of student educational aspirations revealed a reflection of the American ideal of securing college educations for its youth. Table 1 reveals the extent of these aspirations. More students indicated a desire for a college degree than the combined total of those students planning only a high



TABLE 1

## LEVEL OF STUDENT EDUCATIONAL ASPIRATIONS

FREQUENCY OF SCORES - PERCENTAGES				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
HIGH SCHOOL	21.33	35.33	23.33	27.33
SOME COLLEGE	17.33	20.67	15.33	15.33
COLLEGE DEGREE	<u>61.34</u>	<u>44.00</u>	<u>61.34</u>	<u>57.34</u>
TOTAL	100.00	100.00	100.00	100.00
"Z" SCORES - READING				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
HIGH SCHOOL	-1.04	- .47	- .06	.26
SOME COLLEGE	- .48	- .43	.06	.62
COLLEGE DEGREE	<u>-.31</u>	<u>-.24</u>	<u>.45</u>	<u>.64</u>
TOTAL	-1.83	-1.14	.45	1.52
"Z" SCORES - WRITING				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
HIGH SCHOOL	- .82	- .34	.10	.10
SOME COLLEGE	- .46	- .34	- .05	.64
COLLEGE DEGREE	<u>-.32</u>	<u>-.18</u>	<u>.47</u>	<u>.65</u>
TOTAL	-1.60	- .86	.52	1.39
"Z" SCORES - MATHEMATICS				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
HIGH SCHOOL	-1.03	- .63	- .30	.17
SOME COLLEGE	- .74	- .67	.08	.44
COLLEGE DEGREE	<u>-.74</u>	<u>-.31</u>	<u>.50</u>	<u>1.25</u>
TOTAL	-2.51	-1.61	.28	1.86

school career and those attending college on a less than degree program. The percentage of white students stating aspirations for attending college was comparable with the percentages of those enrolling in the colleges and universities of the State of Oklahoma. The percentage of white students expressing an intention of obtaining a degree was higher than the percentages of white students earning college degrees. Nearly two thirds of all the black students in the survey expressed intentions of obtaining a baccalaureate degree. In view of the somewhat limited percentages of black students now enrolling in the state college and university system, this appeared to be unrealistic. It suggested that these black students view a formal education as a means of upward social and economic mobility. On a percentage basis, the black students planning on some college experience, but less than a degree program, exceeded the percentage of white students in the same category. This was another indication that the black students perceive higher education as a means of upward mobility.

The statistics for the reading scores showed that the highest "Z" scores were obtained by the white students who attend desegregated schools. White students in segregated schools received the next highest "Z" scores. Black students in desegregated schools scored the next highest, followed by black students in segregated schools. There was a difference of 3.35 in "Z" scores between the highest score and the lowest

score. This was a considerable range in scores, and was indicative of a difference in the achievement of the two groups. The white students in desegregated schools outscored whites in segregated schools by a "Z" score of 1.07, while black students in desegregated schools outscored blacks in segregated schools by a "Z" score of .69. In each case, the students in desegregated schools outscored their racial counterparts in the segregated schools.

The order in the levels of achievement of the four categories of students on the reading tests established a pattern for the order in the levels of achievement on the writing and mathematics tests. Not only were there identical orders of achievement, the differences in the "Z" scores at each level were comparable.

The greatest difference in "Z" scores for the level of student education aspirations was on the mathematics tests. Black students in segregated schools scored 4.37 below white students in a desegregated school. In the grouping of the population scores for STEP converted scores on the mathematics standardized test, as shown in Appendix B, no student scored above the class interval of 310-314, and 529 of 3,869 scored in the lowest class intervals covering the range of scores from 230-244. This large number of extremely low scores suggest that these students lack adequate understanding of the basic concepts of the operations that are necessary to the understanding of mathematics taught in the high schools.

As stated in  $H_{01}$ : There are no significant differences in standardized reading, writing, and mathematics achievement test scores of tenth grade students in Oklahoma City public high schools for black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same level of student education aspirations.

The range of scores, as previously discussed, and the differences in the "Z" scores as shown in Table 1 are conclusive evidence that there were significant differences in the achievement test scores for the students of different races attending schools with different composition of the student bodies. Accordingly,  $H_{01}$  is rejected.

#### Perceived Quality of School

A majority of the students in the study perceived the quality of their schools to be above average, or at least average for Oklahoma City, whereas only a small percentage of students believed their school to be below average. The figures in Table 2 reveal how the students in the study perceived the quality of their schools.

The students attending segregated schools, both black and white, led all other categories of students in perceiving the quality of their schools to be above average for the system, with more than sixty one percent of these black students, and fifty six percent of these white students

TABLE 2  
PERCEIVED QUALITY OF SCHOOL

FREQUENCY OF SCORES - PERCENTAGES				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
ABOVE AVERAGE	61.33	41.33	56.00	50.67
AVERAGE	30.67	38.00	40.00	30.67
BELOW AVERAGE	<u>8.00</u>	<u>20.67</u>	<u>4.00</u>	<u>18.66</u>
TOTAL	100.00	100.00	100.00	100.00
"Z" SCORES - READING				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
ABOVE AVERAGE	- .50	- .79	.24	.60
AVERAGE	- .45	- .50	.09	.57
BELOW AVERAGE	<u>-.61</u>	<u>-.41</u>	<u>.49</u>	<u>.30</u>
TOTAL	-1.56	-1.70	.82	1.47
"Z" SCORES - WRITING				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
ABOVE AVERAGE	- .51	.02	.04	.61
AVERAGE	- .33	- .51	.23	.35
BELOW AVERAGE	<u>-.58</u>	<u>-.35</u>	<u>.11</u>	<u>.31</u>
TOTAL	-1.42	-.84	.30	1.27
"Z" SCORES - MATHEMATICS				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
ABOVE AVERAGE	- .81	- .29	.20	.47
AVERAGE	- .93	- .62	.14	.43
BELOW AVERAGE	<u>-.47</u>	<u>-.37</u>	<u>-.70</u>	<u>.32</u>
TOTAL	-2.21	-1.28	-.36	1.22

perceived their segregated schools to be superior. Conceivably, this reflected a traditional pride in their school as well as their not having experienced any of the traumatic effects that often accompany the desegregating of a school. Students attending desegregated schools generally thought highly of the school they attended, but a higher percentage of such students thought their schools to be below average for the system than did students in the other categories. Over twenty percent of the black students, and over eighteen percent of the white students were in this category. Again, it is reasonable to assume that the traumatic effects of desegregating the high schools in Oklahoma City, including violence in three of these schools, may have made some significant contribution to the formation of this perception of their schools.

