COMPARISON OF ACHIEVEMENT, SELF-CONCEPT, AND ENVIRONMENT OF BUSED AND NON-BUSED WHITE FIFTH AND SIXTH GRADE CHILDREN

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CHAPTER I

INTRODUCTION

Some of the legal and educational problems spawned by the Brown decision of 1954 stem from the United States Supreme Court's early interpretations of the Civil War Amendments to the Federal Constitution and the educational policies and practices adopted in accordance with those early interpretations. As early as 1883, in a civil rights case, the Supreme Court held that the right to equal protection of the laws guaranteed by the Fourteenth Amendment protects persons against racial action but does not protect against discrimination by non-public or private actions.

In 1890 the General Assembly of the State of Louisiana passed an act providing for separate railway carriages for the white and colored races. The constitutionality of this act was attacked upon the grounds that it was in conflict with the Thirteenth Amendment of the Constitution, abolishing slavery, and the Fourteenth Amendment, which prohibits certain restrictive legislation on the part of the states.

This act was challenged as is widely known as the Plessy vs. Ferguson case. Plessy did not involve the schools; the issue arose under the Louisiana statute requiring segregated railway accommodations for travel within the state as noted above. Justice Brown wrote the majority opinion and held that the state law did not violate either the Thirteenth or the Fourteenth Amendment. Despite the fact that the case

was confined to intrastate railway accommodations, the decision was used to support the notion that separate but equal school facilities for colored pupils were consistent with constitutional principles. Justice Brown (Hazard, 1971) concluded by stating:

> In determining the question of reasonableness, it is at liberty to act with reference to the established usages, customs, and traditions of the people, and with a view to the promotion of their comfort, and the preservation of the public peace and good order. Gauged by this standard, we cannot say that a law which authorizes or even requires the separation of the two races in public conveyances is unreasonable, or more obnoxious to the Fourteenth Amendment than the acts of Congress requiring separate schools for colored children in the District of Columbia . . . or the corresponding acts of state legislatures (p. 145).

Mr. Justice Harland (Hazard, 1971) gave the only dissenting opinion in the Plessy vs. Ferguson case and summarized his feeling by this statement:

> The white race deems itself to be the dominant race in this country. And so it is, in prestige, in achievements, in education, in wealth and in power . . . . But in view of the Constitution, in the eye of the law, there is in this country no superior, dominant ruling class of citizens. There is no caste here. Our Constitution is color-blind, and neither knows nor tolerates classes among citizens. In respect to civil rights, all citizens are equal before the law . . . . It is therefore regretted that this high tribunal, the final expositor of the fundamental law of the land, has reached the conclusion that it is competent for a state to regulate the enjoyment by citizens . . . upon the basis of race (p. 150).

This separate but equal doctrine prevailed in public education until 1954--approximately 58 years. During this period, dual systems of public education were established in 17 states and the District of Columbia, and were optional in four other states. Some educators questioned the educational soundness of separate but equal education, but, for the most part, members of the education profession accepted the situation.

Whatever may have been the extent of psychological knowledge at the time of Plessy vs. Ferguson, it was not supported in 1954 with the decision of the Supreme Court in Brown et al. vs. Board of Education of Topeka et al. Mr. Chief Justice Warren delivered the opinion of the Court that the doctrine of separate but equal has no place and that separate educational facilities are inherently unequal. Thus, the legal basis of the national policy of integration, and of the school busing issue today, is the declaration of the Supreme Court in 1954. The Supreme Court ruled unanimously that segregation of the races in public education was unconstitutional. The Court (Hazard, 1971) made its position abundantly clear in the following unequivocal statement:

> In approaching this problem, we cannot turn back the clock to 1896 when the Amendment was adopted, or even to 1896 when Plessy vs. Ferguson was written. We must consider public education in the light of its full development and its present place in American life throughout the nation. Only in this way can it be determined if segregation in public schools deprives these plaintiffs of the equal protection of the laws . . . .
>
> We come then to the question presented: Does segregation of the children in public schools solely on the basis of race, even though the physical facilities and other "tangible" factors may be equal, deprive the children of the minority group of equal education opportunities? We believe it does.
>
> Segregation of white and colored children in public schools has a detrimental effect upon the colored children. The impact is greater when it has the sanction of the law; for the policy of separating the races is usually interpreted as denoting the inferiority of the Negro group (p. 136-137).

In this decision, the Court held that segregation by race in the public schools is unconstitutional under the Fourteenth Amendment to the Constitution of the United States. After further argument before the Court, it remanded the case to the lower courts for the issuance of decrees consistent with its decision and for the compliance "with all deliberate speed."

This particular decision has specific bearing on the problem of integrated education in the United States. For many years in the country it meant the education of black and white students in the same school for the first time. Racial segregation in the school was of two types: (a) de jure segregation supported by governmental action or inaction and (b) de facto segregation not supported by governmental action but existing in fact.

It has been 20 years since the historic Brown vs. Topeka decision. Schools have been slow in following the "with deliberate speed" decree of the Court. In eliminating both types of segregation, the federal busing orders of 1970, expanding the scope of pre-existing busing, generated a set of controversies continuing to the present. Many prominent Americans have stated their position on busing:

> I would like to restate my position as it relates to busing. I am against busing as that term is commonly used in school desegregation cases. I have consistently opposed the busing of our nation's school children to achieve a racial balance, and I am opposed to the busing of children simply for the sake of busing (President Nixon, 1971).

> All things being equal, with no history of discrimination, it might be desirable to assign pupils to schools nearest their homes. But all things are not equal in a system that has been deliberately constructed and maintained to enforce racial segregation (Chief Justice Warren Burger, 1971).

> The current controversy over school busing is surprising to those of us who have devoted out lives to public education. The school bus has been a major factor in improving educational opportunity of hundreds of millions of American children during the last half century (Donald Morrison, President, National Education Association, 1971).

Although busing has played a role in the desegregation controversy almost from the time of the Brown decision, busing specifically for desegregation purposes has been used across the Nation only in the

last three or four years. Busing as a desegregation tool became a national issue with a series of court decisions starting in 1966.

These decisions set the stage for the busing controversy. This was not because they ordered busing, but because they ordered elimination of "white" and "Negro" schools, and in many communities that could be done only by busing both white and black. A few northern cities began experimenting with busing as a means of increasing school integration. Most of these plans called for "one-way" busing--that is, transporting minority children to predominately white schools.

In 1971, in the Charlotte-Mecklenburg case (Burger, 1971), the Court ruled on what kind of steps should be taken to create a unitary, or single system, without racial division. The Court held unanimously that busing is a proper means of desegregating schools.

Despite the care with which courts acted and despite the fact that many years had gone by since the Brown decision, busing drew a violent reaction during 1970 and 1971. This was especially true when communities were busing white students to formerly all-black schools.

There are many legitimate concerns about busing for desegregation: Will the quality of education suffer? Will the children be safe? Will their health be jeopardized? Will problems of school discipline increase? Are the courts going beyond constitutional requirements? These and other questions demand answers that fact, not rhetoric, can provide.

Wichita, Kansas, Unified School District No. 259, Sedgwick County, was one of many large school systems to desegregate its elementary schools by busing both black and white children in the 1971-72 school year. The desegregation plan was adopted by the Wichita Board of

of Education in the spring of 1971 and was not an integration plan directed by the court. However, the district had been found guilty of de jure segregation in a 1970 administrative hearing in Kansas City under the auspices of the Office of Civil Rights. It probably would have been a matter of time until the courts would have directed the district to integrate by court order had the board not adopted its own integration plan recommended by central administration.

In the spring of 1971, there were 1,318 white students that were randomly selected (Appendix C) by use of birthdates. These students were to be bused from their neighborhood school to one of three formerly all-black schools. Students from kindergarten to sixth grade were selected. There were 273 white students who were volunteered by the parents for the integration effort. These volunteers represented every grade level.

There has been no attempt by the local school district, however, to evaluate the cognitive and affective development of the white students, selected by lottery, and bused to these formerly all-black schools. However, white students who were volunteered by their parents are not part of this investigation.

Justification for the Study

The school bus is familiar to every American. For decades it has been viewed as a convenience, even a necessity, for the education of the Nation's children. Whether brought up in big cities, suburbs, or rural areas, millions of Americans, at one time or another, were bused to and from school and thought little about it. Traditionally, busing has caused little upset or controversy, for everyone understood that

the benefits, in the form of better educational opportunity, well warranted the minor inconvenience which a bus ride involves. Scenes of picketing and protest over busing were rare, and occurred only when parents demanded more, not less, busing.

In recent years, the situation has changed radically. The school bus has been vilified as representing a needless waste of money, a threat to the safety of children, and a health hazard. Busing has been condemned, not as a relative inconvenience, but an absolute evil.

The storm over busing is a limited one. For most purposes, busing continues and even increases with little show of concern. Handicapped children still are bused to school with special facilities. Gifted children are still bused to schools with curriculum and teachers better suited to develop their abilities. And children in rural areas are still bused in increasing numbers as the movement toward consolidation proceeds.

Only in the context of school desegregation has busing become an issue of emotion and controversy. This is especially true when white children are forced to leave their own neighborhood school and are bused to an inner-city or formerly all-black school.

It is quite evident that the success of racial integration in the public schools of the United States will depend upon far more than the enforcement of the Supreme Court's ruling of May, 1954. Empirical evidence is needed on what really happens when white elementary students are bused to formerly all-black schools. The preponderance of research has been done on the effect of desegregation on the black or minority students being bused to white schools. There is considerable

need for information on the difference in academic achievement, self-concept, and perceived school environment for those white students who remain in their own neighborhood for the same period of time, because possible differences between the two groups, in the variables measured, comprise one of the major problem areas in desegregation education.

This study will add to the limited data bank regarding white children who are sent to an inner-city or formerly all-black school over a three-year period. In addition to achievement, there is a need to ascertain how these bused and non-bused students feel about their school. The self-concept of both bused and non-bused will also be measured. The preponderance of available research was done to determine how desegregation affects the black child who is bused from the ghetto to an all-white school. Therefore, most studies evaluate the achievement and related variables on white students who remain in their own neighborhood school. Empirical evidence on the effect of busing whites is practically nil. The variables measured--achievement, self-concept, and perceived school environment--are of paramount importance to any elementary school and are central to the question of integration.

Statement of the Problem

The purpose of this study, therefore, was to provide data on six questions, using control techniques through random selection, on the impact of forced busing of white children who have been bused for a three-year period compared to a comparable group of non-bused white children.

Answers to the following questions were sought.

1. How does the overall educational achievement, as measured by the Iowa Test of Basic Skills composite score, differ when the bused-white students are compared to non-bused whites?

2. How does the educational achievement, as measured by the Iowa Test of Basic Skills (ITBS) reading subtest, differ when the bused-white students are compared to non-bused whites?

3. How does the educational achievement, as measured by the Iowa Test of Basic Skills mathematics subtest, differ when the bused-white students are compared to non-bused whites?

4. How does the self-concept, as measured by the Piers-Harris Children's Self-Concept Scale, differ when the bused-white students are compared to non-bused white students?

5. How does the perceived school environment, as measured by the Elementary School Environment Survey (ESES), differ when the bused-white students are compared to non-bused white students?

6. How does attendance, taken from school records, differ when the bused-white students are compared to non-bused white students?

Basic Hypotheses

Certain hypotheses were formulated and tested by a statistical analysis of the data collected. This study proposes to establish a basis for the testing of the following hypotheses:

Hypothesis One. The ITBS overall composite academic achievement of white-bused children will not be significantly different from that of a comparable group of non-bused white children.

Hypothesis Two. The ITBS reading achievement of white-bused children will not be significantly different from that of a comparable group of non-bused white children.

Hypothesis Three. The ITBS mathematics achievement of white-bused children will not be significantly different from that of a comparable group of non-bused white children.

Hypothesis Four. The self-concept of bused-white children, as measured by the Piers-Harris Children's Self-Concept Scale, will not be significantly different from that of a comparable group of non-bused white children.

Hypothesis Five. The perceived educational environment of white-bused children, as measured by the ESES, will not be significantly different from that of a comparable group of non-bused white children.

Hypothesis Six. The attendance record of children who are bused will not be significantly different from that of a comparable group of non-bused white children.

Definition of Terms

For the purpose of this study, the following definitions were used:

Bused -- Consists of fifth and sixth grade white children who have been bused to one of three formerly all-black schools for a three-year period.

Non-bused -- Consists of fifth and sixth grade white children who have not been bused and have remained in their own neighborhood school for the same three-year period.

Segregation -- For the purpose of this study, segregation refers to separation or isolation by race, either white or black. The term reflects common educational and judicial usage.

De jure segregation -- is a term implying segregation explicitly permitted or prescribed by law.

De facto segregation -- is a term implying segregation without legal sanction.

Educational achievement -- is defined as the student's score on the Iowa Test of Basic Skills (ITBS) composite, the Iowa Test of Basic Skills reading subtest, and the Iowa Test of Basic Skills mathematics subtest.

General ability -- is defined as the student's score on the California Test of Mental Maturity (CTMM).

Self-concept -- is defined as the manner in which one characteristically views and evaluates himself, or feels about himself. It is formed through the individual's physical and social interaction with his environment, which includes the school.

Educational environment -- is defined as the conditions, forces, and external stimuli or situational determinants which foster the development of individual characteristics. The environment can be described according to the participant's perception of these determinants or stimuli as measured by the subject's responses to the statements which depict these perceptions.

Educational environment variables -- are defined as five dimensions which describe some of the reality that exists in elementary schools. The dimensions are: Practicality, Community, Awareness, Propriety, and Scholarship. The five dimensions, as defined below, are taken from Robert Leo Sinclair's dissertation (1968).

Practicality -- The statements in this variable suggest a practical instrumental emphasis in the environment.

> Procedures, personal status, and practical benefits are important. Status is gained by knowing the right people, being in the right groups, and doing what is expected. Order and supervision are characteristic of the administration and classwork. Good fun, school spirit, and student leadership in school social activities are evident (Sinclair, 1968, p. 26).

Community -- A friendly, cohesive, group-oriented school life is characterized by the combination of statements in this dimension.

> The environment is supportive and sympathetic. There is a feeling of group welfare and group loyalty, which encompasses the school as a whole. The school is a community. It has a congenial atmosphere (Sinclair, 1968, p. 27).

Awareness -- The items in this variable seem to reflect a concern emphasis upon three sorts of meaning--personal, poetic, and political.

> An emphasis upon self-understanding, reflectiveness, and identity suggests the search for personal meaning. A wide range of opportunities for creative and appreciative relationships to painting, music, drama, poetry, sculpture, and architecture suggests the search for poetic meaning. A concern about events around the world, the welfare of mankind, and the present and future condition of man suggests the search for political meaning and idealistic commitment. What seems to be evident in this sort of environment is a stress of awareness--an awareness of self, of society, and of esthetic stimuli (Sinclair, 1968, p. 27).

Propriety -- An environment that is polite and considerate is suggested by the statements in this dimension.

> Caution and thoughtfulness are evident. Group standards of decorum are important. On the negative side, one can describe propriety as the absence of demonstrative, assertive, rebellious, risk-taking inconsiderate behavior (Sinclair, 1968, p. 28).

Scholarship -- The items in this variable describe an academic, scholarly environment.

> The emphasis is upon competitively high academic achievement and a serious interest in scholarship. The pursuit of knowledge and theories, scientific or philosophical, is carried on rigorously and vigorously. Intellectual speculation, and interest in ideas as ideas, knowledge for its own sake, and intellectual discipline--all these are characteristic of the environment (Sinclair, 1968, p. 28).

Assigned attendance area -- is defined as the geographical area within the school district, Unified School District No. 259, Wichita, Kansas, where the preponderance of the black citizens within the district reside. The three formerly all-black elementary schools are located in this geographical area and receive the bused-white children.

Major Assumptions

The following assumptions will apply:

1. Academic achievement is measurable by the Iowa Test of Basic Skills (ITBS).

2. Self-concept is measurable by the Piers-Harris Children's Self-Concept Scale (CSCS).

3. School environments are measurable by the Elementary School Environment Survey (ESES).

4. The perceptions of individuals attending a school outside their own neighborhood are a valid source of descriptions of their school environment.

5. If the students agree by a majority of two or more to one, that a statement is true about their school, then that statement is characteristic of their school.

6. Irrespective of the curriculum or administrative organization of the school, such as departmentalized or open space, the program is

also characteristic of the self-contained classroom in which the student is a participant.

7. Since all subjects, bused and non-bused, were randomly selected, both groups for this study are comparable in physical, social, and emotional development.

8. Socio-economic status of all subjects is held constant through random selection procedures.

9. There will be differences between the teachers that worked with the bused subjects as opposed to those who worked with the non-bused subjects.

10. The tester-testee rapport and testing conditions for the Iowa Test of Basic Skills are not prejudical to either group.

11. Again, because of the randomization procedures utilized, there were no differences in the parental attitudes toward school and educational aspirations between bused and non-bused families.

Limitations

The following limitations apply to the study:

1. Finding two samples of children alike in all respects and to control all intervening variables is most difficult.

2. Changes in any of the variables measured in the investigation may be due merely to maturation.

3. The analysis of pupils' perceptions of the school environment is limited to their performance on the Elementary School Environment Survey (ESES).

4. School records are vulnerable to error. The present study necessarily relied on these data under the assumption that such

information, recording, or transcribing errors as may have occurred were random and few and introduced no bias.

5. Attitudes toward whites coming into an all-black school, as opposed to blacks coming into an all-white school, has a possible effect on school values.

Methodology and Data Analysis

The following procedures were employed for collection and analysis of the data:

1. The sample consisted of 52 bused-white fifth and sixth grade students and 64 non-bused white fifth and sixth grade students.

2. Permission was obtained (Appendix B) from the Wichita Public Research Council, Wichita Public Schools, Wichita, Kansas, to do the study.

3. Teachers of selected subjects administered the Iowa Test of Basic Skills over the three-year period.

4. Selected elementary principals personally administered the Children's Self-Concept Scale (CSCS) to all non-bused subjects (see Appendix G).

5. Selected elementary principals personally administered the Elementary School Environment Survey (ESES) to all non-bused subjects to assess the subjects' perceptions of the school environment (see Appendix G).

6. The investigator personally administered the ESES and CSCS to all bused subjects.

7. Iowa Test of Basic Skills Composite, Reading, and Mathematics will constitute the criterion measure in the cognitive domain. Analysis of variance will constitute the statistical treatment on achievement.

8. The Elementary School Environment Survey will be used to determine and compare perceived school environment between bused and non-bused white students. The Mann-Whitney U non-parametric test will be statistical treatment for this instrument. The Mann-Whitney U is sensitive in ascertaining whether or not the two independent samples are from the same populations with the same central tendency or from populations which differ in location of central tendency.

9. The t-ratio will be used to assess the differences in self-concept between the two groups.

10. The t-ratio will be used to assess the difference in attendance between the two groups.

Summary and Organization of the Study

Chapter I of this study has provided background information to the study. The purpose, as well as the hypotheses to be tested, have been identified. The terms used frequently in this study are defined. Finally, the major assumptions, limitations, methodology, and data analysis basic to this study have been stated. The format for the succeeding chapters is as follows: Chapter II treats the selected, related literature which was reviewed for this study. Chapter III relates to methodology and design of the experimental nature of this study. Chapter IV presents the analysis of data collected for this study. Chapter V presents the findings and conclusions, and makes recommendations for further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

In Chapter I, the writer portrayed the need for research in the area of achievement, self-concept, and perception of school environment for bused white elementary children. The second chapter focuses upon relevant research and literature in these areas. Specific areas of the problem are discussed. The areas include: research studies and related literature of white achievement in integrated schools; self-theory; self-concept and achievement; self-concept; studies relating to classroom environment; and environment and integration. The review of each area includes actual research findings and views of authorities.

White Achievement in Integrated Schools

There have been previous studies in the general area of racial differences and academic achievement. In the early 1930's, Doxey Wilkerson (1934) studied the variance in academic achievement between Negro and whites. Naturally, his research findings at that time were based on segregated situations in several school systems in the South.

From Wilkerson's research (1934) he made the following significant observations:

> 1. In all school systems studied, the general achievement level of the Negro children tended to be lower than that of white children.

> 2. The differences between the achievement of the two races tend to increase in the upper grades.
>
> 3. The rate of academic growth through the grades tended to be slower for Negro students. About one-fifth more Negro pupils were retarded, in consideration of age as related to grade placement, than were white students (pp. 88-89).

Evidence submitted in a separate research study by Witty (1941), Long, and McGurk (1945), in the nineteen forties, suggested the same results in that Negro students tend to achieve less well, even when matched in intelligence with white students. These studies gave sociological and psychological implication relative to the Supreme Court's ruling in 1954.

Around the time of the 1954 Supreme Court desegregation decision, numerous schools started to publish test scores on white and Negro students. Without exception, as noted above, the results showed a very large gap between the two. These discrepancies existed after more than a century of a theoretical "separate--but--equal" national school policy.

Probably the most extensive and often quoted source on segregation and integration is the Equality of Educational Opportunity Report, which is sometimes referred to as the Coleman Report (1966). Data gathered in the fall of 1965 relates that white students in general, and advantaged whites in particular, are less sensitive than black children in variations in school achievement. The report takes the position that desegregation will not have a negative effect on the more affluent white and that there is little evidence to support the hypothesis that desegregation would have an adverse effect for the less affluent white children.

Colemen (1966) reported that throughout all regions and all grade levels, black students ranged from two to six years behind white students

in reading, verbal, and mathematics performance. In addition, black students were shown to have lower aspirations, lower self-esteem about academic ability, and a more fatalistic attitude about their ability to change their situation. This led Coleman to conclude that:

> . . . schools bring little influence to bear on a child's achievement that is independent of his background and general social context; and this very lack of an independent effect means that the inequalities imposed on children by their homes, neighborhood, and peer environment are carried along to their adult life (p. 236).

St. John (1966) made an important observation concerning the Coleman report. She concluded that:

> The magnitude of this study in size of sample and in the number of variables studied, as well as to the unexpectedness of its findings, suggest that future scholars will label research on the results of desegregation as 'before' of 'after' Coleman. The chief contribution to educational thought of the Coleman report and of the Civil Rights Commission Report, which followed it, may be evidence as to the importance of economic, as noted in the above quotation, as opposed to ethnic integration (p. 1).

Both the insights afforded by the survey and its methodological limitations propel us to more definitive research. To date, most studies are cross-sectional, not longitudinal, with adequate sample controls. Pieced together, these studies give bits of evidence which help define the shape of the larger puzzle and to identify what is known and what is not known.

Before the publication of the Coleman Report, few people doubted that the all-Negro schools are inferior to all-white schools in physical plant, equipment, teacher qualification and competence, curricular offerings, or that integrated schools fall somewhere in between. Ashmore (1954) compared schools for Negroes and whites in the South and found that most educators research the same conclusion. Becker (1952)

also reports of low morale of teachers in ghetto schools and their low opinion of pupils. They also expressed an eagerness to transfer to a more middle-class (or white) setting.

Dyer (1968) gave further evidence as to the effects of the school on achievement, black or white, and took exception to the Coleman survey. He pointed out several weaknesses of the survey: (1) its cross-sectional design, (2) its exclusive focus on measures of verbal ability, and (3) its technique for computing per-pupil expenditure with district wide figure. He also referred to three earlier large-scale studies, which testify to the relationship between school characteristics and pupil performance. All these serve to reduce the quality of schooling and pupil performance.

Bowles and Levin (1968) argued that the measures of school resources employed by the Coleman Report were inadequate and were so highly correlated with the background characteristics of students that the separation of the unique effects of each is very difficult. In short, in spite of any Coleman Report of evidence to the contrary, it seems highly likely that the quality of schools and their staff generally varies with the proportion of minority groups' pupils in attendance. Any superiority in the performance of integrated over segregated children may, in large part, be due to such differences in school quality.

During 1959-1960, the United States Commission on Civil Rights (USCCR) sponsored two conferences on desegregation. Superintendents attended from school systems in 18 states and the District of Columbia. Eleven of them spoke to the question of whether desegregation had lowered academic standards in their system. Nine said no, and two said yes. All superintendents noted the initial lag of Negro students but

most observed that special measures had invariably led to improvement. Wey (1959) reported:

> In 1958 many teachers and principals felt that desegregation had necessitated a lowering of some academic standards . . . . In 1963 only two out of forty teachers felt that the instructional program had been handicapped by the placement of Negroes in former all-white schools and that white achievement had not been adversely effected. Administrators and teachers stated over and over that they had a better instructional program now than when the program began (p. 64).

The United States Commission on Civil Rights (USCCR) (1967) analyzed 95 pages of Coleman's cross-tabulations and concluded that classroom racial composition was related to academic performance of both Caucasion and Negro pupils over and above effects of classroom social class. There was no control for individual ability or socio-economic status, and the study was cross-sectional. The USCCR itself had reservations concerning socio-economic status categorizations and cautioned against hypothesizing cause and effect relationships from its findings.

Marland (1963) reported that Negro students performed somewhat better after Washington, D. C. had been desegregated for five years. At the same time, white students performed at least as well as before desegregation. He compared the reading and arithmetic median scores and they remained essentially unchanged.

Elliott and Badal (1968) studied the effects of desegregation in Oakland, California. The main question they tried to answer was: "Does racial composition of the school make a difference in achievement when scholastic aptitude is controlled?" Their subjects were 4,693 fifth graders. Schools were classified by percentage of Negro population: 80 percent and over, 46 to 79 percent, 11 to 45 percent, and

10 percent and less. Every child took an aptitude test and three achievement tests. Mathematics achievement scores rose as the percentage of Negroes enrolled fell. Reading achievement scores seemed altogether unaffected by racial composition of school.

The Dumbarton (1966) study undertook to discover the effect of desegregation in Oakland, California, the following year. This study related to the following concern:

> Whether significant differences would be observed between those Negroes whose elementary school experiences had been in segregated or predominately Negro schools and those whose experience had been in racially balanced schools; and, similarly between white children who had attended only all-white elementary schools or only racially balanced schools (p. 114-115).

Summary achievement results (p. 123) found that white children perform better than Negroes; Negroes in racially mixed schools achieve better than Negroes in segregated; white children, on the other hand, were found to achieve more in white-segregated than in mixed schools. This difference, however, was clearly a result of social class rather than ethnic makeup. Whites in all-white schools were of much higher social state than whites in mixed schools.

Stallings (1959) studied academic achievement both before and after desegregation in Louisville. After one year, Negro achievement scores rose more than those of whites. Stallings, it should be observed, did not contrast differential achievement in segregated and desegregated schools. Instead, he grouped all students of each race and compared the two races. This procedure probably obscures the precise connections between desegregation and improved achievement. Kantz (1964) observed the improved achievement occurred in segregated as well as desegregated

schools. Accordingly, such improvements in learning attributed to factors other than desegregation, such as improved educational standards.

Hansen (1960) found generally higher system-wide achievement scores for Washington, D. C., pupils following abolition of de jure segregation. Again, there were no controls, data were not longitudinal, and nominal desegregation was accompanied by substantial educational program improvements. He reported that the median city-wide achievement median improved at all grade levels and in major subject areas for both black and white. Unfortunately, for a number of reasons, this encouraging finding cannot be accepted as evidence that desegregation was causally related to improved performance of minority-group children or white as no testing of black children was done before desegregation and no separation of black and white scores was reported after desegregation. Improved white scores could, therefore, have accounted for a higher median. Also, the scores of the same children are not traced through the years; instead successive third grade (etc.) classes were compared. Migration could produce differences in population characteristics. Also, the actual racial composition of schools and classrooms was not considered, and in view of the larger and increasing proportion of blacks in the city in those years, it is likely that most children did not experience much desegregation in their schools. The simultaneous establishment of the track system probably resulted in considerable classroom segregation in those schools that were technically desegregated. As noted above, the quality of substantial educational improvement--lower teacher pupil ratios, increased budget, more (medical) services--allowed plausible alternative explanations of the improved performance.

Samuels (1958) matched black and white pupils on several pertinent factors and found greater average achievement gains for blacks than white. He attempted to control variables such as socio-economic status and intelligence. After two years of desegregation, the achievement gap between Negro and white narrowed significantly; he contributed this improvement directly to desegregation. Overall, Samuels (1958) observed that:

> . . . the longer the association between any particular group of white and Negro students, the smaller the differences in academic achievement appear to be . . . and that the Negro students who had been educated in mixed schools achieved as well as and sometimes better than white students in the integrated program (p. 100).

Katzenmeyer (1962) studied the effect of social interaction on achievement of Negro and white pupils in the public schools of Jackson, Michigan. He hypothesized that:

> . . . the measured intelligence of the Negro children will be significantly changed as the consequence of school experience which enhances their opportunities for social interaction with the dominant white culture (p. 9).

He found that blacks, the experimental group, exceeded the gains for the white students, which constituted the control group. Katzenmeyer (1962) concluded that the change was to be explained principally by the social interaction between Negro and white children. He reported the following:

> . . . the great majority of the Negro population is confined to a small area of the city by economic limitations and by discriminatory policies and pressures in the sale of real estate . . . thus integregation of the schools represents the beginning of a period of social contact by both black and whites (pp. 57-58).

Laurent (1970) studied the effects of pupil race and racial balance in schools on educational achievement. Subjects consisted of 160 black and white students in Tacoma, Washington Public Schools, who ranged

from primary to junior-high levels. Of the 96 four-group comparisons of variables, 32 at each level, only four showed significant differences and three of the four were racial effects. Caucasians scored higher than Negroes in primary mathematics, intermediate language arts, and intermediate composite. The sole interaction effect indicated that Caucasians in nonsegregated schools scored higher than Caucasians in de facto segregated schools on the primary composite. Results of the study suggest that neither pupil race nor racial composition of the school, considered alone or interactively, seemed to have a substantial effect on academic performance when other relevant variables were controlled.

Prichard (1969) compared the achievement scores of both white and black students who attended segregated schools during 1965-1966 to scores of the same students who later attended desegregated schools in Chapel Hill, North Carolina. Comparisons were then made between students in grades five, seven, and nine of segregated schools with students at the same grade level who had experienced one and two years of segregation. Desegregation in itself did not appear to have any significant negative effects on the academic achievement of either race. The only significant changes were of a positive nature. In general, Negro students failed a higher percentage of their courses than did white students during the period of this study. However, Prichard (1969) felt the result as reflected in passing or failing courses was due to the orientation of the curriculum and teaching methods of Chapel Hill Schools to the average middle-class student.

Connery (1971) made a series of four reports concerning the progress of the busing program in District Four, Chicago, Illinois,

covering the school year of September 1970 - June 1971. The four purposes of the plan, as stated in the original report and subsequent reports, are as follows:

> To relieve serious overcrowding, to promote stabilization through the Austin area, and to improve the educational experiences of all children, it has been found that black pupils integrated into classes with white children have achieved at a higher level academically than do their counter parts who remain in the segregated schools. White pupils did not suffer any loss in academic achievement as a result of the busing program. Principals and teachers . . . believe that the busing program has demonstrated positive educational results. White children from segregated white classes have gained in achievement at a normal rate after busing program (integration) has been effected. Black children continued to gain (academically) at a lower rate of achievement in segregated black classes when they remain in such classes (pp. 34-35).

A similar report on a desegregation-busing program was made by Purl and Dawson (1970) covering a period of four years. Their report indicated "that the average reading achievement test scores of the bused pupils showed the same trends as those among the receiving schools (p. 20)." Desegregation was considered to be more beneficial for the higher achieving black than for the lower achiever, which has been reported earlier in similar reports.

Carrigan (1969) reported on a compulsory-busing program in Ann Arbor, Michigan. Again, the compulsory busing effect involved the closing of a predominately Negro school and busing the black students to predominately white schools. Her research focused on the first year of school desegregation, exploring academic, social behavioral, and attitudinal characteristics of the bused-black children and of the white children in the predominately white receiving school. In her summary, Carrigan (1969) stated:

> At the end of a year of desegregated schooling, half the transfer pupils showed five points or more gains in I. Q., and 37 percent showed normal or greater gains in reading. However, gains made by the transfer group were smaller, on the whole, than gains made by the other two groups. There was no evidence to suggest that the normal progress of white receiving children was interrupted by the transfer (p. 429).