The achievement scores on the level of education aspirations for the black students were below the scores achieved by the white students. The only positive "Z" scores for black students were scored by the desegregated black students on the writing test, whereas the only negative "Z" scores were made by segregated white students on the mathematics test. In each category, the desegregated white students made the highest scores with the segregated black students earning the lowest scores. The ranges on the scores of the reading, writing, and mathematics tests were respectively 3.03, 1.69, and 3.43. This continued wide difference

in "Z" scores in itself gives credence to the existence of a great need for the study in depth of the educational opportunities available to the black youth of Oklahoma City.

In examining the data on the students' perceived quality of school, and seeking an explanation for the wide ranges in the achievement test scores, there is no acceptable explanation that does not include the fact that when the schools are basically equal, then the influences of the family and the community where the students reside are so great that the school is unable to overcome them with the present programs of the schools.

It was noteworthy that students perceiving their high schools to be above average made the highest scores, followed by students who believed their schools to be average with the students who esteemed their schools to below average making the lowest scores. If a rise in perceived quality of school accompanies an increased achievement score, then it appears that efforts to increase the perceived quality of the school has merit as an avenue for increasing achievement scores.

As stated in HO<sub>2</sub>: There are no significant differences in the standardized reading, writing, and mathematics achievement test scores of tenth grade students in Oklahoma City public high schools for black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same perception of the quality of their schools.

The ranges of the scores derived from the "Z" scores shown in Table 2 are conclusive evidence that there were significant differences in the achievement test scores for the students of different races attending high schools with different racial compositions of the student bodies. Accordingly,  $H_{O_2}$  was rejected.

#### Family Socio-Economic Status

The sample failed to contain a single black student whose family was in the upper socio-economic status. The total population of black students did contain students from families in the upper socio-economic status, but they were in such small numbers that they failed to appear in the sample.

There were many black students in the middle socio-economic status whose family would have been in the upper middle class status if the middle class status had been dichotomized. These students were primarily from families where the breadwinner was an executive in federal government activities located in the Oklahoma City area. There were seventeen white students attending desegregated schools from families in the upper socio-economic status and seven white students from segregated schools in this category. Table 3 shows results for the study of the family socio-economic status.

The pattern established relative to the order of the level of achievement for the educational aspirations and for



TABLE 3  
FAMILY SOCIO-ECONOMIC STATUS

FREQUENCY OF SCORES - PERCENTAGES				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
UPPER	No Score	No Score	4.67	10.67
MIDDLE	38.67	52.67	76.67	73.33
LOWER	<u>61.33</u>	<u>47.33</u>	<u>18.66</u>	<u>16.00</u>
TOTAL	100.00	100.00	100.00	100.00

  

"Z" SCORES - READING				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
UPPER	No Score	No Score	.62	1.08
MIDDLE	- .33	- .24	.12	.49
LOWER	<u>-.60</u>	<u>-.38</u>	<u>.33</u>	<u>.47</u>
TOTAL	- .93	- .62	1.07	2.04

  

"Z" SCORES - WRITING				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
UPPER	No Score	No Score	.52	.88
MIDDLE	- .34	- .22	.16	.44
LOWER	<u>-.49</u>	<u>-.28</u>	<u>.37</u>	<u>.43</u>
TOTAL	- .83	- .50	1.05	1.75

  

"Z" SCORES - MATHEMATICS				
	ALL BLACK	DESEGREGATED BLACKS	ALL WHITE	DESEGREGATED WHITES
UPPER	No Score	No Score	.58	.72
MIDDLE	- .87	- .40	.15	.47
LOWER	<u>-.78</u>	<u>-.48</u>	<u>.15</u>	<u>.11</u>
TOTAL	-1.65	- .88	.88	1.30

the perceived quality of school was followed for the family socio-economic status. Black students failed to register any positive "Z" scores, whereas all "Z" scores for the white students were positive.

As stated in  $H_{O_3}$ : There are no significant differences in standardized reading, writing, and mathematics achievement test scores of tenth grade students in Oklahoma City public high schools for black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same family socio-economic status.

A study of the "Z" scores contained in Table 3, and the range of student scores derived therefrom, showed factually that there were significant differences in the achievement test scores for the students of different races attending high schools with different racial composition of the student bodies. Accordingly,  $H_{O_3}$  is rejected.

## CHAPTER IV

### SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### Summary

The purpose of this study was to determine and analyze the effects of race, desegregation, and family background on the achievement of tenth grade students in the Oklahoma City public high schools. The family background factors considered in this study were student education aspirations, perceived quality of their schools, and family socio-economic status. The Oklahoma City public high schools included both desegregated schools and segregated black and white schools.

Black and white students in the eight Oklahoma City public schools were divided into groups according to whether the type schools they attended were segregated or desegregated. Thus, the students were divided into four groups; students in an all white school, students in an all black school, white students in desegregated schools and black students in desegregated schools.

Tenth grade students in each of these eight schools completed a questionnaire designed to elicit information as to whether their school was above average, average, or below

average; whether they intended to finish high school, attend some college, or obtain a college degree; and what was the vocation of the family breadwinner in order to determine the socio-economic status of the family.

From this population of approximately 4,000 students, a sample of six hundred students was selected. There were one hundred fifty students for each of the four categories being tested. Using the statistical device of crossbreak paradigms, a "Z" score was computed for each standardized test X each category of student X each family condition, where "Z" equals (Sample mean less population mean)/standard deviation.

The first crossbreak paradigm recorded the level of student education aspirations. Black students were divided into students from all black schools and black students in desegregated schools. White students were separated into students from all white schools and white students in desegregated schools. For each of the four categories, "Z" scores were computed for the reading, writing, and mathematics standardized test scores for each student in the sample for each level of student education aspirations. These aspirations were to finish high school, attend some college but not seek a degree, and to graduate from college.

The second crossbreak paradigm followed the same statistical design for perceived quality of school, where the options were above average, average, and below average.

The third crossbreak paradigm was also repetitive in design relative to the family socio-economic status with the choices of upper, middle, and lower.