In a late report, Carrigan (1970) submitted a limited follow-up two years later and found that there was no evidence that established patterns were altered appreciably by desegregated schooling. That is, black children tended to be more similar to one another across the three populations, mentioned in her 1969 report, than to white children within the same population. Carrigan (1970) noted that the differences tended to favor the whites. She concluded that she felt "desegregation is no panacea for the ills of the minority group." This report did not state whether she had controlled the socio-economic status of blacks as a variable or that the six white receiving schools were comparable in their socio-economic makeup or the racial composition after blacks were bused in.

A voluntary school integration project using the "open enrollment" plan of the Boston School department in transferring Negro children in the black district to more racially balanced schools in other parts of Boston was reported by Teele (1969). Attitudinal and achievement tests on children participating in the project were taken over a two-year period. Teele (1969) found that the black children who volunteered to be bused showed greater improvement in change in achievement than the non-bused black child. Also, he did not find that white achievement was adversely effected. Further data analysis and research is presently being done to try to more clearly locate the factors related to

improvement in both the affective and cognitive area for both white and black children.

Gardner and others (1970) found similar results when their study again focused on the busing of black inner-city children into white suburban schools. Their study attempted to discover what happens to students' attitudes and academic performances as a result of busing. The students studied were involved in a special busing program called Operation Hospitality, which was carried out by the Chicago Catholic School Board. Through this program, black grade-school children from inner-city parochial schools were bused to all-white schools, mostly in suburbs. Although the program had been under way since 1967, it was decided to try to make comparisons in attitude and achievement between bused and non-bused black students and white classmates and non-classmates to see if there was any reasonable evidence of changes. It was found, that in terms of attitude, both groups became slightly more interesting to the other. In terms of scholastic performance, there was no significant difference in either grades or performance on academic tests between the bused or non-bused blacks. Also, white students increased their acceptability of blacks and did not suffer academically from the integration experience.

The Riverside Public Schools in California desegregated according to a program, beginning in 1965. Three segregated-minority schools were closed and students bused to white neighborhoods. Purl and Dawson (1970) made a longitudinal and cross-sectional analysis of achievement during this six-year period. The standardized-achievement scores of black bused and whites in the receiving schools were compared each year

with scores of all students in the district at the same level. A summary of their report concluded:

> The achievement of black-bused pupils did not increase . . . . The achievement of white students in the receiving schools was not impaired (p. 30).

In summary, this section has dealt with the question about the impact of desegregation upon the academic achievement of white students. Many cross-sectional and a few longitudinal analyses have been made. As noted in most of the reports and review of the literature, comparisons were made between blacks and whites on the basis of busing blacks to white schools. The results indicate that, for the most part, the busing of black children usually raises their academic performance or has no adverse effect. In a few cases, the academic performance of black children fell. As noted many times, the socio-economic status was one variable that may have related to this decrease. More germane to this report, is that white children fail to suffer learning disadvantages from desegregation. However, little or no research is available on what happens to white achievement when whites are bused to inner-city schools. It seems evident from this review of the literature that this question needs to be answered empirically.

Self-Theory

At the turn of the present century, there was a great deal of interest in the concept of self. William James (1914) wrote extensively on the concept of self and his writings came in a period that was on the verge of revolution concerning this concept. Freudian psychologists emphasized unconscious motivation. Introspectionists defended the process of introspection as a way of exploring consciousness,

gestaltists believed in the value of insight and stressed the selective perceiver, and the behaviorists attempted to cancel out all other schools of thought of self-theory by claiming that all systems except their own studied consciousness while only a person's tangible, observable behavior was fit for scientific inquiry.

In a period of approximately 20 years (1920's - 1940's), self as a psychological construct and other internal constructs were dropped as a worthy study. Purkey (1967) points out that when psychology abandoned the self, so did education. He further relates that those who purported to believe in the self failed to report any rigorous experimentation. A few exceptions were Mead, Lewin, Goldstein, and Maslow.

Those who supported a "self-theory," and objected most to the behaviorists were the clinical psychologists. Carl Rogers (1950) seemed to take the theory of self and developed the "client-centered" approach to counseling and psychotherapy which he introduced in 1939. It was Rogers' work that has come to be known as "self-theory." It would seem that Rogers' linking of earlier and recent theory regarding self brought about a conscious return to the importance of self in counseling theory and practice, and to education.

In recent years, there has been a great increase in the number of self theories and the number of people in the psychology area who have been influenced by self theories. It was not until the late forties that much empirical work was done. Since that time, there has been an increasingly large output of reports and investigations in this area.

Symonds (1949), in his attempts to conceptualize the self within, states that the self as a concept develops according to what one's

parents call one, is the core of self, and provides possible consistency to behavior.

Sullivan's (1952) conception of self system emphasizes early interpersonal relations and implies stability. His view is that self is built from reflected appraisals coming from the parents. Security measures from the self sanctions good-me behavior and forbids bad-me behavior. Since the self system (originally transmitted from the mother) guards the person from anxiety, it is held in high esteem by the individual and protected from criticism.

Wylie (1961) has summarized the problems involved in the measurement of self-concept when a self-report method is employed. She points out that self reports can be influenced by such irrelevant response variables as social desirability, identity of the examiner, response set, quality of examiner rapport, and the relationship of item content to the degree of revelation. Investigations such as Coopersmith (1967) have dealt with the biasing effects of subject defensiveness and irrelevant response variables through the use of what they call a lie score index. The items comprising the lie index are introduced into a self report and are presumed to be effective in identifying the subjects who are making false responses.

Coopersmith (1967) concluded that the problem of validity in self report appears more critical in theory than empirically. He stated that subjects tend to want social approval and did not want to be associated with the phenomenon known as low self esteem.

Erickson's (1950) approach focuses on a relationship of childhood and society that is pertinent to the development of self-concept. He notes the development of self-concept in early years and states:

> The human child's much more fragmentary patterns depend upon the process of tradition which guides and gives meaning to parental responses. These family patterns are established by tradition and to the institutions of his childhood milieu (p. 72).

Both theoretical approaches and empirical findings indicate that the global versus specific aspects or actual versus self ideal discrepancy representing conflicts in conceptualizations of the self-concept must be resolved before appropriate changes can be effected. However, the basic concept of self is well established in literature.

Self-Concept and Achievement

Laryea (1972) studied the relationship between academic self-concept and achievement. Black and white students in the sixth grade were used in his investigation. Also, the relationship between reflected academic self-concept and the teacher's perception of the student's performance was also examined.

Laryea (1972) determined academic self-concept (what the student thinks of himself in relation to school work) by using a seven-point self reporting instrument consisting of a number of "I" statements made up of words that the sixth grade subjects used in describing what they thought of themselves in relation to their work. Reflected academic achievement (what the student thinks his teacher thinks of him in relation to his work) was measured using the Academic Self-Concept inventory with appropriate modification. An index of the teacher's perception of the student was obtained from a five-point rating scale completed by the teacher; achievement was measured by the student's composite score obtained on a standardized arithmetic and reading test battery.

Data collected and analyzed by Laryea was done separately by race and sex. Examination of the results indicated that black and white students emphasized different attributes in their self-perceptions relating to academic achievement in school. White students seemed to emphasize academic attributes whereas black students appeared to emphasize non-academic attributes.

Davidson and Long (1960) did a similar study when they studied the relation between children's perception of teachers' feelings toward them and the variables self-perception, academic achievement, and classroom behavior. Their sample consisted of about 200 upper elementary students, both boys and girls, in the upper half of their respective grades in reading ability. Self-perception and perception of teachers' feelings were measured by an adjective check list containing words that teachers and pupils had judged to be favorable or unfavorable. Achievement was determined by asking the teachers to rate each pupil on a three point scale--very well, adequately, or below average. The investigators found a positive correlation between childrens' self-perception of academic achievement and their perception of the feeling of their teachers toward them. More importantly, they found a significant positive relationship between reflected self-concept and academic achievement.

Bledson and Garrison (1962) also studied the self-concept of elementary school children in relation to academic achievement, intelligence, interest, and manifest anxiety. Like Davidson and Long, they found a positive correlation between self-concept and achievement.

A study using black and white students was carried out by Caplin (1968). Caplin compared the personal-social and school self-concept

of black and white students in the fourth through sixth grades in desegregated and segregated areas, relating self-concept to achievement. He found that both black and white students attending segregated schools were significantly lower in school-related self-concept than were those in desegregated schools. He reported a correlation of .52 between self-concept and achievement for the two groups.

Purkey (1967) reviewed the literature on self-concept as it relates to academic achievement and concluded that there is a positive relationship between attitudes of self and academic achievement. Most of his studies related to high school pupils and causation was never established.

Fink (1962) studied self-concept as it relates to academic achievement. Pupils were matched on the basis of psychological test data and were analyzed for evidence of an adequate or inadequate self-concept. His hypothesis was that adequate self-concept is related to high academic achievement and that inadequate self-concept was related to underachievement. His hypothesis was supported at the .01 level for boys and at the .1 level for girls.

Self-Concept and Integration

The purpose of school integration is not only to raise the scholastic achievement of Negro children, although most studies as related earlier indicate that it does accomplish this, but more importantly it is to provide equality of opportunity, to raise aspirations, to change behavior and attitudes and to reduce anxiety, prejudice, and antagonism. Those affective goals of integration are impossible where

schools are racially or culturally isolated. Fisher (1966) has stated the problem well when he said:

> It is the substantial isolation of Negro and white students from each other rather than the numbers involved that produces the implication of differential status and prevents the association that is the indispensable basis for mutual understanding and acceptance (p. 29).

The extreme importance of attitudes and self-concept in integration was also pointed out by the Coleman Report (1966):

> Of all the variables measured in the survey, including the measures of family background and all school variables, these attitudes showed the strongest relation to achievement at all three grade levels . . . . Taken alone, these attitudinal variables account for more of the variation in achievement than any other set of variables (p. 319).

The other major report on integration, the Civil Rights Commission Report, agrees with the importance of attitudes and the role of integrated or segregated schools in fostering positive attitudes toward school, one's self, and others of a different race.

In order for one to gain a realistic, positive self-concept, it is necessary to see oneself and one's race in a positive, realistic light. Research has pointed up the need for an understanding of race and color, and the importance of studying one's history and culture in order to bring about racial pride and rising individual aspiration and self-esteem.

According to Combs (1962), self-concept theory points to three important steps: Perceiving, Behaving, Becoming. It also gives some basic hypotheses, which are helpful in the analysis of research dealing with the self-concept as it is affected by integration. It is necessary that a person involved in an integrated setting have an openness to a new experience, which is a reflection of how he feels about himself.

In terms of creativity and openness to experience, Combs (1962) makes this salient comment to self-concept and integration:

> With a positive view of self, one can risk taking changes; one does not have to be afraid of what is new and different. A sturdy ship can venture farther from port. Just so, an adequate person can launch himself without fear into the new, the untried and unknown. A positive view of self permits the individual to be creative, original and spontaneous. What is more . . . to give of himself freely or to become personally involved in events. With so much more at his command, he has much more to give.
>
> Truly adequate people possess perceptual fields maximally open to experience. That is to say, their perceptual fields are maximally capable of change and adjustment in such fashion as to make fullest possible use of their experience (p. 141).

Openness to experience, as noted above, must be emphasized as a prerequisite to a successful integration endeavor. This openness again is based on the self-concept of those involved in the integration experience and the ability to adjust indicates that openness can be fostered by provided new experiences. Integration is a new experience for those that have never been in contact, in the school as a social setting, with members of other racial groups.

In a study for the United States Office of Education, Harootunian (1969) sought to discover the relationship between self-concept and cognitive performance in segregated Negroes, desegregated Negroes, and whites. To measure self-concept, Harootunian used a self-concept ability scale, and to measure cognitive performance, a number of tests eliciting a variety of intellectual constructs were used. He found the self-concept of ability to be an important predictor for all groups except for segregated Negro males and desegregated Negro females. Therefore, he concluded that self-concept was a significant correlate

for whites, and particularly noteworthy for the desegregated Negro males.

Bass (1969) investigated the change of ninth graders' self-concepts and concepts held of others, after interacting with materials taught in seminars of a segregated and an integrated group structure. He concluded that there was no significant change in self-concept or in concept of others as a result of experiencing the content on morals, values, and cultural differences, as taught in the study.

In an integrated Manhattan elementary school, Guggenheim (1969) studied the interrelationships of self-esteem and achievement expectation. He found that both Negro and white children tended to overestimate their probable achievement, especially the Negro. This was especially true of children with high self-esteem. While both Negro and white children of high esteem had equally high achievement expectations, white students of low self-esteem had higher expectations than did Negro children of corresponding self-esteem. This latter finding is contrary to findings of many other studies.

Powell (1970) studied the psychological impact of school desegregation on seventh, eighth, and ninth graders in a southern city. She administered a self-concept scale and a socio-familial questionnaire to 614 desegregated schools. In addition to comparing the effect of desegregation, the investigator was interested in identifying the variables related to positive or negative self-concepts. Her report concludes that there is a self-concept gap between Negro and white students, with Negro students having higher scores than white students on the self-concept scale.

In studying the self-esteem of black and white fifth graders as a function of demographic categorization, Beers (1973) took the position that pupils' attitudes toward themselves and others are just as important, if not more important, than scholastic achievement. Self-esteem was measured by 47 items from the Coopersmith self-esteem inventory and six items from the Equality of Educational Opportunity Survey. Two samples were employed, but the author does not state the racial or socio-economic makeup of either group. She suggests that the result of her study has implications for pupil assignment to buildings as well as implications for the selection of teachers. Unfortunately, though she suggests that self-esteem for both black and white is necessary, she does not specify in her report the demographic categorization that would foster the best possible self-esteem on the part of her subjects.

In summary, research and the review of literature indicates that integration improves the self-concept of Negro children and does not negatively effect the self-concept of white children. Again, empirical evidence is needed in determining how integration effects the self-concept of white children who are bused into inner-city schools.

Studies Relating to Classroom Environment

There is abundant evidence that individual differences in particular characteristics or behavior result from differences in environments in which individuals have lived. Of particular theoretical significance is the need to recognize the diversity existing in elementary school environments. Different environments affect children in different ways, and to ignore variance in school environment is to limit

understanding of behavior differences in students. Because so little is known at present about the major ways in which elementary school environments differ, it is difficult to determine exactly how particular environment variables affect the development of specific characteristics in elementary students.

Ragan (1966) defines classroom environment as "those physical, intellectual, emotional, and social factors that directly affect living and learning in the classroom (p. 195)." He perceives the school as having a physical environment which constitutes the location, size, shape, construction, and physical features of the room itself. Naturally, the physical environment of a school or classroom has certain disadvantages or advantages. However, Ragan feels that the intellectual, social, and emotional climate are more important than the physical environment of the school. Ragan (1966) expresses his feeling in the following manner:

> Most of us are familiar with different classroom climates for we have visited rooms so lacking in friendliness that we call them cold or chilly. We have seen stormy rooms too, where the air was electric and we felt a storm about to break; and foggy rooms, where the teacher and the children were anxious, jittery, and uncertain. You feel, after a visit to such rooms, that . . . . you are glad to get out into fresh air again. There are rooms where you feel that you have walked into a patch of warm sunshine . . . . These rooms have a temperature climate which is right for the optimum growth of the child--a climate in which the learning process flourishes (pp. 196-197).

Bloom (1964) maintains that "the improvement of education and other environments is really the only means available to a civilized society for the improvement of the lot and fate of man (p. 6)." The range of environments goes from the most immediate social interactions to the more remote cultural or institutional forces. These interactions may

be physical, social, and intellectual. He regards the environment as a force that is continually shaping and changing the individual.

Sinclair (1968) studied the diversity and similarity of educational environments in selecting elementary schools in California and Massachusetts by using the Elementary School Environment Survey. The purpose of his study was to identify the educational environments of several schools and to analyze differences and patterns of commonality existing among the schools. He defined educational environment as "the conditions, forces, and external stimuli which foster the development of individual characteristics." Environment was recognized as a complex system of situational determinants that exert an influence upon participating individuals. These determinants include social, physical, and intellectual factors. The environment described was interpreted from the collective perceptions of students participating in the study. Among the findings of the study were: a) school environments are different when measured along selected variables, and b) elementary schools may be grouped into environment patterns and each school may emphasize different dimensions of these selected variables.

Probably one of the most extensive studies of school environment was conducted by Moore (1972). Moore used the Elementary School Environment Survey to identify the educational environments of Oklahoma elementary schools as perceived by fifth and sixth grade pupils who attended those schools. It was the purpose of his study to determine whether or not any significant educational environments of schools became apparent when they were grouped together according to population size, demographic features, socio-economic composition, sex of principal, age of teachers, organizational plans, and amount of open space

facilities. The five environmental variables--Practicility, Community, Awareness, Propriety, and Scholarship, were the same variables used by Sinclair (1968). Seven basic hypotheses were tested and were expressed in the null form. The investigation found that there was a difference between the educational environment of schools located in low socio-economic class setting and schools located in middle-class or higher socio-economic settings. This difference was especially true in the dimension of scholarship. Moore also found a significant difference in educational environments of elementary schools located in urban settings as compared to elementary schools located in rural settings.

Environment and Integration

Coleman (1966) discusses the relationship between learning environment and school achievement by presenting the following evidence which strongly supports the need for integrated education:

> Finally, it appears that a pupil's achievement is strongly related to the educational backgrounds and aspirations of the other students in the school . . . . Analysis indicates that children from a given family background, when put in schools of a different social composition, will achieve at quite different levels. This effect is again less for white students, than for any minority group other than Orientals. Thus, if a white pupil from a home that is strongly and effectively supportive of education is put in a school where most pupils do not come from such homes, his achievement will be little different than if he were in a school composed of others like himself. But if a minority pupil from a home without such educational strength is put with schoolmates with strong educational backgrounds his achievement is likely to increase. This general result . . . has important implications for equality of educational opportunity. For the earlier tables show that the principal way in which the school environments of Negroes and whites differ is in the composition of their student bodies, and it turns out that the composition of their student bodies has a strong relationship to achievement (p. 21).

With findings similar to those reported by Coleman, the United States Commission on Civil Rights (1967) published a study dealing with the effects of racial isolation in the public schools. The Commission found a strong relationship between the achievement and attitudes of a school child and the economic circumstances and educational backgrounds of his family. Environmental factors that contribute to this relationship include the material deprivation and inadequate health care that children from backgrounds of poverty often experience. In terms of the school environment, the Commission made this important finding:

> The social class of the student's schoolmates, as measured by the economic circumstances and educational backgrounds of their families, also strongly influenced his achievement and attitudes. Regardless of his own family background, an individual student achieves better in schools where most of his fellow students are from advantaged backgrounds than in schools where most of his fellow students are from disadvantaged backgrounds. The relationship between a student's achievement and the social class composition of his school grows stronger as the students progress through school (p. 203).

Even though academic performance is one of many goals of American education, its attainment has not been conclusively related to school racial balance, per se. Nichols (1968) takes exception to the recommendations of the United States Commission on Civil Rights for further de facto desegregation. He feels that even though integration may be desirable for social and political reasons, the Commission may be setting the Negro up for yet another disillusionment by promoting school integration as a means of achieving equality of performance.

Pettigrew (1968) indicates that research has shown that social class is a more important variable in determining educational

achievement than race. He feels, therefore, that schools should provide a middle-class milieu of environment for the white as well as the Negro child.

Greeley (1971) feels that, on the whole, American social and cultural pluralism has worked well and that the schools should have a dramatic increase in heterogeneous environments. It is felt that minority children adapt well to the suburban school milieu and that suburban (white) children do not suffer academically when they are in classes with inner-city children.

Gordon (1972) and others support the concept of compensatory education as a substitute for a heterogeneous learning environment. Compensatory education refers to educational programs which are designed to make up deficiencies in a child's home environment. He feels that the ghetto or low-income white child will never have a meaningful school experience unless the onus of his failure to learn is removed from his mode of life, his economic condition, and his lack of motivation. Gordon concludes his position by making the following statement:

> It is hypothesized that school failure in urban ghetto neighborhoods need not be attributed to the fact of de facto segregated schools or to our failure to understand the perceptual or cognitive style of a particular subculture. Ghetto children can learn equally well in all-black schools as integrated schools . . . . Programs designed to improve education in de facto segregated schools must aim at increasing the frequency of success and heightening of levels of aspirations of each child. Both white and black children, separately or together, can learn in neighborhood schools which ideally would be developed as community schools (pp. 15-17).

Summary

Much has been written the past few years on the effects of integration. A review of the literature indicated that the evidence is

strong that desegregation improves the academic achievement of Negroes and that white children fail to suffer any learning disadvantages from desegregation. Integration does tend to provide greater equality of opportunity, raise academic achievement, change behavior and attitudes, and generally improves the effective climate of the school and the community.

In relation to self-concept, integration again tends to improve the self-concept of Negro pupils and does not appear to harm that of the white pupils in any way. Self-concept has proven to be an important predictor and determinant of academic achievement. However, very few studies have focused on a particular dimension of the self-concept and its relation to achievement.

The review of the literature on classroom environments indicates that classrooms and individual schools do differ in their perceived environments. A survey of the literature shows that few studies have centered around the concept of integration and environment. However, racial composition of schools and classrooms suggest that there are substantial changes in white performance associated with the racial composition. It is important to note that racial composition of schools is only one dimension of a student's perception of his school environment.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

Turney (1971) states that:

> The chief purposes for conducting research are: (1) to determine the status of phenomena (past and present); (2) to ascertain the nature, composition, and process that characterize selected phenomena; (3) to trace growth, developmental history, change, and status of certain phenomena; and (4) to study the cause-and-effect relationships among and between certain phenomena (p. 2).

This chapter deals with the description of the procedures used in conducting the study relative to the cause-and-effect of busing. It also deals with the selection of the sample, collection of the data, the instruments used, and data analysis.

Population and Sample Collection

St. John (1966) stated that, "If busing studies could randomly assign subjects to experimental and control groups, the matching problem could be avoided; but politics and parental pressure and preferences seem invariably to bias the selection (p. 49)."

In the Spring of 1971, the Board of Education of the Wichita Public Schools, Wichita, Kansas, adopted a policy statement committing itself to completely reduce racial imbalance in elementary schools where racial imbalance existed. Junior and senior high schools were racially

balanced by action of the board two years earlier. Prior to the board policy statement, there were seven predominately all-black schools. These schools were located in the north-central city area and, as usual, the suburbs were almost entirely Caucasian. This geographic area of the center city is referred to as the Assigned Attendance Area (AAA). In the Fall of 1971, four of these all-black schools were closed as attendance centers and three were to remain open and have Caucasian students bused to them. Since the black enrollment in Wichita constituted approximately twenty percent of the total elementary enrollment, all elementary schools in the district, including the three schools in the Assigned Attendance Area, were to have approximately twenty percent of their enrollment Negro and the remaining eighty percent white. In other words, a geographical plan was adopted to insure racial balance at every grade level, kindergarten through sixth grade, in every elementary school of the Wichita Public School System.

Approximately 450 white students were to be assigned to the three formerly all-black schools in the Assigned Attendance Area. In the Spring of 1971, a vigorous volunteer program was initiated to have as many Caucasians as possible volunteer to be bused to these three formerly all-black schools. Blacks were also asked to volunteer to be bused out to formerly all-white schools. There were 273 Caucasian students that did volunteer to be bused to the Assigned Attendance Area and 1,318 (see Appendix J) were randomly selected by birthdates. However, Caucasian students who were volunteered to be bused by their parents are not included in this investigation.

It seemed quite appropriate to conduct a study to determine what effect the progress of desegregation has produced on those white students who were randomly selected by lottery in 1971 and have continued to be bused to the Assigned Attendance Area for the last three years. Therefore, the experimental group consists of 52 white students who were randomly assigned to the Assigned Attendance Area and have remained in attendance for the past three years. The control group consists of 64 white children who were eligible to be selected by lottery in 1971, but were not randomly selected and have remained in their own white neighborhood school for the same three-year period. (Refer to Appendix E for the method of random selection of white non-bused subjects.) This study was limited to fifth and sixth grades because of the number of bused subjects and the availability of achievement scores at those grade levels over the same three-year period. The scores of these white-bused fifth and sixth grade students, who were assigned to the Assigned Attendance Area, will be compared with the scores of white non-bused fifth and sixth grade students. Comparisons will be made on standardized achievement test scores, self-concept, perceived school environment, and school attendance.

Data Collection

The Wichita Public School Research Council of Unified School District No. 259, Wichita Public Schools, Wichita, Kansas (Appendix B), granted permission for the investigator to use selected elementary subjects in conducting the study. Copies of the instruments to be used were given to the Council when the research proposal was submitted.

After securing permission from the Council, the principle investigator drove to Wichita to discuss the random selection of non-bused white fifth and sixth grade students at an elementary principals' meeting (Appendix E). This meeting was held in Wichita, Kansas, on January 30, 1974. Principals of the 64 eligible elementary schools were advised of the random selection process of non-bused white subjects and were to return the names of these subjects by February 15, 1974. All eligible schools had returned their selection of subjects and all had responded by February 20, 1974.

From the original 64 schools, 32 schools were randomly selected by the investigator. Principals of these 32 schools were personally contacted by the investigator prior to the administration of the Piers-Harris Self-Concept Scale and the Elementary School Environment Survey. The time period of data collection in the 32 participating schools and the three schools in the AAA was between March 11 and March 22, 1974.

Each principal of the 32 schools was individually contacted by this investigator during the first two days of the week of March 11, 1974. Each principal consented to personally administer the Piers-Harris Self-Concept Scale and the Elementary School Environment Survey. Instructions for administering these two instruments appear in Appendix G. Principals were asked not to deviate from the instructions. This investigator personally picked up the two instruments during the week of March 17, 1974, and no difficulties were reported by any of the 32 principals. Selected subjects in the Assigned Attendance Area were administered both instruments the same week, March 10, 1974, by this investigator using the same instructions (Appendix G).

Data on achievement and attendance (Appendix F) were obtained from the permanent records of all selected subjects. The researcher and an assistant personally obtained this data from the permanent records to insure that there were no transposition errors.

Analysis of Data

Data gathered on each student included, besides grade level and bused-non-bused status, the Iowa Test of Basic Skills (ITBS), Reading, Mathematics, and Composite Achievement scores, attendance records, self-concept scores, and perceived school environment using the Elementary School Environment Survey. Data on the ITBS, intelligence, and attendance were obtained from school files.

The main analysis of this study is concerned with the following question:

> Do selected subjects who have been bused differ significantly in cognitive and affective development from a comparable group of subjects who have not been bused?

In this study control through randomization was possible since assignments to groups, bused-non-bused, was not predetermined. A one-way analysis of variance (ANOVA) design was selected to test the hypothesis with respect to any given criterion measure of academic achievement. A cross-grade comparison will be made for each year for any statistical differences.

The t-test was used to analyze the differences between the two groups on the Children's Self-Concept Scale (CSCS) and attendance. The Mann-Whitney U test will analyze the data obtained from the Elementary School Environment Survey (ESES).

The level of confidence was set at the .05 level for all statistical analysis made of the data.

Instrumentation

Iowa Test of Basic Skills

The Iowa Test of Basic Skills is a multilevel test designed for grades three to nine. Five areas of basic skills are emphasized: Reading Comprehension, Language Skills, Work-Study Skills, and Arithmetic Skills. Although there is overlapping, the tests are designed for specific grade levels. Ahmann and Glock (1971) state that the standardization of ITBS was made to represent all elementary children in public schools and include 74,174 pupils from 213 school systems in 46 states; all these are included in the normative sample. Grade and percentile norms are available for each of the tests and for the composite of all tests. Norms for school averages are presented for the beginning, middle, and end of the year.

Reliability. Both the coefficient of reliability and the standard error of measurement for each of the 11 tests and the composite of these are given. The split-half method was used to determine the reliability coefficients and they range from 0.70 in Map Reading, grade 3, to 0.96 in Reading, grade 4, for the subtests. The coefficient for the composite in grades fifth and sixth is 0.98.

Validity. Ahmann and Glock (1971) relate that a great deal of planning and careful consideration was given to the validity of this battery of tests. Instructional procedures, course of study, and textbooks were analyzed. The skills tested and subject matter content

included were identified and studied with considerable care. Cruciality and discriminating power served as the main criteria for items selected.

Piers-Harris Children's Self-Concept Scale (CSCS)

A positive self-concept is essential to effective learning and is considered paramount in the motivation of children to learn. One of the goals of any school system, in its integration effort, is to instill a positive self-concept in every student. The Piers-Harris Children's Self-Concept Scale (CSCS) was administered as a way of measuring self-concept and to compare the degree of positive self reported by both groups.

The CSCS entitled, "The Way I Feel About Myself," is a quickly completed (15-20 minutes) self-report instrument designed for children over a wide range. It requires approximately a third grade reading knowledge. It can be administered and scored by a responsible educator; but should be interpreted only with the aid of someone knowledgeable in measurement and statistics, psychology of adjustment of children's self-attitudes, and correlation of these attitudes.

The items are written as simple declarative statements, e.g., "I am a good reader." At least half are negative in content, e.g., "I forget what I learn." Negative statements were included in order to reduce effects of acquiescene; but negative terms such as "don't" were avoided insofar as possible, in order to reduce the confusion of a double negative. (Refer to Appendix K for a copy of CSCS.)

Reliability. The reliability and internal consistency of the CSCS was determined by the Kuder-Richardson Formula 21, which assumes equal

difficulty of items. The resulting coefficients ranged from .78 to .93. The authors also employed the Spearman-Brown odd-even formula and found resulting coefficients of .90 and .87.

Validity. The validity of the Piers-Harris Scale has been investigated through the comparison of the total scores of normal children, institutional retardates, and public school retardates. This use of the scale substantiated the hypothesis that differences in global self-concept scores would be evident for the three groups with the institutional retardates getting the lowest scores, the normal children the highest scores, and the public school retardates the middle scores.

The systematic study of the various elements comprising the self-concept of middle school children represented one facet of the research program with the Piers-Harris Scale. Six interpretable factors were reported by Piers (1969):

I . . . . . Perception of Intellectual and School Status

II . . . . . Perception of Behavior

III . . . . . Perception of Popularity

IV . . . . . Anxiety

V . . . . . Happiness and Satisfaction

VI . . . . . Physical Appearance and Attributes

Jersild (1952) attempted to build validity into the CSCS by defining the universe to be measured as the areas about which children reported qualities they liked or disliked about themselves. Items were written to cover all these areas but during item analysis non-discriminating items were dropped, so that the final scale no longer covers any area to the same degree.

The Elementary School Environment Survey

The Elementary School Environment Survey was created by Dr. Robert Sinclair from the College and University Environment Scales (CUES) developed by Pace (1965).

There are two forms of the ESES instrument, each composed of 40 statements about the instruction, curricula, rules and regulations, teachers, students, and other features of elementary school life (see Appendices L and M). These statements are used to describe the environment as the students perceive it. There are eight statements for each of five variables. Both forms were used in the investigation. The variables are:

(a) Practicality. This variable suggests a practical, instrumental emphasis in the school environment; procedures, personal status, and practical benefits are important. Status is gained by knowing the right people, being in the right groups, and doing what is expected. Order and supervision are characteristic of the administration and the classwork. Good fun, school spirit, and student leadership in school social activities are evident.

(b) Community. This variable reflects a friendly, cohesive, group-oriented school life. The environment is seen as supportive and sympathetic. A feeling of group welfare and group loyalty encompasses the school as a whole, and the school is a community with a congenial atmosphere.

(c) Awareness. A concern for an emphasis upon three sorts of meaning--personal, poetic, and political--is emphasized in this dimension. Self-understanding, reflectiveness, and identity suggests the search for personal meaning. The quest for poetic meaning is reflected by a wide range of opportunities for creative and appreciative relationships to painting, music, drama, poetry, sculpture, and architecture. Concern about events around the world, the welfare of mankind, and the present and future condition of man suggests the search for political meaning and idealistic commitment. A stress on awareness of self, of society, and of esthetic stimuli was most evident in this environment.

(d) Propriety. This variable suggests an environment that is polite and considerate. Caution and thoughtfulness are evident while group standards of decorum are important. Conversely, this environment may be described as the absence of demonstrative, assertive, rebellious, risk-taking, inconsiderate behavior.