A comparison of levels of achievement for each of the four categories of students on the reading, writing, and mathematics standardized tests for each of the three variables was easily made by a comparison of the "Z" scores in the cells of the paradigms, in order to test each hypothesis. The paradigms containing the "Z" scores are contained in Tables 1, 2, and 3.

The statement of hypotheses was as follows: There are no significant differences in standardized reading, writing, and mathematics achievement test scores of tenth grade students in Oklahoma City as related to each of the following factors:

- HO<sub>1</sub>: Black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same level of student education aspirations.
- HO<sub>2</sub>: Black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same perception of the quality of their schools.
- HO<sub>3</sub>: Black students in all black schools, white students in all white schools, and black and white students in desegregated schools with the same family socio-economic status.

#### Findings

1. White students in all categories had higher levels of achievement than all categories of black students on standardized reading, writing, and mathematics tests designed to measure educational progress.

2. Black students in desegregated high schools scored higher on the reading, writing, and mathematics tests than black students in all black high schools.

3. White students in desegregated high schools scored higher on the reading, writing, and mathematics tests than white students in all white high schools.

4. A majority of students, black and white, plan to seek a college degree. The percentages of students in all black schools planning on obtaining a college degree were the same as for students in all white schools. The percentage of white students in desegregated high schools intent on seeking a college degree was greater than the percentage of black students in these schools.

5. Black students in desegregated schools planning on high school as a terminal educational experience scored higher on the mathematics test than did their classmates who planned college attendance. With this exception, the "Z" scores for all groups of students increased as the level of student education aspiration increased.

6. There were more black and white students who perceived the quality of their schools to be above average than there were black and white students who perceived their schools to be average or below average.

7. A greater percentage of students in all white and all black schools perceived their schools to be above average than did black students and white students in desegregated

schools. Conversely, a smaller percentage of students in all white and all black schools perceived the quality of their schools to be below average than did their counterparts in desegregated schools.

8. Students from upper socio-economic status families scored higher on reading, writing, and mathematics tests than did students from middle and lower socio-economic status families. With the exception of a single score on each of the three tests, students from families in the middle socio-economic group scored higher on the tests than did students from lower socio-economic status families.

### Conclusions

The following conclusions were derived from the sample and considered appropriate for the population studied.

1. The total societal experiences of a student, especially including the conditions caused by the separation of the races, were such as to inhibit academic achievement by black students and white students having a commonality of family background.
2. The investigation disclosed a difference in achievement levels of white students and black students. It was concluded that this was due to factors of long standing resulting from separation of the races. Since both white and black students in desegregated schools evaluate the quality of their school programs at a lower level than did students in segregated schools, it was concluded that the administration and faculty

in desegregated schools should give careful attention to an evaluation of factors which threaten the security and lessen the likelihood of success of students.

3. White students had higher levels of achievement than black students in both segregated and desegregated schools. This difference in achievement may be the result of factors, both internal and external to the schools, whose effects tend to be reduced by interaction of black and white students in the learning processes.

#### Recommendations

1. The Oklahoma City public schools should make efforts to increase the "in service" preparation of teachers and others involved in the education of black students in the areas of human rights and human relations.
2. As greater numbers of black students are enrolled in predominantly white schools, curriculum modifications should be made, as well as programs and activities initiated, that will cause these black students to feel that they can benefit from, contribute to, and be a part of these schools.
3. Present programs in these schools need to be maintained and strengthened in order that the white students will not perceive a diminution in the quality of their educational opportunities.
4. Increasing portions of our national and state resources are being devoted to the improvement of the social, economic,



and educational well being of disadvantaged students, especially the black students. Oklahoma City should systematically utilize any assets available from these sources to enhance the educational progress of its black students.

5. Due to the large number of low scores by white and black students on both the reading and mathematics standardized tests, consideration should be given to the development of system wide programs in math and reading that would identify the low achiever and provide him with remedial instruction.

6. An increase in the perceived quality of school was accompanied by an increase in the level of achievement.

Further study appears to be warranted to determine if this increase in perceived quality of school is a result of increased achievement, or if the possibility exists of increasing achievement by developing an increase in the students' perceived quality of his school.

7. The Oklahoma City public schools have the responsibility for the development of vehicles through which appropriate black and white interaction may be achieved.

# APPENDIX A

## STUDENT QUESTIONNAIRE

NAME \_\_\_\_\_  
                                     LAST,                                    FIRST                                    MIDDLE INITIAL

RACE ( ) BLACK ( ) INDIAN ( ) WHITE ( ) OTHER \_\_\_\_\_

NAME OF YOUR SCHOOL: \_\_\_\_\_

NAME OF YOUR NINTH GRADE SCHOOL(S): \_\_\_\_\_

NAME OF YOUR EIGHTH GRADE SCHOOL(S): \_\_\_\_\_

NAME OF YOUR SEVENTH GRADE SCHOOL(S): \_\_\_\_\_

All answers to the questions below are confidential and will not be given to anyone. The answers will be included in a study of tenth grade Oklahoma City students. They will not be identified by name.	DO NOT WRITE IN BOX		

1. How far do you plan to go in school?
  - a. ( ) Finish high school
  - b. ( ) Attend college for awhile
  - c. ( ) Graduate from college
2. Do you live with:
  - a. ( ) Both parents
  - b. ( ) One parent and a step-parent
  - c. ( ) Neither of the above
3. What do you think of your school? is it:
  - a. ( ) One of the best in Oklahoma City
  - b. ( ) About average for Oklahoma City
  - c. ( ) Not as good as most schools in Oklahoma City
4. What kind of student do you wish to be?
  - a. ( ) One of the best in class
  - b. ( ) About average
  - c. ( ) Satisfied if passing in all classes
5. What is your father's usual work? (If you are not living with your real father, answer for your stepfather, foster father, or man in the home. If there is no man in the home, list your mother's usual work)

\_\_\_\_\_  
 If it will help to explain the type of work, include the type firm or place where the work is performed.