(e) Scholarship. An academic, scholarly environment is described by this variable. The emphasis is placed on competitively high academic achievement with serious interest in scholarship. Intellectual speculation, interest in ideas as ideas, knowledge for its own sake, and intellectual discipline may all be considered as characteristic of the environment.

Reliability. To determine reliability, the variance of the distribution of different schools was computed. Kuder-Richardson reliability estimates for the subscales were: Practicality, .53; Community, .81; Awareness, .85; Propriety, .86; and Scholarship, .54.

Validity. In an analysis by Pace of the psychometric properties of the College and University Environment Scales, it was found that the content of the measure is representative of the environment being considered. The ESES is an adaptation of the instrument used by Pace (1965).

The findings of early testing with the ESES also support the relevance of the relationship between the statements and the measured environmental variables. In view of this and the above criteria, the instrument is judged to have adequate content validity.

In determining construct validity data correlations between the ESES and Halpin-Croft Organizational Climate scores were run using the Pearson Product-Moment formula to test for significance. Correlations significant at or beyond the .05 level were obtained in five of the subscale dimensions.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Introduction

In this chapter are present data regarding the subjects investigated, the statistical treatment of the hypotheses, and each of the research questions. The data gathered were used for the primary purpose of assessing the educational effects, both cognitive and affective, of busing white students out of their own neighborhood school into one of three formerly all-black schools in the Assigned Attendance Area of the Wichita Public Schools, Wichita, Kansas. The hypotheses stated in the null form were given in Chapter I, page 9.

Before viewing the findings as they are related to the hypotheses, it seems appropriate to view the populations and the demographic characteristics of the two major groups - bused and non-bused white fifth and sixth grade children. The population used for this study consisted of 116 white fifth and sixth grade students. Fifty-two are referred to as the bused subjects and serve as the experimental group. These subjects were randomly selected by birthdates, in the Spring of 1971, to be bused to one of three formerly all-black schools in the AAA in the Fall of 1971. The subjects have been in attendance in the AAA for the past three years. A comparable group of students, 64, were eligible to be selected by lottery in 1971, but have remained in their own white neighborhood school for the same three-year period.

The non-bused subjects were randomly selected for this study (Appendix E) in January of 1974. These non-bused subjects constitute the control group. Basic information concerning the distribution of subjects is presented in Table I.

The data were collected through the use of four instruments: Achievement, Iowa Test of Basic Skills; Perceived school environment, Elementary School Environment Survey; and self-concept, Piers-Harris Children's Self-Concept Scale. Native ability and attendance were obtained through the subjects' permanent record folders at their respective schools.

TABLE I

DISTRIBUTION OF BUSED AND NON-BUSED SUBJECTS ACCORDING TO SEX

ITEM	FIFTH GRADE		SIXTH GRADE		TOTAL
	Girls	Boys	Girls	Boys	(N=116)
Non-Bused	17	15	19	13	64
Bused	11	11	13	17	52

Again, this chapter presents tabulated results obtained from investigational procedures described in Chapter III. The format will include the stating of each hypothesis and the results obtained.

Academic Achievement-Composite

Since academic achievement is of paramount importance in any elementary school, the first hypothesis formulated for this study stated:

> The ITBS overall composite academic achievement of white-bused children will not be significantly different from that of a comparable group of non-bused subjects.

The administration of the Iowa Test of Basic Skills to all subjects provided five scores for each subject. The test battery was administered in the second week of October in 1971 and 1972. Due to an administrative policy change, the ITBS test battery was administered the second week of April in 1974. Actually, this administrative change allowed this longitudinal study to run an additional six months and provides 26 months of busing experience instead of 20 months, which would have comprised the period if the ITBS battery had been administered in October of 1973.

ITBS Composite - Fifth Grade

The ITBS composite represents the aggregate score for the complete test battery. For the October, 1971, scores, an F ratio of 2.7822 was computed between the fifth grade bused subjects and non-bused subjects. In view of the interpolated critical F value of 4.032, it was concluded that the two major groups did not reveal significant difference at the .05 level. The mean for the bused subjects was 31.64 with a SD of 8.14, and the mean of the non-bused was 35.62 with a SD of 8.95. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table II.

TABLE II

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS COMPOSITE-1971

Source	SS	DF	MS	F-Ratio *
Between Groups	207.4089	1	207.4089	2.7822
Within Groups	3876.5879	52		
Total	4083.9968	53		

* - Critical F = 4.032, $p > .10$

For the composite score in October, 1972, an F ratio of 2.8975 was computed between the fifth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.032, it was concluded that the two major groups did not reveal significant difference at the .05 level. The mean for the bused subjects was 39.41 with a SD of 9.03, and the mean for the non-bused subjects was 44.00 with a SD of 10.19. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table III.

For the composite score in April of 1974, an F ratio of .5959 was computed between the fifth grade groups. In view of the interpolated critical F value of 4.032, it was concluded that the two major groups did not reveal any significant difference at the .05 level. The mean of the bused subjects was 56.409 with a SD of 11.219 and the mean of the non-bused subjects was 58.844 with a SD of 11.501. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table IV.

TABLE III

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE
BETWEEN FIFTH GRADE BUSED AND NON-BUSED
SUBJECTS ON ITBS COMPOSITE-1972

Source	SS	DF	MS	F-Ratio *
Between Groups	274.7761	1	274.7761	2.8975
Within Groups	4931.3125	52	94.8329	
Total	5206.0859	53		

* - Critical F = 4.032, $p < .10$

TABLE VI

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE
BETWEEN FIFTH GRADE BUSED AND NON-BUSED
SUBJECTS ON ITBS COMPOSITE-1974

Source	SS	DF	MS	F-Ratio *
Between Groups	77.2802	1	77.2802	.5959
Within Groups	6743.5312	52	129.6833	
Total	6820.8086	53		

* - Critical F = 4.032, $p > .25$

ITBS Composite - Sixth Grade

For the composite score in October, 1971, an F ratio of .71 was computed between the sixth grade bused and non-bused subjects. In

view of the interpolated critical F of 4.00, it was concluded that the two major groups did not reveal any significant difference at the .05 level. The mean of the bused subjects was 45.80 with a SD of 11.29, and the mean of the non-bused subjects was 43.56 with a SD of 9.53. Therefore, the mean was in the direction of the bused subjects. Summary data for this test are shown in Table V.

TABLE V

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS COMPOSITE-1971

Source	SS	DF	MS	F-Ratio *
Between Groups	77.5179	1	77.5179	0.7142
Within Groups	6512.6680	60	108.5445	
Total	6590.1836	61		

* - Critical F = 4.00, $p > .25$

For the composite score in October of 1972, an F ratio of .74 was computed between the sixth grade groups. In view of the interpolated critical F value of 4.00, it was concluded that the two major groups did not reveal any significant difference at the .05 level. The mean of the bused subjects was 55.70 with a SD of 11.90, and the mean for the non-bused subjects was 53.13 with a SD of 11.70. Therefore,

the mean was in the direction of the bused subjects. Summary data for this test are shown in Table VI.

TABLE VI

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS COMPOSITE-1972

Source	SS	DF	MS	F-Ratio *
Between Groups	102.6659	1	102.6659	0.7395
Within Groups	8329.7969	60	138.8299	
Total	8432.4609	61		

* - Critical F = 4.00, $p > .25$

For the composite score in April of 1974, an F ratio of .003 was computed between the sixth grade groups. In view of the interpolated critical F value of 4.00, it was concluded that the two major groups did not reveal any significant difference at the .05 level. The mean of the bused subjects was 66.867 with a SD of 14.588, and the mean of the non-bused subjects was 67.063 with a SD of 13.626. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table VII.

TABLE VII

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS COMPOSITE-1974

Source	SS	DF	MS	F-Ratio *
Between Groups	0.5940	1	.5940	0.0030
Within Groups	11927.3203	60	198.7887	
Total	11927.9141	61		

* - Critical F = 4.00, $p > .25$

Academic Achievement-Reading

On the grounds that reading achievement is essential to effective learning and that one of the major goals of an elementary school education is reading achievement, the second hypothesis formulated for the present study stated:

> The ITBS reading achievement of white bused children will not be significantly different from that of a comparable group of non-bused white children.

ITBS Reading - Fifth Grade

For the reading test taken in October, 1971, an F ratio of 5.99 was computed between the fifth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.032, it was concluded that the two groups did reveal a significant difference at the .05 level. The non-bused subjects were significantly higher than the bused subjects. The mean for the bused subjects was 30.14 with a SD of 9.90,

and the mean for the non-bused subjects was 37.81 with a SD of 12.18. The mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table VIII.

TABLE VIII

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS READING-1971

Source	SS	DF	MS	F-Ratio *
Between Groups	768.1846	1	768.1846	5.99
Within Groups	6659.4648	52	128.0666	
Total	7427.6484	53		

* - Critical F = 4.03, $p < .05$

For the reading test taken in October, 1972, an F ratio of 2.08 was computed between the fifth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.032, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean for the bused subjects was 40.14 with a SD of 11.81, and the mean for the non-bused subjects was 45.55 with a SD of 14.18. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test is shown in Table IX.

TABLE IX

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS READING-1972

Source	SS	DF	MS	F-Ratio *
Between Groups	366.3696	1	366.3696	2.079
Within Groups	9162.4648	52	176.2012	
Total	9528.8320			

* - Critical F = 4.03, $p > .10$

For the reading test taken in April, 1974, an F-ratio of .463 was computed between the fifth grade groups. In view of the interpolated critical F value of 4.032, it was concluded that the two major groups did not reveal any significant difference at the .05 level. The mean of the bused subjects was 58.864 with a SD of 12.863, and the mean of the non-bused subjects was 61.281 with a SD of 12.787. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table X.

ITBS Reading - Sixth Grade

For the reading test taken in October, 1971, an F ratio of .49 was computed between the sixth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.00, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean for the bused subjects was 47.93 with a SD of 15.49,

and the mean for the non-bused subjects was 45.41 with a SD of 12.99. Therefore, the mean was in the direction of the bused subjects. Summary data for this test are shown in Table XI.

TABLE X

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS READING-1974

Source	SS	DF	MS	F-Ratio *
Between Groups	76.1998	1	76.1998	0.4638
Within Groups	8543.0508	52	164.2894	
Total	8619.2500	53		

* - Critical F = 4.03, $p > .25$

TABLE XI

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS READING-1971

Source	SS	DF	MS	F-Ratio *
Between Groups	98.8817	1	98.8817	.49
Within Groups	12197.5391	60	203.2923	
Total	12296.4180	61		

* - Critical F = 4.00, $p > .25$

For the reading test taken in October, 1972, an F ratio of 1.71 was computed between the sixth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.00, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean for the bused subjects was 59.57 with a SD of 15.42, and the mean for the non-bused subjects was 54.25 with a SD of 16.53. Therefore, the mean was in the direction of the bused subjects. Summary data for this test are shown in Table XII.

TABLE XII

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS READING-1972

Source	SS	DF	MS	F-Ratio *
Between Groups	437.6782	1	437.6782	1.71
Within Groups	15365.3320	60	256.0889	
Total	15803.0078	61		

* - Critical F = 4.00, $p > .10$

For the reading test taken in April, 1974, an F ratio of .084 was computed between the sixth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.00, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean for the bused subjects was 66.767 with a SD of 17.769,

and the mean for the non-bused was 68.031 with a SD of 16.585. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table XIII.

TABLE XIII

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS READING-1974

Source	SS	DF	MS	F-Ratio *
Between Groups	24.7624	1	24.7624	0.0840
Within Groups	17684.2734	60	294.7378	
Total	17709.0352	61		

* - Critical F = 4.00, $p > .25$

Academic Achievement-Mathematics

On the grounds that mathematical achievement is essential to effective learning and that one of the major goals of an elementary education is mathematical achievement, the third hypothesis formulated for the present study stated:

> The ITBS mathematics achievement of white bused children will not be significantly different from that of a comparable group of non-bused white children.

ITBS Mathematics - Fifth Grade

For the mathematics test taken in October, 1971, an F ratio of .54 was computed between the fifth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.032, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean for the bused subjects was 33.64 with a SD of 7.27, and the mean for the non-bused subjects was 35.03 with a SD of 6.55. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table XIV.

TABLE XIV

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS MATHEMATICS-1971

Source	SS	DF	MS	F-Ratio *
Between Groups	25.3673	1	25.3673	.54
Within Groups	2442.0566	52	46.9626	
Total	2467.4238	53		

* - Critical F = 4.03, $p > .25$

For the mathematics test taken in October, 1972, an F ratio of 2.39 was computed between the fifth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.032, it was concluded

that the two groups did not reveal a significant difference at the .05 level. The mean of the bused subjects was 40.54 with a SD of 8.58 and the mean of the non-bused subjects was 44.18 with a SD of 8.47. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table XV.

TABLE XV

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS MATHEMATICS-1972

Source	SS	DF	MS	F-Ratio *
Between Groups	172.9330	1	172.9330	2.39
Within Groups	3768.3274	52	72.4678	
Total	3941.2603	53		

* - Critical F = 4.03, $p > .10$

For the mathematics test taken in April, 1974, an F ratio of .417 was computed between the fifth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.032, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean of the bused subjects was 56.318 with a SD of 12.871, and the mean of the non-bused subjects was 58.469 with a SD of 11.402. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table XVI.

TABLE XVI

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS MATHEMATICS-1974

Source	SS	DF	MS	F-Ratio *
Between Groups	60.2959	1	60.2959	0.4176
Within Groups	7508.7383	52	144.3988	
Total	7569.0312	53		

* - Critical F = 4.03, $p > .25$

ITBS Mathematics - Sixth Grade

For the mathematics test taken in October, 1971, an F ratio of 1.84 was computed between the sixth grade bused and non-bused subjects. In view of the interpolated critical value of 4.00, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean of the bused subjects was 45.60 with a SD of 8.69, and the mean for the non-bused subjects was 42.50 with a SD of 9.27. Therefore, the mean was in the direction of the bused subjects. Summary data for this test are shown in Table XVII.

For the mathematics test taken in October, 1972, an F ratio of .41 was computed between the sixth grade bused and non-bused subjects. In view of the interpolated critical value of 4.00, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean of the bused subjects was 51.97 with a SD of 8.08, and the mean for the non-bused subjects was 53.44 with a SD of 9.76.

Therefore, the mean was in the direction of the non-bused subjects.

Summary data for this test are shown in Table XVIII.

TABLE XVII

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE
BETWEEN SIXTH GRADE BUSED AND NON-BUSED
SUBJECTS ON ITBS MATHEMATICS-1971

Source	SS	DF	MS	F-Ratio *
Between Groups	148.7999	1	148.7999	1.8389
Within Groups	4855.1953	60	80.9199	
Total	5003.9922	61		

* - Critical F = 4.00, $p > .10$

TABLE XVIII

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE
BETWEEN SIXTH GRADE BUSED AND NON-BUSED
SUBJECTS ON ITBS MATHEMATICS-1972

Source	SS	DF	MS	F-Ratio *
Between Groups	33.4977	1	33.4977	.4143
Within Groups	4850.8359	60	80.8473	
Total	4884.3320	61		

* - Critical F = 4.00, $p > .25$

For the mathematics test taken in April, 1974, an F ratio of .863 was computed between the sixth grade bused and non-bused subjects. In view of the interpolated critical F value of 4.00, it was concluded that the two groups did not reveal a significant difference at the .05 level. The mean of the bused subjects was 65.267 with a SD of 14.885, and the mean of the non-bused subjects was 68.687 with a SD of 14.095. Therefore, the mean was in the direction of the non-bused subjects. Summary data for this test are shown in Table XIX.

TABLE XIX

A SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ITBS MATHEMATICS-1974

Source	SS	DF	MS	F-Ratio *
Between Groups	181.1939	1	181.1939	0.8639
Within Groups	12584.7070	60	209.7451	
Total	12765.8984	61		

* - Critical F = 4.00, $p > .25$

Tables XX and XXI show the mean and standard deviation of bused and non-bused subjects on the Iowa Test of Basic Skills for the three-year period under investigation. It should be noted from these two tables that the means are directionally consistent.