# APPENDIX B

## COMPUTATION OF POPULATION MEAN AND STANDARD DEVIATION STEP CONVERTED SCORES FOR READING

CLASS INTERVAL	f	d	fd	fd <sup>2</sup>
325-329	4	11	44	484
320-324	41	10	410	4,100
315-319	58	9	522	4,698
310-314	98	8	784	6,272
305-309	159	7	1,113	7,791
300-304	233	6	1,398	8,388
295-299	388	5	1,941	9,700
290-294	394	4	1,576	6,304
285-289	390	3	1,170	3,510
280-284	368	2	736	1,472
275-279	364	1	364	364
TOTAL POS fd			10,057	
270-274	273	0	0	0
265-269	229	-1	-229	229
260-264	221	-2	-442	884
255-259	193	-3	-579	1,737
250-254	192	-4	-768	3,072
245-249	320	-5	-1,600	8,000
240-244	0	-6	0	0
235-239	0	-7	0	0
230-234	0	-8	0	0
TOTAL NEG fd			-3,618	
N=3,925TOTAL			6,439	67,005

$$\begin{aligned}\text{Mean} &= \text{assumed mean} + \left( \frac{\sum fd}{N} \times \text{c.i.} \right) \\ &= 272 + (6,439/3,925 \times 5) \\ &= 280.20\end{aligned}$$

$$\begin{aligned}\text{Standard Deviation} &= \sqrt{\frac{\sum fd^2}{N} - \left( \frac{\sum fd}{N} \right)^2} \times \text{c.i.} \\ &= \sqrt{(67,005/3,925) - (6,439/3,925)^2} \times 5 \\ &= 18.95\end{aligned}$$

COMPUTATION OF POPULATION MEAN AND STANDARD DEVIATION  
STEP CONVERTED SCORES FOR WRITING

CLASS INTERVAL	f	d	fd	fd <sup>2</sup>
325-329	7	11	77	847
320-324	15	10	150	1,500
315-319	24	9	216	1,944
310-314	49	8	392	3,136
305-309	85	7	595	4,165
300-304	108	6	648	3,888
295-299	232	5	1,160	5,800
290-294	276	4	1,104	4,416
285-289	361	3	1,083	3,249
280-284	489	2	978	1,956
275-279	343	1	343	343
TOTAL POS fd			6,746	
270-274	254	0	0	0
265-269	264	-1	-264	264
260-264	386	-2	-772	1,544
255-259	269	-3	-807	2,421
250-254	338	-4	-1,352	5,408
245-249	394	-5	-1,970	9,850
240-244	0	-6	0	0
235-239	0	-7	0	0
230-234	0	-8	0	0
TOTAL NEG fd			-5,165	
N=3,894TOTAL			1,581	50,731

$$\begin{aligned}\text{Mean} &= \text{assumed mean} + \left( \frac{\sum fd}{N} \times \text{c.i.} \right) \\ &= 272 + (1,581/3,894 \times 5) \\ &= 274.03\end{aligned}$$

$$\begin{aligned}\text{Standard Deviation} &= \sqrt{\frac{\sum fd^2}{N} - \left( \frac{\sum fd}{N} \right)^2 \times \text{c.i.}} \\ &= (50,731/3,894) - (1,581/3,894)^2 \times 5 \\ &= 17.93\end{aligned}$$

COMPUTATION OF POPULATION MEAN AND STANDARD DEVIATION  
STEP CONVERTED SCORES FOR MATHEMATICS

CLASS INTERVAL	f	d	fd	fd <sup>2</sup>
325-329	0	11	0	0
320-324	0	10	0	0
315-319	0	9	0	0
310-314	1	8	8	64
305-309	4	7	28	196
300-304	17	6	102	612
295-299	48	5	240	1,200
290-294	131	4	524	2,096
285-289	246	3	738	2,214
280-284	402	2	804	1,608
275-279	439	1	439	439
TOTAL POS fd			2,883	
270-274	624	0	0	0
265-269	503	-1	-503	503
260-264	481	-2	-962	1,924
255-259	248	-3	-744	2,232
250-254	196	-4	-784	3,136
245-249	0	-5	0	0
240-244	163	-6	-978	5,868
235-239	0	-7	0	0
230-234	366	-8	-2,928	23,424
TOTAL NEG fd			-6,899	
N=3,869 TOTAL			-4,016	45,516

$$\begin{aligned}\text{Mean} &= \text{assumed mean} + \left( \frac{\sum fd}{N} \times \text{c.i.} \right) \\ &= 272 + (-4,016/3,869 \times 5) \\ &= 266.81\end{aligned}$$

$$\begin{aligned}\text{Standard Deviation} &= \sqrt{\frac{\sum fd^2}{N} - \left( \frac{\sum fd}{N} \right)^2 \times \text{c.i.}} \\ &= (45,516/3,869) - (4,016/3,869)^2 \times 5 \\ &= 16.345\end{aligned}$$

# APPENDIX C

## GROUPING OF POPULATION SCORES - STEP CONVERTED SCORES FOR READING

CLASS INTERVAL	CLASSEN	NORTH EAST	JMHS	SOUTH EAST	GRANT	CAPITOL HILL	DOUGLASS	NORTH WEST	TOTAL
325-329	0	0	0	1	0	1	0	2	4
320-324	2	2	11	2	6	3	0	15	41
315-319	2	2	17	6	10	3	0	18	58
310-314	5	7	20	6	14	11	0	35	98
305-309	11	12	38	7	30	18	3	40	159
300-304	14	17	55	15	46	25	6	55	233
295-299	25	13	85	40	75	56	7	87	388
290-294	24	22	67	35	86	53	26	81	394
285-289	28	23	57	37	84	65	34	62	390
280-284	23	21	47	45	79	58	36	59	368
275-279	24	28	39	42	65	72	39	55	364
270-274	27	21	25	38	35	50	46	31	273
265-269	20	16	25	27	41	43	32	25	229
260-264	24	22	10	26	30	46	47	16	221
255-259	24	17	12	22	23	41	40	14	193
250-254	18	23	22	23	15	31	52	8	192
245-249	10	43	153	12	23	31	41	7	320
240-244	0	0	0	0	0	0	0	0	0
235-239	0	0	0	0	0	0	0	0	0
230-234	0	0	0	0	0	0	0	0	0
TOTAL	281	289	683	384	662	607	409	610	3,925