TABLE XX

MEANS AND STANDARD DEVIATION OF FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE IOWA TEST OF BASIC SKILLS

		BUSED		NON-BUSED	
Date	Test	Mean	SD	Mean	SD
October 1971	ITBS Composite	31.64	8.14	35.62	8.95
October 1972	ITBS Composite	39.41	9.03	44.00	10.19
April 1974	ITBS Composite	56.41	11.22	58.84	11.50
October 1971	ITBS Reading	30.14	9.90	37.81	12.18
October 1972	ITBS Reading	40.14	11.81	45.44	14.18
April 1974	ITBS Reading	58.86	12.86	61.28	12.79
October 1971	ITBS Math	33.64	7.27	35.03	6.55
October 1972	ITBS Math	40.54	8.58	44.18	8.47
April 1974	ITBS Math	56.32	12.87	58.47	11.40

TABLE XXI

MEANS AND STANDARD DEVIATION OF SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE IOWA TEST OF BASIC SKILLS

		BUSED		NON-BUSED	
Date	Test	Mean	SD	Mean	SD
October 1971	ITBS Composite	45.80	11.29	43.56	9.53
October 1972	ITBS Composite	55.70	11.90	53.13	11.70
April 1974	ITBS Composite	66.87	14.59	67.06	13.63
October 1971	ITBS Reading	47.93	15.49	45.41	12.99
October 1972	ITBS Reading	59.57	15.42	54.25	16.53
April 1974	ITBS Reading	66.77	17.77	68.03	16.58
October 1971	ITBS Math	45.60	8.69	42.50	9.27
October 1972	ITBS Math	51.97	8.08	53.44	9.76
April 1974	ITBS Math	65.27	14.88	68.69	14.09

Self-Concept

On the assumption that a positive self-concept is essential to effective learning, and that one of the goals of the school is to instill a positive view of self, the Piers-Harris Children's Self-Concept Scale (CSCS) was administered as a way of assessing the degree of positive self-concept for both bused and non-bused subjects. Therefore, the fourth hypothesis formulated for this study stated:

> The self-concept of bused-white children will not be significantly different from that of a comparable group of non-bused white children.

Group characteristics for fifth grade bused and non-bused subjects on the CSCS are reported in Table XXII. Group characteristics for sixth grade bused and non-bused subjects on the CSCS are reported in Table XXIII.

The data in Table XXIV represents the analysis between fifth grade bused and non-bused subjects on the CSCS total battery scores. In view of the obtained and critical t values, it was concluded that the two groups were not significantly different on the total scores.

The data in Table XXV represents the analysis between sixth grade bused and non-bused subjects on the CSCS total battery scores. In view of the obtained and critical t values, it was concluded that the two groups were not significantly different on the total scores.

The structure of the Piers-Harris Children's Self-Concept Scale allows the investigator to analyze six factors that are related to self-concept. These factors are Factor I, behavior; Factor II, intellectual and school status; Factor III, physical appearance and attributes; Factor IV, anxiety; Factor V, popularity; and Factor IV, happiness and satisfaction.

TABLE XXII

MEANS AND STANDARD DEVIATIONS OF FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE

AREA	BUSED SUBJECTS			NON-BUSED SUBJECTS		
	N	Mean	SD	N	Mean	SD
TOTAL BATTERY	22	59.95	13.59	32	58.66	10.57
Factor I Behavior	22	14.05	3.08	32	14.81	3.56
Factor II Intellectual and School Status	22	13.18	3.75	32	12.56	3.18
Factor III Physical Appearance	22	8.36	3.55	32	7.28	2.92
Factor IV Anxiety	22	8.41	2.74	32	8.31	2.63
Factor V Popularity	22	8.64	3.08	32	8.06	2.79
Factor VI Happiness and Satisfaction	22	7.73	1.81	32	7.97	1.31

TABLE XXIII

MEANS AND STANDARD DEVIATIONS OF SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE

AREA	BUSED SUBJECTS			NON-BUSED SUBJECTS		
	N	Mean	SD	N	Mean	SD
TOTAL BATTERY	30	60.97	13.59	32	62.84	12.33
Factor I Behavior	30	15.47	2.24	32	14.87	3.47
Factor II Intellectual and School Status	30	13.17	3.09	32	13.65	4.08
Factor III Physical Appearance	30	7.93	2.94	32	8.46	3.33
Factor IV Anxiety	30	9.07	3.24	32	9.44	2.62
Factor V Popularity	30	8.73	2.89	32	8.75	2.93
Factor VI Happiness and Satisfaction	30	7.53	1.78	32	8.13	1.29

TABLE XXIV

A SUMMARY OF t - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - TOTAL BATTERY

Group	t*	P
Bused Subjects (N=22) Non-Bused Subjects (N=30)	-.38	>.05

* - Critical t = 2.00, p >.40

TABLE XXV

A SUMMARY OF t - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - TOTAL BATTERY

Group	t*	P
Bused Subjects (N=30) Non-Bused Subjects (N=32)	.61	>.05

* - Critical t = 2.00, p >.40

The data in Table XXVI represents the analysis between fifth grade bused and non-bused subjects, and the data in Table XXVII represents the analysis between sixth grade bused and non-bused subjects on Factor I - behavior. In view of the critical and obtained t values, it was

concluded that the two major groups, bused and non-bused, were not significantly different on this factor.

TABLE XXVI

A SUMMARY OF t - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR I BEHAVIOR

Group	t*	P
Bused Subjects (N=22) Non-Bused Subjects (N=32)	.84	$>.05$

* - Critical t = 2.00, $p > .40$

TABLE XXVII

A SUMMARY OF t - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR I BEHAVIOR

Group	t*	P
Bused Subjects (N=30) Non-Bused Subjects (N=32)	-.80	$>.05$

* - Critical t = 2.00, $p > .40$

The data in Table XXVIII represents the analysis between fifth grade bused and non-bused subjects, and the data in Table XXIX represents the analysis between sixth grade bused and non-bused subjects on Factor II - intellectual and school status. In view of the critical and obtained *t* values, it was concluded that the two major groups, bused and non-bused, were not significantly different on this factor.

TABLE XXVIII

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR II INTELLECTUAL AND SCHOOL STATUS

Group	*t**	P
Bused Subjects (N=22) Non-Bused Subjects (N=32)	-.63	$>.05$

* - Critical *t* = 2.00, $p > .40$

The data in Table XXX represents the analysis between fifth grade bused and non-bused subjects, and the data in Table XXXI represents the analysis between sixth grade bused and non-bused subjects on Factor III - physical appearance and attributes. In view of the critical and obtained *t* values, it was concluded that the two major groups, bused and non-bused, were not significantly different on this factor.

TABLE XXIX

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR II INTELLECTUAL AND SCHOOL STATUS

Group	*t**	P
Bused Subjects (N=30)	.53	>.05
Non-Bused Subjects (N=32)		

* - Critical *t* = 2.00, p >.40

TABLE XXX

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR III PHYSICAL APPEARANCE AND ATTRIBUTES

Group	*t**	P
Bused Subjects (N=22)	-1.18	>.05
Non-Bused Subjects (N=32)		

* - Critical *t* = 2.00, p >.20

The data in Table XXXII represents the analysis between fifth grade bused and non-bused subjects, and the data in Table XXXIII represents the analysis between sixth grade bused and non-bused subjects on Factor IV - anxiety. In view of the critical and obtained *t* values,

it was concluded that the two major groups, bused and non-bused, were not significantly different on this factor.

TABLE XXXI

A SUMMARY OF t - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR III PHYSICAL APPEARANCE AND ATTRIBUTES

Group	t*	P
Bused Subjects (N=30) Non-Bused Subjects (N=32)	.67	$>.05$

* - Critical t = 2.00, $p > .40$

TABLE XXXII

A SUMMARY OF t - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR IV ANXIETY

Group	t*	P
Bused Subjects (N=22) Non-Bused Subjects (N=32)	-1.13	$>.05$

* - Critical t = 2.00, $p > .20$

TABLE XXXIII

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR IV ANXIETY

Group	*t**	P
Bused Subjects (N=30) Non-Bused Subjects (N=32)	.49	$>.05$

* - Critical *t* = 2.00, $p > .40$

The data in Table XXXIV represents the analysis between fifth grade bused and non-bused subjects, and the data in Table XXXV represents the analysis between sixth grade bused and non-bused subjects on Factor V - popularity. In view of the critical and obtained *t* values, it was concluded that the two major groups, bused and non-bused, were not significantly different on this factor.

The data in Table XXXVI represents the analysis between fifth grade bused and non-bused subjects, and the data in Table XXXVII represents the analysis between sixth grade bused and non-bused subjects on Factor VI - happiness and satisfaction. In view of the critical and obtained *t* values, it was concluded that the two major groups, bused and non-bused, were not significantly different on this factor.

TABLE XXXIV

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR V POPULARITY

Group	t*	P
Bused Subjects (N=22) Non-Bused Subjects (N=32)	-.70	$>.05$

* - Critical *t* = 2.00, $p > .40$

TABLE XXXV

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR V POPULARITY

Group	t*	P
Bused Subjects (N=30) Non-Bused Subjects (N=32)	.02	$>.05$

* - Critical *t* = 2.00, $p > .40$

TABLE XXXVI

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR VI HAPPINESS AND SATISFACTION

Group	*t**	P
Bused Subjects (N=22) Non-Bused Subjects (N=32)	.54	$>.05$

* - Critical *t* = 2.00, $p > .40$

TABLE XXXVII

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE - FACTOR VI HAPPINESS AND SATISFACTION

Group	*t**	P
Bused Subjects (N=30) Non-Bused Subjects (N=32)	1.49	$>.05$

* - Critical *t* = 2.00, $p > .10$

Environment

The major purpose of this section is to compare bused and non-bused students' perceptions of educational environment along five variables measured by the Elementary School Environment Survey (ESES). Therefore, the fifth hypothesis formulated for this study stated:

> The perceived educational environment of white bused children will not be significantly different from that of a comparable group of non-bused white children.

The data in Table XXXVIII represents the analysis between fifth grade bused and non-bused subjects on the Elementary School Environment Survey. In view of the Z scores derived, there is insufficient evidence of any significant difference on any of the five dimensions between the two groups.

The data in Table XXXIX represents the analysis between sixth grade bused and non-bused subjects on the Elementary School Environment Survey. In view of the Z scores derived, there is insufficient evidence of any significant difference on any of the five dimensions between the two groups.

Attendance

The sixth hypothesis formulated for the present study states:

> The attendance record of children who are bused will not be significantly different from that of a comparable group of non-bused white children.

Attendance data were obtained from each subject's permanent school record and recorded by the number of school days missed for each three-year period. The data in Table XXXX represents the analysis between fifth grade bused and non-bused subjects. In view of the

TABLE XXXVIII

A SUMMARY OF COMPUTED U VALUES RESULTING FROM THE MANN-WHITNEY U TEST RELATIVE TO FIFTH GRADE BUSED AND NON-BUSED SUBJECTS' SCORES ON THE ESES INSTRUMENT

Dimension	U Value	Z Score	Probability*	Significant At:
Practicality	344.00	-.14468	.44248	N.S.
Scholarship	270.50	-1.46822	.07102	N.S.
Community	310.00	-.76182	.22308	N.S.
Awareness	288.00	-.11632	.12237	N.S.
Propriety	327.00	-.44679	.32751	N.S.

*One-tailed probability, double computed probability for two-tailed test, $>$ .05

TABLE XXXIX

A SUMMARY OF COMPUTED U VALUES RESULTING FROM THE MANN-WHITNEY U TEST RELATIVE TO SIXTH GRADE BUSED AND NON-BUSED SUBJECTS' SCORES ON THE ESES INSTRUMENT

Dimension	U Value	Z Score	Probability*	Significant At:
Practicality	466.00	-.20210	.41992	N.S.
Scholarship	368.00	-1.60740	.05397	N.S.
Community	472.00	-.11619	.45375	N.S.
Awareness	472.00	-.11477	.45431	N.S.
Propriety	477.50	-.03568	.48577	N.S.

*One-tailed probability, double computed probability for two-tailed test, $>$.05

critical t value, it was concluded that the two groups were not significantly different in attendance during the first and second year. There was a significant difference the third year in the direction of the bused subjects. The fifth grade bused subjects missed fewer days of school than the fifth grade non-bused subjects.

TABLE XXXX

A SUMMARY OF t - TEST ANALYSIS BETWEEN FIFTH GRADE BUSED AND NON-BUSED SUBJECTS ON ATTENDANCE OVER A THREE-YEAR PERIOD

	Bused(N=22)		Non-Bused(N=32)		
Year	Mean	SD	Mean	SD	t*
1971	6.91	5.18	7.31	6.34	.26
1972	6.45	6.30	7.00	5.05	.34
1974	4.82	3.39	7.41	4.42	-2.31**

* - Critical t = 2.01, **p $<$ .05

The data in Table XXXXI represents the analysis between sixth grade bused and non-bused subjects. In view of the critical t value, it was concluded that the two groups were not significantly different in attendance during the three-year period under investigation.

TABLE XXXXI

A SUMMARY OF t - TEST ANALYSIS BETWEEN SIXTH GRADE BUSED AND NON-BUSED SUBJECTS ON ATTENDANCE OVER A THREE-YEAR PERIOD

	Bused(N=30)		Non-Bused(N=32)		
Year	Mean	SD	Mean	SD	t*
1971	11.50	8.75	7.56	6.98	-1.95**
1972	8.97	7.07	5.66	6.26	-1.95**
1974	7.00	4.01	7.19	5.76	-.14

* - Critical t = 2.00, **p < .10

Intelligence

Even though general ability, as measured by the subject's score on the California Test of Mental Maturity (CTMM), was not part of the basic hypotheses, this information is submitted as additional data. This writer assumed, but wanted to present evidence, that since the groups were randomly selected that there would be no significant difference between the bused and non-bused subjects relative to general ability or intelligence. The data on Table XXXXII reflects the means and standard deviation for both bused and non-bused subjects.

On the basis of the t value of 1.25 between the fifth grade bused and non-bused subjects and in view of the critical t value of 2.00, it was concluded that the two groups did not reveal significant difference at the .05 level. Summary data for this test are shown in Table XXXXIII.

TABLE XXXXII

MEANS AND STANDARD DEVIATIONS OF CTMM SCORES FOR BUSED AND NON-BUSED SUBJECTS BY GRADE LEVEL

	Bused(N=52)		Non-Bused(N=64)	
Grade	Mean	SD	Mean	SD
5	107.00	7.46	109.90	9.55
6	109.93	10.06	107.40	10.46

TABLE XXXXIII

A SUMMARY OF t - TEST ANALYSIS BETWEEN BUSED AND NON-BUSED FIFTH GRADE SUBJECTS ON THE CTMM

Groups	t*	P
Bused Subjects (N=22) Non-Bused Subjects (N=32)	1.25	$>.05$

* - Critical t = 2.00, $p > .20$

On the basis of the t value of -.97 between the sixth grade bused and non-bused and in view of the critical t value of 2.00, it was concluded that the two groups did not reveal significant difference at the .05 level. Summary data for this test are shown in Table XXXXIV.

TABLE XXXXIV

A SUMMARY OF *t* - TEST ANALYSIS BETWEEN BUSED AND NON-BUSED SIXTH GRADE SUBJECTS ON THE CTMM

Groups	t*	P
Bused Subjects (N=30) Non-Bused Subjects (N=32)	-.97	$>.05$

* - Critical *t* = 2.00, $p > .30$

Summary

This chapter briefly reviewed the study and the two groups, bused and non-bused, white fifth and sixth grade students, that were selected for use in the study. Chapter IV also presented the procedural treatment and the statistical analysis of data collected through the use of the Iowa Test of Basic Skills, Piers-Harris Children's Self-Concept Scale, Elementary School Environment Survey, and the permanent cumulative records of each subject giving attendance and intelligence. The null hypotheses were reviewed and levels of rejection were cited. Statistical confidence was specified at the .05 confidence level and the hypotheses were put to the test.

Chapter V will present a summary, findings, conclusions, implications, and recommendations for further research in areas related to this study.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS, FURTHER RECOMMENDATIONS, CONCLUDING STATEMENT

Summary

The purpose of this study was to assess the differences on specified variables, both cognitive and affective, between bused and non-bused white fifth and sixth grade students. The investigation concerned itself with achievement, self-concept, and the perceived school environment of white children bused to a formerly all-black school, compared to non-bused white children who have remained in their own neighborhood school for the same three-year period. There were 116 subjects studied in this research design. Fifty-two are referred to as bused subjects and constitute the experimental group. Sixty-four are referred to as non-bused subjects and constitute the control group. All subjects were randomly selected and attended the Wichita Public Schools, Wichita, Kansas, for the same three-year period--1971-1974.