GROUPING OF POPULATION SCORES - STEP CONVERTED SCORES FOR WRITING

CLASS INTERVAL	CLASSEN	NORTH EAST	JMHS	SOUTH EAST	GRANT	CAPITOL HILL	DOUGLASS	NORTH WEST	TOTAL
325-329	0	0	1	0	0	4	0	2	7
320-324	0	0	2	1	1	0	0	11	15
315-319	1	0	8	2	2	1	0	10	24
310-314	4	1	13	2	8	3	0	18	49
305-309	8	8	17	6	10	7	0	29	85
300-304	2	5	31	6	18	12	1	33	108
295-299	10	13	59	15	47	22	9	57	108
290-294	25	13	56	23	49	46	8	56	276
285-289	15	21	70	29	81	51	7	87	361
280-284	30	26	76	57	97	73	38	92	489
275-279	23	22	45	36	55	62	45	55	343
270-274	18	24	22	32	41	54	28	35	254
265-269	22	22	36	35	40	39	41	29	264
260-264	40	34	30	41	56	79	67	39	386
255-259	29	32	31	28	37	42	48	22	269
250-254	24	37	56	44	34	55	67	21	338
245-249	30	31	135	21	61	61	48	7	394
240-244	0	0	0	0	0	0	0	0	0
235-239	0	0	0	0	0	0	0	0	0
230-234	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	281	289	688	378	637	611	407	603	3,894

GROUPING OF POPULATION SCORES - STEP CONVERTED SCORES FOR MATHEMATICS

CLASS INTERVAL	CLASSEN	NORTH EAST	JMHS	SOUTH EAST	GRANT	CAPITOL HILL	DOUGLASS	NORTH WEST	TOTAL
325-329	0	0	0	0	0	0	0	0	0
320-324	0	0	0	0	0	0	0	0	0
315-319	0	0	0	0	0	0	0	0	0
310-314	0	0	1	0	0	0	0	0	0
305-309	0	0	1	0	2	0	0	1	4
300-304	1	1	6	1	2	4	0	2	17
295-299	4	4	13	4	8	3	0	12	48
290-294	3	4	44	12	26	8	0	34	131
285-289	9	10	87	12	41	21	4	62	246
280-284	17	21	97	32	73	55	6	101	402
275-279	25	24	100	33	90	64	15	88	439
270-274	42	37	106	59	131	109	46	94	624
265-269	43	32	75	57	85	94	46	71	503
260-264	44	42	61	54	66	80	70	64	481
255-259	25	25	19	29	44	41	36	29	248
250-254	19	17	23	19	24	37	41	16	196
245-249	0	0	0	0	0	0	0	0	0
240-244	11	19	15	24	23	24	39	8	163
235-239	0	0	0	0	0	0	0	0	0
230-234	<u>34</u>	<u>43</u>	<u>28</u>	<u>39</u>	<u>47</u>	<u>57</u>	<u>102</u>	<u>17</u>	<u>366</u>
TOTAL	277	279	676	374	662	597	405	599	3,869



# APPENDIX D

## GROUPING OF SAMPLE SCORES - READING LEVEL OF EDUCATIONAL ASPIRATIONS

	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	Total
	249	254	259	264	269	274	279	284	289	294	299	304	309	314	319	324	
<b>HIGH SCHOOL</b>																	
SEGREGATED BLACK	7	8	2	4	3	3	2	1	2								32
SEGREGATED WHITE		2	4	3	7	3	5	11	5	5	4	3	1				53
DESEGREGATED BLACK	1	3	4	3	4	4	6	2	4	1	2			1			35
DESEGREGATED WHITE	2	1		1	2	1	6	8	7	5	3	2	2	1			41
<b>SOME COLLEGE</b>																	<b>TOTAL</b>
SEGREGATED BLACK	3	2	1	3	4	1	4	1	4	2	1						26
SEGREGATED WHITE	4	1	1		2	2	2	6	4	1	1	1	2	4			31
DESEGREGATED BLACK	2	3		2	3	4	1	2	3		3						23
DESEGREGATED WHITE	1				1		1	3	4	2	1	5	4	1			23
<b>COLLEGE DEGREE</b>																	<b>TOTAL</b>
SEGREGATED BLACK	5	6	3	15	4	10	12	13	10	7	4	2	1				92
SEGREGATED WHITE	5		1		2	1	1	11	7	11	14	5	5	1		2	66
DESEGREGATED BLACK	6	3	9	9	7	8	9	13	6	10	6	3	2	1			92
DESEGREGATED WHITE			1	2	1	6	9	5	12	11	14	8	4	6	4	3	86
																	<b>TOTAL</b>
																	<b>336</b>

GROUPING OF SAMPLE SCORES - WRITING LEVEL OF EDUCATIONAL ASPIRATIONS

	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	325	Total
	249	254	259	264	269	274	279	284	289	294	299	304	309	314	319	324	
<b>HIGH SCHOOL</b>																	
SEGREGATED BLACK	6	11	1	6	1	2	3	1		1							32
SEGREGATED WHITE		4	5	2	9	2	8	9	6	4	2	1		1			53
DESEGREGATED BLACK	3	6	3	6	2	2	4	3	2	4							35
DESEGREGATED WHITE	1	3	3	5	3	2	7	7	4	1	3			1		1	41
<b>SOME COLLEGE</b>																	<b>TOTAL</b>
SEGREGATED BLACK	3	5	1	4	2	3	5	1		1	1						26
SEGREGATED WHITE	4	2	3	4	1	1	3	1	6	1	4	1					31
DESEGREGATED BLACK	2	4	3	3	1	1	4	2	1		1		1				23
DESEGREGATED WHITE			1	1	1	1	2	4	3	5	3	1	1				23
<b>COLLEGE DEGREE</b>																	<b>TOTAL</b>
SEGREGATED BLACK	8	10	5	16	11	7	16	11	4	1	3						92
SEGREGATED WHITE	4	2	1	3	3	2	7	9	10	11	9	2	2	1			66
DESEGREGATED BLACK	8	6	7	13	10	10	11	14	2	6	3	1			1		92
DESEGREGATED WHITE		3	2	4	6	10	18	6	8	14	3	9	1				86
																	<b>TOTAL</b>
																	<b>336</b>

GROUPING OF SAMPLE SCORES - MATHEMATICS LEVEL OF EDUCATIONAL ASPIRATIONS

	230	240	250	255	260	265	270	275	280	285	290	295	300	Total
	234	244	254	259	264	269	274	279	284	289	294	299	304	
<b>HIGH SCHOOL</b>														
SEGREGATED BLACK	11	4	3		7	3	3	1						32
SEGREGATED WHITE	9	2	2	1	8	6	13	8	2	1	1			53
DESEGREGATED BLACK	4	3	7	5	6	5	3	2						35
DESEGREGATED WHITE	3		1	2	7	3	10	5	8	2				41
<b>SOME COLLEGE</b>														<b>TOTAL</b>
SEGREGATED BLACK	7	2	2	1	4	3	7							26
SEGREGATED WHITE	3		1	1	5	4	8	3	2	2	2			31
DESEGREGATED BLACK	2	4	3	3	7	2		1	1					23
DESEGREGATED WHITE			1		4	3	5	4	4	1		1		23
<b>COLLEGE DEGREE</b>														<b>TOTAL</b>
SEGREGATED BLACK	22	3	7	10	16	13	10	4	2					92
SEGREGATED WHITE	2	1	1	3	4	8	7	12	15	7	3	2	1	66
DESEGREGATED BLACK	11	4	5	14	14	16	12	6	7	2	1			92
DESEGREGATED WHITE	1	2	1	3	6	4	16	13	21	11	4	4		86
														<b>TOTAL</b>
														<b>336</b>

## APPENDIX E

### GROUPING OF SAMPLE SCORES - READING PERCEIVED QUALITY OF SCHOOL

	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	Total
	249	254	259	264	269	274	279	284	289	294	299	304	309	314	319	324	
<b>ABOVE AVERAGE</b>																	
SEGREGATED BLACK	10	11	3	13	6	9	9	9	10	6	5	1					92
SEGREGATED WHITE	5	3	3		6	3	4	15	8	8	12	7	4	5		1	84
DESEGREGATED BLACK	2	1	7	3	7	4	6	7	7	6	8	1	2	1			62
DESEGREGATED WHITE	1		1	1	2	3	7	8	11	11	10	6	5	5	2	3	76
<b>AVERAGE</b>																<b>TOTAL</b>	<b>314</b>
SEGREGATED BLACK	3	4	1	9	2	5	8	5	5	3		1					46
SEGREGATED WHITE		4	3	3	5	3	4	11	8	5	7	3	3			1	60
DESEGREGATED BLACK	7	6	2	7	4	7	7	5	4	4	3			1			57
DESEGREGATED WHITE	1	1			1	1	2	7	9	6	4	6	4	2	2		46
<b>BELOW AVERAGE</b>																<b>TOTAL</b>	<b>209</b>
SEGREGATED BLACK	2	1	1	1	2	1	1	1	1				1				12
SEGREGATED WHITE								2		3	1						6
DESEGREGATED BLACK		2	4	4	3	5	4	4	2	1		2					31
DESEGREGATED WHITE	1				1	2	7	2	4	2	4	3	1	1			28
																<b>TOTAL</b>	<b>77</b>

GROUPING OF SAMPLE SCORES - WRITING PERCEIVED QUALITY OF SCHOOL

	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	Total
	249	254	259	264	269	274	279	284	289	294	299	304	309	314	319	324	
<u>ABOVE AVERAGE</u>																	
SEGREGATED BLACK	12	18	6	13	9	8	11	2	2	2							92
SEGREGATED WHITE	6	7	3	2	7	4	10	10	12	10	8	2	2	1			84
DESEGREGATED BLACK	3	5	5	6	5	6	8	8	4	5	4	1	1		1		62
DESEGREGATED WHITE		3	2	3	3	3	12	14	7	7	11	2	7	1		1	76
																	TOTAL <u>314</u>
<u>AVERAGE</u>																	
SEGREGATED BLACK	2	7	2	8	5	4	12	3	1	1	1						46
SEGREGATED WHITE	2	2	4	6	4	3	7	9	9	6	6	1		1			60
DESEGREGATED BLACK	8	7	7	9	6	4	7	5	1	3							57
DESEGREGATED WHITE	1	2	2	6	3	1	2	9	6	5	6		2	1			46
																	TOTAL <u>209</u>
<u>BELOW AVERAGE</u>																	
SEGREGATED BLACK	3	1	1	3	1		1		1		1						12
SEGREGATED WHITE		1		1	1		1	1		1							6
DESEGREGATED BLACK	2	4	2	6	3	4	3	5		2							31
DESEGREGATED WHITE		1	2	3		5	4	4	1	2	3	1	2				28
																	TOTAL <u>77</u>

GROUPING OF SAMPLE SCORES - MATHEMATICS PERCEIVED QUALITY OF SCHOOL

	230	240	250	255	260	265	270	275	280	285	290	295	300	Total
	234	244	254	259	264	269	274	279	284	289	294	299	304	
<u>ABOVE AVERAGE</u>														
SEGREGATED BLACK	25	7	6	9	19	13	9	2	2					92
SEGREGATED WHITE	6	2	4	3	10	8	15	12	14	3	4	2	1	84
DESEGREGATED BLACK	6	4	5	8	10	10	7	5	4	2	1			62
DESEGREGATED WHITE	2	1	2	4	3	6	16	9	23	5	3	2		76
														TOTAL <u>314</u>
<u>AVERAGE</u>														
SEGREGATED BLACK	14	5	6	2	7	4	6	2						46
SEGREGATED WHITE	5	1	1	2	8	8	12	11	3	7	2			60
DESEGREGATED BLACK	9	5	6	9	12	7	4	3	2					57
DESEGREGATED WHITE	1		1		10	3	8	9	4	7	1	2		46
														TOTAL <u>209</u>
<u>BELOW AVERAGE</u>														
SEGREGATED BLACK	2	2			1	2	4	1						12
SEGREGATED WHITE	3						1		2					6
DESEGREGATED BLACK	2	2	3	5	7	5	4	2	1					31
DESEGREGATED WHITE	1	1		1	4	1	7	5	5	2		1		28
														TOTAL <u>77</u>

## APPENDIX F

## GROUPING OF SAMPLE SCORES - READING FAMILY SOCIO-ECONOMIC STATUS

	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	Total
	249	254	259	264	269	274	279	284	289	294	299	304	309	314	319	324	
<u>UPPER</u>																	
SEGREGATED BLACK								NO SCORES									0
SEGREGATED WHITE					1			1		1	2	1	1				7
DESEGREGATED BLACK								NO SCORES									0
DESEGREGATED WHITE							2	1	1	1	1	3	2	3		2	16
																TOTAL	<u>23</u>
<u>MIDDLE</u>																	
SEGREGATED BLACK	5	5	1	9	2	5	8	5	8	5	2	2	1				58
SEGREGATED WHITE	8	2	6	2	8	5	7	21	15	13	11	8	4	3		2	115
DESEGREGATED BLACK	4	4	7	8	6	10	6	9	6	8	6	3	1	1			79
DESEGREGATED WHITE	2	1	1	2	2	7	10	14	17	12	16	10	7	4	3	2	110
																TOTAL	<u>462</u>
<u>LOWER</u>																	
SEGREGATED BLACK	9	12	4	14	8	10	10	11	7	4	3						92
SEGREGATED WHITE	1	1		1	2	1	1	6	1	3	6	1	2	2			28
DESEGREGATED BLACK	5	5	6	6	8	6	11	7	7	3	5		1	1			71
DESEGREGATED WHITE	1				1		2	4	4	2	3	2	1				24
																TOTAL	<u>215</u>