Academic achievement was based on test scores in the areas of composite, reading, and mathematics, as measured by the Iowa Test of Basic Skills. Self-concept was based on scores, as measured by the

Piers-Harris Self-Concept Scale. Perceived school environment was measured by scores from the Elementary School Environment Survey. Native ability and attendance were obtained from the subject's permanent record folder.

The major objective of this study was to test the following null hypotheses:

1. The ITBS overall composite academic achievement of white bused children will not be significantly different from that of a comparable group of non-bused white children.

2. The ITBS reading achievement of white bused children will not be significantly different from that of a comparable group of non-bused white children.

3. The ITBS mathematics achievement of white bused children will not be significantly different from that of a comparable group of non-bused white children.

4. The self-concept of bused white children will not be significantly different from that of a comparable group of non-bused white children.

5. The perceived educational environment of white bused children will not be significantly different from that of a comparable group of non-bused white children.

6. The attendance record of white bused children will not be significantly different from that of a comparable group of non-bused white children.

The data were analyzed through the use of one-way analysis of variance, t-test, and the Mann-Whitney U test. Significance was established at the .05 level of confidence.

Findings

Findings resulting from this statistical analysis of the data were:

1. Null Hypothesis I of no significant difference between fifth grade bused and non-bused white children on ITBS composite was supported.

2. Null Hypothesis I of no significant difference between sixth grade bused and non-bused children on ITBS composite was supported.

3. Null Hypothesis II of no significant difference between fifth grade bused and non-bused children on ITBS reading was rejected the first year, but supported the second and third year. Refer to Table VIII for a summary of these findings.

4. Null Hypothesis II of no significant difference between sixth grade bused and non-bused children on ITBS reading was supported.

5. Null Hypothesis III of no significant difference between fifth grade bused and non-bused children on ITBS mathematics was supported.

6. Null Hypothesis III of no significant difference between sixth grade bused and non-bused children on ITBS mathematics was supported.

7. Null Hypothesis IV of no significant difference between fifth grade bused and non-bused children on self-concept was supported.

8. Null Hypothesis IV of no significant difference between sixth grade bused and non-bused children on self-concept was supported.

9. Null Hypothesis V of no significant difference between fifth grade bused and non-bused children on the environment variables of the ESES was supported.

10. Null Hypothesis V of no significant difference between sixth grade bused and non-bused children on the environment variables of the ESES was supported.

11. Null Hypothesis VI of no significant difference between fifth grade bused and non-bused children on attendance was supported the first and second year, but was rejected the third year.

12. Null Hypothesis VI of no significant difference between sixth grade bused children and non-bused children on attendance was supported.

Conclusions

The following conclusions have been drawn from the findings of this study:

1. The evidence obtained in this study indicates that there is not a significant difference between bused and non-bused subjects, with the exception of 2 and 3 listed below.

2. The investigation disclosed a difference in reading achievement between fifth grade bused and non-bused subjects the first year. It was concluded that fifth grade bused subjects made a sufficient gain in reading during the first year of integration, and that there was no significant difference between fifth grade bused and non-bused the second or third year. It is assumed that the gain in reading by the bused subjects is due, in part, to the emphasis in reading by the instructors in the three formerly all-black schools.

3. Differences in attendance between fifth grade bused and non-bused subjects the third year would indicate that busing does not negatively effect school attendance.

4. Both bused and non-bused subjects still appear to be in an advantageous position with respect to national norms for standardized tests of intelligence and academic achievement.

5. Busing white students out of their own neighborhood does not adversely effect their self-concept.

6. Formerly all-black schools are not perceived to have different educational environments than those of formerly all-white schools.

7. It is important to conclude that this investigation focused on the effects of busing white children away from their own neighborhood school, and it is not a study of the effects of desegregation.

8. The findings from analysis of the data collected should be interpreted to apply only to the local school district in which this study was made. Generalizing to other populations should be done only when there is a comparable ethnic and student population.

Implications and Recommendations

In light of the related literature and the results of this study, the following recommendations are suggested:

1. The validity and the findings of this study should be substantiated through additional investigations of bused white children of other ages and in other sections of the country.

2. Longitudinal studies of five years or more should be attempted, using control techniques, of the effect of busing white children out of their own neighborhood into the ghetto or inner-city schools.

3. An attempt should be made to develop an instrument that would be sensitive in measuring the self-concept of elementary age children.

4. Research investigations of this type should be planned in such a manner that the educational experiences of the pupils, during the time they are studied, can be controlled. Educational experiences would include special programs, additional services, and school sponsored activities, such as scouting programs.

5. School systems should offer in-service training for teachers who receive bused students, black or white, to help them to be more effective in desegregated schools.

6. Research should be conducted to investigate the extent of the impact of the mass media on busing. Comparative studies of television, radio, and press involvement in communities which have substantial school busing programs would be helpful.

7. Research on the educational and social impact of busing is needed by policy makers in making decisions relative to busing.

8. Research should be applied in determining the relationship between parent and student involvement and the intervention of the school district in successful and unsuccessful busing programs.

9. Research on the relationship between utilization of parent and advisory councils for busing programs and the success of these programs should be studied.

10. Descriptive analysis which focuses on the characteristics and decision-making styles of school leaders who have implemented successful busing programs should be investigated.

Further Recommendations

1. The busing of both whites and blacks should proceed so that both groups will be better educated and as a result, contribute more to this society.

2. Teachers receiving bused students, either black or white, should become skilled in promoting social acceptance of different ethnic groups within the classroom.

3. Efforts should be applied to discover whether busing children, black or white, brings about gains in those concomitants of learning which elude measurement by standardized tests.

4. Racial integration, through busing, should be considered whenever feasible as it promises to yield positive benefits for children.

Concluding Statement

Even though there may be flaws in the methodology, control, and choice of sample (plus obvious impacts from time constraints and other countervailing influences) which might limit the ability to generalize from the data yielded by this investigation, there are important reasons for continuing efforts toward school integration. As pointed out in Chapter I, the United States judicial system has established desegregation as unconstitutional and integration as a worthy national goal. It appears that integration through residential patterns would be the preferable solution to most Americans, and that most of the American citizenry would expouse that integration holds the potential to bring a rich variety of social advances to all. Without regard to the method of bringing about an integrated society, the alternative, ethnic segregation, is unacceptable under the Constitution.

Equal opportunity through equal access to education has been identified as a national goal. The concern over busing follows a national concern in relation to education. The author is aware that

the end result of a quality education cannot necessarily come through the school alone, but that other social institutions have a responsibility in bringing about an integrated society. While the American public school is a potent institution, it is only one factor in the solution of intricate and difficult domestic problems. From this study, certain generalizations concerning the school are noted regarding the impact of busing white children into the inner-city school area. These are stated in the conclusions, but further research is imperative if this society is to work its way through the current set of problems.

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APPENDIX A

REQUEST FOR RESEARCH APPROVAL AND AGREEMENT

REQUEST FOR RESEARCH APPROVAL AND AGREEMENTS

Investigator(s): C. Lindel Silvertooth Date: January 10, 1974

Permanent Address: Apt. 308, 700 Scott Telephone: 372-6211
Stillwater, Oklahoma 74074 Ext. 6461

College Advisor: Dr. Kenneth St. Clair, Acting Head
Department of Administration and Higher Education
Oklahoma State University

Date request is initiated by student: 1/74	Date request approved advisor and/or committee: Approved by OSU committee 10/15/73	Date request approved Wichita Schools Research Council: 2/74	Starting Date: 3/74 Completion Date: 7/74 Final Report: 10/74 File Date: 10/74

Complete six copies of this form. One for the OSU advisor and four copies to the Director of Research in Wichita Schools. One form is to be kept by the student. Use statements that are brief, concise and in good grammatical form and style. All projects must be dated and initialed by the approval individuals or offices before the commencement of any new project. A copy of the written report or abstract of the study must be deposited in the office of the Director of Research, Wichita Public Schools, upon completion of the study.

1. Statements of the problem to be studied: The title for this graduate research problem is "A Comparison of Achievement, Self-Concept, and Perceived School Environment of Bused and Non-bused White Students." First, a comparison will be made of achievement of white students who have been bused for a period of three years into one of the three AAA schools to a comparable group of white students, selected at random, who have remained in their own neighborhood school for the same three-year period. Second, a comparison will be made of the educational environment of the three AAA schools to the educational environment of students in white neighborhoods. Third, a comparison of self-concept will be examined.

2. Specific purpose of the study: The proposed study will investigate the impact of busing on fifth and sixth grade white students with respect to their achievement on the Iowa Test of Basic Skills, perceived school environment using the Elementary School Environment Survey (ESES), and the Piers-Harris Children's Self-Concept Scale.

   This study was stimulated by a desire to provide more adequate data on both achievement and non-achievement variables when the independent variable was busing and where bused white students were compared with their non-bused white peers. This investigation will increase the data base on the educational effects of forced busing on white elementary students. Most studies on achievements, or

any other variables, of white children are conducted on situations where black children have been bused to white schools and not white children to black schools.

3. Hypothesis to be tested: In each instance, the null hypothesis formulated and tested for statistical significance will be that there will be no significant difference between the two groups with respect to achievement, self-concept, or perceived school environment. Throughout this study, significance will be accepted at the .05 level.

4. Description of sample needed, desired location, and school staff to be contacted: White students who have been bused and have attended one of the three AAA schools for the past three years will be subjects for this study. AAA principals have indicated verbally that there are 60 fifth and sixth grade students who meet this prerequisite. Approximately 60-70 students will be selected at random from non-AAA schools. Location and staff will be determined in consultation with appropriate officials of the Wichita Public Schools.

5. Procedures and methods to be employed: (What will be done by the investigator and participants in the study, data to be gathered, data-collecting instrument to be used.) If possible, attach copies of instrument to be used in obtaining data. The Iowa Test of Basic Skills and the California Test of Mental Maturity scores will be available in May for all potential subjects. The investigator will randomly select, through Pupil Accounting, the 60-70 non-bused white children to be utilized in this investigation. The Elementary School Environment Survey (ESES) will be used to assess the educational climate, Children's Self-Concept Scale will be administered to all subjects. Each of the two preceding instruments take approximately 15-20 minutes to administer. Both instruments will be administered by the investigator with the cooperation and at the convenience of school officials. It will be suggested by this investigator to administer these two tests the first two weeks of April or the last two weeks of April.

6. Data treatment and analysis: All subjects and participating schools will be guaranteed strict anonymity. Selected subjects and schools will not be identified. All data will be handled in a strictly confidential manner and will be retained under the security of the investigator at all times. All results will be made available to interested officials of the Wichita Public Schools.

Statistical Treatment

ACHIEVEMENT: ITBS Composite, Reading and Mathematics will constitute the criterion measure. Analysis of Covariance will constitute the statistical treatment. CTMM scores will be used as a covariate. The alpha level for each test will be set at the .05 level of significance.

ENVIRONMENT: The ESES will be used to determine and compare school identification between bused and non-bused white students. The Mann-Whitney U is sensitive in ascertaining whether or not two independent samples are from populations with the same central tendency or from populations which differ in location (Central Tendency). This is especially true with larger sample sizes (20) and when ordinal measurement has been achieved.

SELF-CONCEPT: The t-ratio will be used to calculate the variances, standard deviation, standard error of the means and the standard variances of the means between the two groups.

Approval		Date
Research Council Chairman	_____	_____
Research Council Member	_____	_____
Research Council Member	_____	_____
Research Council Member	_____	_____
Research Council Member	_____	_____
Building Principal(s)	_____	_____
	_____	_____
	_____	_____

APPENDIX B

LETTER OF CONSENT FROM DIVISION OF RESEARCH

WICHITA PUBLIC SCHOOLS

WICHITA PUBLIC SCHOOLS
EDUCATIONAL SERVICES BUILDING
640 North Emporia
WICHITA, KANSAS 67214

January 22, 1974

Division of Research and Evaluation Services

Mr. C. Lindel Silvertooth
700 Scott, Apt. 308
Stillwater, OK 74074

Dear Lin:

Your January 10, 1974 research proposal has been reviewed by members of the Research Council. This will inform you that the study has been approved. The comparison of achievement, self-concept, and perceived school environment of bused and non-bused white, elementary pupils should provide information of value. A copy of your request containing the signatures of Research Council members is enclosed.

Please keep me informed as the study progresses. I will need a list of all schools participating in the research as soon as the subjects from non-AAA schools have been selected. Also, a copy of the report of the study will be needed for office files. If I can assist you further, please let me know.

Sincerely yours,

Ralph

Ralph E. Walker, Director
Research and Evaluation
Services Division

cc: Dr. Doyle Koontz
Dr. Donald Younglund
Dr. Lawrence Bechtold

APPENDIX C

LIST OF RANDOMLY SELECTED SCHOOLS

FOR NON-BUSED SUBJECTS

Oklahoma State University
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION

STILLWATER, OKLAHOMA 74074
GUNDERSEN HALL
(405) 372-6211, EXT. 6245

March 2, 1974

Dr. Ralph Walker
Director, Research Division
Wichita Public Schools
428 South Broadway
Wichita, Kansas

Dear Ralph:

I believe that you requested a list of the non-AAA schools that will be used in my research study. As you know, I will administer the Piers-Harris Self Concept instrument and the Elementary School Environment Survey to selected fifth and sixth grade students. I plan on administering these instruments the week of March 10 and 17, 1974. Principals will be contacted at least one day prior to testing.

The following schools will be contacted during the two week period mentioned above.

Adams	Gardiner	Longfellow
Allen	Garrison	Meridian
Booth	Greiffenstein	Minneha
Caldwell	Griffith	O.K.
Cessna	Hyde	Payne
Chisholm (Jesse)	Irving	Price
Cleaveland	Kellogg	Seltzer
Earhart	Kensler	South Hillside
Enterprise	Lawrence	Wells
Fabrique	Lincoln	Wilson
Finn		Woodland

If you have any questions, please don't hesitate to call. My number is 405-377-3246.

Very truly yours,

C. Lindel Silvertooth
Graduate Student

APPENDIX D

LIST OF SCHOOLS EXEMPT FROM THE LOTTERY

OKLAHOMA STATE UNIVERSITY — STILLWATER

OKLAHOMA PUBLIC SCHOOL RESEARCH COUNCIL
STILLWATER, OKLAHOMA 74074

AFFILIATED UNIVERSITIES
The University of Oklahoma
Oklahoma State University

OFFICE OF THE EXECUTIVE SECRETARY
Gunderson Hall, Room 302 C
Phone 372-6211, ext. 6245

January 21, 1974

TO: Selected Elementary Principals

FROM: C. Lindel Silvertooth

SUBJECT: Random Selection of White, Fifth and Sixth Grade, Non-bused Students

The following schools were exempt from the lottery in the 1971-72 school year. Exemptions were based on the fact that they were integrated by residence, Follow Through, or were paired with another school. Random selection of white fifth and sixth grade students will not be solicited from these schools.

Feeder Schools to Ingalls, L'Ouverture and Mueller
that were exempt from the lottery for integration purposes in 1971-72

INGALLS	L'OUVERTURE	MUELLER
	Arkansas Ave.	Alcott
	Bridgeport	MacArthur
	Buckner	Park
	Carter	Rogers
	Chisholm Trail	Sunnyside
	N. Pl. Valley	Waco
		Washington

APPENDIX E

LETTER CONCERNING RANDOM SELECTION OF NON-BUSED SUBJECTS

OKLAHOMA STATE UNIVERSITY — STILLWATER

OKLAHOMA PUBLIC SCHOOL RESEARCH COUNCIL
STILLWATER, OKLAHOMA 74074

AFFILIATED UNIVERSITIES
The University of Oklahoma
Oklahoma State University

OFFICE OF THE EXECUTIVE SECRETARY
Gunderson Hall, Room 302 C
Phone 372-6211, ext. 6245

January 15, 1974

TO: Selected Elementary Principals

FROM: C. Lindel Silvertooth

SUBJECT: Random Selection of White, Fifth and Sixth Grade, Non-bussed Students

As you know, when we integrated our elementary schools in the 1971-72 school year, we asked for white parents to volunteer their children and selected the remainder by lottery. The preponderance of white students were selected by lottery and approximately 60 fifth and sixth grade students are still in attendance at one of our three Assigned Attendance Area elementary schools.