GROUPING OF SAMPLE SCORES - WRITING FAMILY SOCIO-ECONOMIC STATUS

	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	Total
	249	254	259	264	269	274	279	284	289	294	299	304	309	314	319	324	
<u>UPPER</u>																	
SEGREGATED BLACK									NO SCORES								0
SEGREGATED WHITE	1				1			2		2	1						7
DESEGREGATED BLACK									NO SCORES								0
DESEGREGATED WHITE				1			2	4	2	1	1	2	2	1			16
																	TOTAL <u>23</u>
<u>MIDDLE</u>																	
SEGREGATED BLACK	7	8	3	7	5	5	11	7		2	3						58
SEGREGATED WHITE	6	7	6	9	12	5	14	14	16	15	9	1	1	2			115
DESEGREGATED BLACK	6	4	12	11	9	9	6	8	5	4	3		1		1		79
DESEGREGATED WHITE	1	5	4	9	5	7	13	16	11	12	19	1	6	1			110
																	TOTAL <u>462</u>
<u>LOWER</u>																	
SEGREGATED BLACK	10	18	5	17	10	7	12	7	4	1	1						92
SEGREGATED WHITE	1		1		4	2	5	5	3	2	3	1	1				28
DESEGREGATED BLACK	7	11	1	12	5	5	11	10	1	6	1	1					71
DESEGREGATED WHITE		1	1	1	2	2	3	6	3	1	1		1	1		1	24
																	TOTAL <u>215</u>



GROUPING OF SAMPLE SCORES - MATHEMATICS FAMILY SOCIO-ECONOMIC STATUS

	230	240	250	255	260	265	270	275	280	285	290	295	300	Total
	234	239	254	259	264	269	274	279	284	289	294	299	304	
<u>UPPER</u>														
SEGREGATED BLACK					NO SCORES									0
SEGREGATED WHITE	1					2		2		2				7
DESEGREGATED BLACK					NO SCORES									0
DESEGREGATED WHITE					2		4	3	4		1	2		16
														TOTAL 23
<u>MIDDLE</u>														
SEGREGATED BLACK	18	5	4	5	8	8	7	3						58
SEGREGATED WHITE	10	3	3	5	15	11	23	15	15	7	5	2	1	115
DESEGREGATED BLACK	9	5	7	9	17	15	6	4	5	2				79
DESEGREGATED WHITE	2	1	3	3	12	10	20	15	24	13	4	3		110
														TOTAL 462
<u>LOWER</u>														
SEGREGATED BLACK	23	9	9	4	19	12	12	2	2					92
SEGREGATED WHITE	3		1	1	3	3	5	5	5	1	1			28
DESEGREGATED BLACK	8	6	8	12	11	9	8	6	2		1			71
DESEGREGATED WHITE	2	1		1	3	7	3	4	2					24
														TOTAL 215

# APPENDIX G

## FREQUENCY OF SCORES

LEVEL OF STUDENT EDUCATIONAL ASPIRATIONS	LEVEL OF STUDENT EDUCATIONAL ASPIRATIONS			TOTAL
	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE	
ALL BLACK SCHOOL STUDENTS	32	26	92	150
ALL WHITE SCHOOL STUDENTS	53	31	66	150
DESEGREGATED SCHOOL, BLACK STUDENTS	35	23	92	150
DESEGREGATED SCHOOL, WHITE STUDENTS	41	23	86	150

PERCEIVED QUALITY OF SCHOOL	PERCEIVED QUALITY OF SCHOOL			TOTAL
	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	
ALL BLACK SCHOOL STUDENTS	92	46	12	150
ALL WHITE SCHOOL STUDENTS	84	60	6	150
DESEGREGATED SCHOOL, BLACK STUDENTS	62	57	31	150
DESEGREGATED SCHOOL, WHITE STUDENTS	76	46	28	150

FAMILY SOCIO-ECONOMIC STATUS	FAMILY SOCIO-ECONOMIC STATUS			TOTAL
	UPPER	MIDDLE	LOWER	
ALL BLACK SCHOOL STUDENTS	0	58	92	150
ALL WHITE SCHOOL STUDENTS	7	115	28	150
DESEGREGATED SCHOOL, BLACK STUDENTS	0	79	71	150
DESEGREGATED SCHOOL, WHITE STUDENTS	16	110	24	150

# APPENDIX H

## LEVEL OF STUDENT EDUCATIONAL ASPIRATIONS CELL MEANS

### BLACK STUDENTS

	ALL BLACK SCHOOL			DESEGREGATED SCHOOL		
	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE
Reading	260.44	271.04	274.33	271.29	272.00	275.75
Writing	259.35	265.85	268.25	267.83	267.88	270.81
Mathematics	250.03	254.70	254.67	256.77	255.91	261.79

### WHITE STUDENTS

	ALL WHITE SCHOOL			DESEGREGATED SCHOOL		
	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE
Reading	278.98	281.35	288.74	285.17	292.00	292.40
Writing	275.77	273.12	282.45	275.78	285.26	285.43
Mathematics	261.76	268.13	275.03	269.57	273.95	286.36

PERCEIVED QUALITY OF SCHOOL  
CELL MEANS

BLACK STUDENTS

	ALL BLACK SCHOOL			DESEGREGATED SCHOOL		
	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE
Reading	270.75	271.68	268.67	265.15	270.49	272.48
Writing	264.94	268.20	263.67	274.33	264.90	267.82
Mathematics	253.64	251.57	259.09	262.09	256.74	260.71

WHITE STUDENTS

	ALL WHITE SCHOOL			DESEGREGATED SCHOOL		
	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE
Reading	284.97	281.83	289.50	291.53	291.02	285.92
Writing	273.20	278.16	272.00	284.89	280.26	279.50
Mathematics	270.10	269.17	255.34	274.50	273.84	272.00

FAMILY SOCIO-ECONOMIC STATUS  
CELL MEANS

BLACK STUDENTS

	ALL BLACK SCHOOL			DESEGREGATED SCHOOL		
	UPPER	MIDDLE	LOWER	UPPER	MIDDLE	LOWER
Reading	No Score	273.91	268.91	No Score	275.67	273.05
Writing	No Score	267.95	265.16	No Score	270.17	269.05
Mathematics	No Score	252.52	254.07	No Score	260.23	258.90

WHITE STUDENTS

	ALL WHITE SCHOOL			DESEGREGATED SCHOOL		
	UPPER	MIDDLE	LOWER	UPPER	MIDDLE	LOWER
Reading	292.00	282.56	286.46	300.75	289.50	289.08
Writing	283.42	277.13	280.57	289.81	281.86	281.79
Mathematics	276.28	269.22	269.22	278.56	274.54	268.88

# APPENDIX I

## LEVEL OF STUDENT EDUCATIONAL ASPIRATIONS "Z" SCORES

### BLACK STUDENTS

	ALL BLACK SCHOOL			DESEGREGATED SCHOOL		
	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE
Reading	-1.04	-.48	-.31	-.47	-.43	-.24
Writing	-0.82	-.46	-.32	-.34	-.34	-.18
Mathematics	-1.03	-.74	-.74	-.63	-.67	-.31

### WHITE STUDENTS

	ALL WHITE SCHOOL			DESEGREGATED SCHOOL		
	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE	HIGH SCHOOL	SOME COLLEGE	COLLEGE DEGREE
Reading	-0.60	.06	.45	.26	.62	.64
Writing	0.10	-.05	.47	.10	.64	.65
Mathematics	-0.30	.08	.50	.17	.44	1.25

PERCEIVED QUALITY OF SCHOOL  
"Z" SCORES

BLACK STUDENTS

	ALL BLACK SCHOOL			DESEGREGATED SCHOOL		
	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE
Reading	-.50	-.45	-.61	-.79	-.50	-.41
Writing	-.51	-.33	-.58	-.02	-.51	-.35
Mathematics	-.81	-.93	-.47	-.29	-.62	-.37

WHITE STUDENTS

	ALL WHITE SCHOOL			DESEGREGATED SCHOOL		
	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE
Reading	.24	-.09	.49	.60	.57	.30
Writing	-.04	.23	.11	.61	.35	.31
Mathematics	.20	.14	-.70	.47	.43	.32

FAMILY SOCIO-ECONOMIC STATUS  
"Z" SCORES

BLACK STUDENTS

	ALL BLACK SCHOOL			DESEGREGATED SCHOOL		
	UPPER	MIDDLE	LOWER	UPPER	MIDDLE	LOWER
Reading	No Score	-.33	-.60	No Score	-.24	-.38
Writing	No Score	-.34	-.49	No Score	-.22	-.28
Mathematics	No Score	-.87	-.78	No Score	-.40	-.48

WHITE STUDENTS

	ALL WHITE SCHOOL			DESEGREGATED SCHOOL		
	UPPER	MIDDLE	LOWER	UPPER	MIDDLE	LOWER
Reading	.62	.12	.33	1.08	.49	.47
Writing	.52	.16	.37	.88	.44	.43
Mathematics	.58	.15	.15	.72	.47	.11



## SELECTED BIBLIOGRAPHY

Bertolaet, Frederick W., and Nystrand, Raphael O. "Urban Educational Problems," Encyclopedia of Educational Research. (London: The MacMillan Company, 1969). Pp. 1499-1505.

Bulletin of the National Association of Secondary Principals. A Profile of the Large City High School. (Washington: National Education Association, January, 1971), Vol. 55, Number 351.

Calhoun, Lillian S. Desegregation Works: A Primer for Parents and Teachers. (Chicago: Integrated Education Associates, 1968), 29 pages.

Coffman, William E. "Achievement Tests," Encyclopedia of Educational Research. (London: The MacMillan Company, 1969), pp. 7-14.

Downs, Anthony. Racism in America, and How to Combat It. (Washington: Clearinghouse Publication, Urban Series, 1970), 44 pages.

Editors of Education, U. S. A. The Shape of Education for 1970-1971. (Washington: National School Public Relations Association, 1970), 65 pages.

Fantini, Mario D. The Reform of Urban Schools. (Washington: The National Education Association, 1970), 100 pages.

Holden, A., Valien, B., and Valien, P. A Tentative Description and Analysis of the School Desegregation Crisis. (New York: Anti-Defamation League of B'Nai B'rith, Undated), 23 pages.

Mack, Raymond W. "Suburb, Central City, and Education," Metropolitanism, Its Challenge to Education, The Sixty Seventh Yearbook of the National Society for the Study of Education. (Chicago: University of Chicago Press, 1968), pp. 71-87.

- Morphet, Edgar L., Johns, Roe L., and Reller, Theo L. Educational Organization and Administration; Concepts, Practices, and Issues. (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1967), pp. 61-62.
- Pettigrew, Thomas F., Negro American Intelligence. (Princeton, N.J.: D. VanNostrand Company, Inc., 1964), 35 pages.
- \_\_\_\_\_. School Integration in Current Prospective. (New York: The American Jewish Committee, 1958) 12 pages.
- Smith, Paul M. Jr. "What Guidance for Blacks," The Personnel and Guidance Journal. (Washington: American Personnel and Guidance Association, May, 1970), 92 pages.
- Tannenbaum, Abraham J. "Social and Psychological Considerations in the Study of the Socially Disadvantaged," The Educationally Retarded and Disadvantaged. The Sixty Sixth Yearbook of the National Society for the Study of Education. (Chicago: The University of Chicago Press, 1967), pp. 40-63.
- Tuddenham, Read D. "Intelligence," Encyclopedia of Educational Research. (London: The MacMillan Company, 1969), pp. 654-664.
- U. S. Department of Health, Education, and Welfare. Equality of Educational Opportunity. A report prepared by the Office of Education. (Washington: U. S. Government Printing Office, 1966), 737 pages.
- Wey, Herbert. Planning and Preparing for a Successful Program of School Desegregation. (Bloomington: Phi Delta Kappa, 1965), 47 pages.
- Wolfe, Ann G. Differences Can Enrich Our Lives. (New York: Public Affairs Committee, 1967), Pamphlet Number 399, 29 pages.



2