I am requesting that each school, excluding AAA and those exempt from the lottery system in the 1971-72 school year, to select, at random, one white fifth grade student and one white sixth grade student who has been in continuous attendance at your school for the past three years.

For example, if Linwood Elementary has seven white fifth grade students who are presently attending Linwood and have been in attendance at Linwood for the past three years, to select one student at random. This may be done by putting all seven names in a hat and having your secretary, or any other person, select one name. The same process should be followed for sixth grade students.

I have received permission to administer the Elementary School Environment Survey and the Piers-Harris Children's Self Concept Scale to selected fifth and sixth grade students the latter part of March or the early part of April. Both instruments require approximately 20-30 minutes to administer. Each principal will be personally contacted by me before these tests are administered.

Please submit the student's name on the lower portion of this form by February 15, 1974. Your cooperation is tremendously appreciated.

- -

C. Lindel Silvertooth
Room 309-B
Gunderson Hall
Oklahoma State University
Stillwater, Oklahoma 74074

_____
SCHOOL

_____, FIFTH GRADE

_____, SIXTH GRADE

_____
PRINCIPAL

APPENDIX F

DATA GATHERING FORM

DATA-GATHERING FORM

CTMM: I.Q. %

2ND _____

3RD _____

5TH _____

_____
STUDENT CODE

_____
STUDENT CODE

ITBS:	READING		MATHEMATICS		COMPOSITE	
	SS	%	SS	%	SS	%
3RD						
4TH						
5TH						
6TH						

ATTENDANCE: NUMBER OF DAYS ABSENT

3RD _____

4TH _____

5TH _____

6TH _____

TOTAL _____

APPENDIX G

INSTRUCTIONS FOR ADMINISTRATION OF ESES AND CSCS

Oklahoma State University

DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION

STILLWATER, OKLAHOMA 74074
GUNDERSEN HALL
(405) 372-6211, EXT. 6245

March 1, 1974

Dear Principal:

Thank you for personally taking time from your busy schedule to administer the Elementary School Environment Survey (ESES) and the Piers-Harris Self Concept Scale (CSCS). You may administer the instruments to both fifth and sixth grade students simultaneously. Please do not deviate from the instructions to students for both instruments. Your assistance in this research effort is greatly appreciated.

INSTRUCTIONS TO STUDENTS (ESES)

We are interested in your ideas about your classroom. We are asking you to be a reporter and tell your thoughts about your classroom.

Please understand that this is not a test, and there are no right or wrong answers. In fact, we do not even ask you name. We simply want your honest ideas about your classroom.

How to Mark Sentences: When you think a sentence tells about your classroom, mark that sentence TRUE by circling the T on the answer sheet. In other words, circle T if you think the sentence tells the way things usually are in your classroom, what happens or might happen there, or the way people usually act or feel.

Circle the F on the answer sheet if the sentence is FALSE or is not the way things usually are in your classroom, is not what happens or might happen there, or is not the way people usually act or feel.

INSTRUCTIONS TO STUDENTS (CSCS)

Here are a set of statements. Answer the items or statements as you really feel you are, not as you think you ought to be. Some of them are true of you so you will circle the yes. Some are not true of you and so you will circle the no. Answer every question even if some are hard to decide, but do not circle both yes and no. Remember, circle the yes if the statement is generally like you, or circle the no if the statement is generally not like you. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

APPENDIX H

LETTER REQUESTING PERMISSION TO USE ESES

OKLAHOMA STATE UNIVERSITY — STILLWATER

OKLAHOMA PUBLIC SCHOOL RESEARCH COUNCIL
STILLWATER, OKLAHOMA 74074

AFFILIATED UNIVERSITIES
The University of Oklahoma
Oklahoma State University

OFFICE OF THE EXECUTIVE SECRETARY
Gunderson Hall, Room 302 C
Phone 372-6211, ext. 6245

January 16, 1974

Dr. Robert Sinclair
Professor of Education
School of Education
University of Massachusetts
Amherst, Massachusetts 01002

Dear Dr. Sinclair:

Thank you for granting me permission to use the Elementary School Environment Survey during our telephone conversation yesterday. Enclosed is the research proposal submitted to the Wichita Public School Research Council for your information as to the purpose and scope of the study. As noted in the proposal, my alternate hypothesis is that white bused children will do significantly better on achievement, have a better self concept, and identify with their school more than non-bused white students.

I would appreciate a formal letter granting me permission to use ESES and any additional information, such as a bibliography, that might be helpful to me. This is especially true for any study that relates to integration. I believe you mentioned that appropriate norms, the answer sheet, and both forms of the test would be sent to me upon receipt of this letter.

You also mentioned a school in New Jersey that has extensively bused white students and I failed to write down the city or town in New Jersey. This information would be helpful.

Again, may I express my sincere thanks for permission to use ESES and any additional information you might send me. Results of the study will be sent to you as soon as possible.

Very truly yours,

C. Lindel Silvertooth
Graduate Student, OSU

cc: Dr. Kenneth St. Clair
Chairman, Doctoral Committee

Enc.

APPENDIX I

LETTER OF CONSENT TO USE ESES

The Commonwealth of Massachusetts
University of Massachusetts
Amherst 01002

SCHOOL OF EDUCATION

...'Who is more responsible than a gull who finds and follows a meaning, a higher purpose for life? For a thousand years we have scrabbled after fish heads, but now we have a reason to live--to learn, to discover, to be free! Give me one chance, let me show you what I've found..."
Jonathan Livingston Seagull
by Richard Bach, p. 35.

January 31, 1974

Dear Mr. Silvertooth,

Thank you for your interest in my efforts to improve the educational environments in which children live and learn. The active response to my article, "Set a Stage for Response," in the Instructor is exciting. Educators throughout the United States and Canada have requested further information.

I am pleased to give you permission to use the "Elementary School Environment Survey (ESES)". There is no charge for this permission; I am interested only in fostering inquiry into school environments. However, I would like you to send me the results of your study so that I can continue to keep abreast of the conditions and happenings confronting teachers and students.

Also, enclosed are two supporting documents that will assist you in administering ESES, interpreting the results, and understanding the power of environmental change. The first document for your review is an annotated bibliography of environmental studies. This information will provide conceptual and empirical support for your efforts. The second document is a research paper centering on actual studies conducted in Elementary Schools. The variables measured, by ESES are described in a somewhat different way in this paper. The variables were revised for the recent article in the Instructor. When you read the second document please note that teachers and students differ in how they perceive school atmosphere. Further, you might be particularly interested in the findings that suggest leadership behaviors of the principal influence the nature of educational environment in the school. For example, if you have a principal who is closed and authoritarian an educational environment with the same characteristics will result. I hope you find these documents helpful.

Now a few brief comments about the administration, scoring, and interpretation of ESES.

The ESES is designed for use with fifth and sixth grade children. If you use it with younger children please make sure you read the items aloud. I have enclosed some simple directions for you to read to your students.

Scoring of ESES is simple. You can determine a score on each variable for your classroom by computing the percent of students who answer according to the keyed response. If 66% or more answer in the keyed direction, your class gets a point for that item. However, if 66% or more answer opposite to the key you take away a point. Simply add the pluses and subtract the minus to determine the score for the variable. Then go to the next variable and repeat the process. By comparing all of the variable scores you can see which variables are most intensive.

Also, you can score ESES by using only percents. In other words, determine the percent of students responding in the keyed direction to each item in each variable. Add the percent for each item associated with a variable and divide by the number of items.

Interpretation of your classroom scores can be of many types. Please use your own creativity to make use of the information about how children see the classroom. Some of the ways other teachers have used the results are:

1. Match the student perceptions with what you and the students desire for the classroom. Use the student reports as an assessment of where you are at present and then project what you would like to change.

2. Identify those students who view the classroom atmosphere in a very different manner than the majority of students. You can council with these individuals to determine what perceptions contribute to either positive or negative views of the classroom. Such knowledge will help you to work with individuals who are presently disconnected from the curriculum and instruction.

3. Use your environmental information when meeting with parents. You can share with them how their child perceives the classroom and how all students report the nature of the environment. This type of information could also be included in report cards.

Again, thank you for your interest in my article. I am pleased that the Instructor made it possible for us to communicate about important aspects of education. Best wishes in your continued effort to make schools and classrooms even more responsive to learners.

Yours sincerely,

Robert Sinclair

Robert Sinclair
Associate Professor of Curriculum
and Instruction and Director,
Program for Curriculum Studies.

RS:lmp

APPENDIX J

LETTER CONCERNING 1971 LOTTERY

WICHITA PUBLIC SCHOOLS
ADMINISTRATION BUILDING
428 South Broadway
WICHITA, KANSAS 67202

Division of Data Processing and Pupil Accounting

April 3, 1974

Mr. C. Lindel Silvertooth
Graduate Student
309 B Gundersen Hall
Oklahoma State University
Stillwater, Oklahoma 74074

Dear Mr. Silvertooth:

Enclosed is the information that you requested in your telephone call to me yesterday. We selected a total of 1,318 non-blacks in the 1971-72 school year. These were the first 22 birthdates selected on the list of randomly selected birthdates. The analysis of the 1972-73 enrollment is: 81 pupils were selected to attend L'Ouverture; 193 pupils were selected to attend Ingalls; and 146 pupils were selected to attend Mueller for a total of 420 pupils.

Enclosed is a sample of the card used for our total volunteer program in 1970-71 and a copy of a card used in 1971-72. Also enclosed is a group of letters and a calendar of events for the 1971-72 school year.

It was nice to hear from you and if we can help you further please don't hesitate to call us.

Sincerely,

Wilbur C. Dorsey

Wilbur C. Dorsey, Division Director
Data Processing and Pupil Accounting

WCD:nh
Encl.

APPENDIX K

CHILDREN'S SELF-CONCEPT SCALE

THE WAY I FEEL ABOUT MYSELF

NAME . . . . . .

AGE . . . . . GIRL OR BOY . . . . . .

GRADE. . . . . SCHOOL. . . . . .

DATE . . . . . .

Here are a set of statements. Some of them are true of you and so you will circle the yes. Some are not true of you and so you will circle the no. Answer every question even if some are hard to decide, but do not circle both yes and no. Remember, circle the yes if the statement is generally like you, or circle the no if the statement is generally not like you. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. My classmates make fun of me. . . . . yes no
2. I am a happy person . . . . . yes no
3. It is hard for me to make friends . . . . . yes no
4. I am often sad. . . . . yes no
5. I am smart. . . . . yes no
6. I am shy. . . . . yes no
7. I get nervous when the teacher calls on me. . . . . yes no
8. My looks bother me. . . . . yes no
9. When I grow up, I will be an important person . . . . . yes no
10. I get worried when we have tests in school. . . . . yes no
11. I am unpopular. . . . . yes no
12. I am well behaved in school . . . . . yes no
13. It is usually my fault when something goes wrong. . . . . yes no
14. I cause trouble to my family. . . . . yes no
15. I am strong . . . . . yes no
16. I have good ideas . . . . . yes no
17. I am an important member of my family . . . . . yes no
18. I usually want my own way . . . . . yes no
19. I am good at making things with my hands. . . . . yes no
20. I give up easily. . . . . yes no
21. I am good in my school work . . . . . yes no
22. I do many bad things. . . . . yes no

23. I can draw well . . . . . yes no

24. I am good in music. . . . . yes no

25. I behave badly at home. . . . . yes no

26. I am slow in finishing my school work . . . . . yes no

27. I am an important member of my class. . . . . yes no

28. I am nervous. . . . . yes no

29. I have pretty eyes. . . . . yes no

30. I can give a good report in front of the class. . . . . yes no

31. In school I am a dreamer. . . . . yes no

32. I pick on my brother(s) and sister(s) . . . . . yes no

33. My friends like my ideas. . . . . yes no

34. I often get into trouble. . . . . yes no

35. I am obedient at home . . . . . yes no

36. I am lucky. . . . . yes no

37. I worry a lot . . . . . yes no

38. My parents expect too much of me. . . . . yes no

39. I like being the way I am . . . . . yes no

40. I feel left out of things . . . . . yes no

41. I have nice hair. . . . . yes no

42. I often volunteer in school . . . . . yes no

43. I wish I were different . . . . . yes no

44. I sleep well at night . . . . . yes no

45. I hate school . . . . . yes no

46. I am among the last to be chosen for games. . . . . yes no

47. I am sick a lot . . . . . yes no

48. I am often mean to other people . . . . . yes no

49. My classmates in school think I have good ideas . . . . . yes no

50. I am unhappy. . . . . yes no

51. I have many friends . . . . . yes no

52. I am cheerful . . . . . yes no

53. I am dumb about most things . . . . . yes no

54. I am good looking . . . . . yes no

55. I have lots of pep. . . . . yes no

56. I get into a lot of fights. . . . . yes no

57. I am popular with boys. . . . . yes no

58. People pick on me . . . . . yes no

59. My family is disappointed in me . . . . . yes no

60. I have a pleasant face. . . . . yes no

61. When I try to make something, everything seems to go wrong. yes no

62. I am picked on at home. . . . . yes no

63. I am a leader in games and sports . . . . . yes no

64. I am clumsy . . . . . yes no

65. In games and sports, I watch instead of play. . . . . yes no

66. I forget what I learn . . . . . yes no

67. I am easy to get along with . . . . . yes no

68. I lose my temper easily . . . . . yes no

69. I am popular with girls . . . . . yes no

70. I am a good reader. . . . . yes no

71. I would rather work alone than with a group . . . . . yes no

72. I like my brother (sister). . . . . yes no

73. I have a good figure. . . . . yes no

74. I am often afraid . . . . . yes no

75. I am always dropping or breaking things . . . . . yes no

76. I can be trusted. . . . . yes no

77. I am different from other people. . . . . yes no

78. I think bad thoughts. . . . . yes no

79. I cry easily. . . . . yes no

80. I am a good person. . . . . yes no

Score: _____

APPENDIX L

FORM A-Sc, ELEMENTARY SCHOOL ENVIRONMENT SURVEY,

PRINTED AT OKLAHOMA STATE UNIVERSITY

Form A-Sc

1.	Teachers watch the students closely when they work to make sure there are no mistakes.	T	F
2.	The attendance roll is called every day in class	T	F
3.	Students often work in small groups of about three of four students without the teacher.	T	F
4.	Students try to get special favors from the teachers.	T	F
5.	Bells ring during the day to tell students what class-work to do next.	T	F
6.	In this school students usually have to line up before going into the classroom or leaving the classroom.	T	F
7.	The subjects taught here do not help students learn how to solve real problems.	T	F
8.	In this school students quickly learn what to do and what not to do.	T	F
9.	Most students finish the projects and assignments that they start.	T	F
10.	Most students here have homework many times during the week.	T	F
11.	Science is probably the most important subject in this school.	T	F
12.	In this school it is easy to pass most subjects without working hard.	T	F
13.	Most students are happy if they do average work.	T	F
14.	When school work gets difficult students study harder.	T	F
15.	Most of the students in this school study a lot so that they can get high grades.	T	F
16.	Most students here do not care much about their school work.	T	F
17.	Many students like to stay around after school gets out.	T	F
18.	Most of the teachers do not care about problems that students are having.	T	F
19.	Students have many chances to help other students.	T	F
20.	In this school students have parties in class to celebrate birthdays or other important days.	T	F
21.	Teachers are kind and friendly when they work with students.	T	F
22.	The students in this school feel like they are one big family.	T	F
23.	Many of the students here are unhappy about the school.	T	F
24.	Students here are often reminded to be careful about getting sick.	T	F
25.	Many interesting people visit the school to play music or to talk about their experiences.	T	F
26.	Students often talk about their own personal problems.	T	F
27.	Most teachers do not try to get students interested in what's going on in the United States.	T	F
28.	Many students often talk about what they think is right or wrong.	T	F
29.	Quite a few of the teachers talk to students about concerts, plays and museums.	T	F

30.	Many students talk about traveling to different parts of the United States.	T	F
31.	In many classes students talk about what they do outside of school.	T	F
32.	Social studies is not a very important subject in this school.	T	F
33.	Students here are very quick to tell teachers about things that should be changed.	T	F
34.	Students do not pay much attention to school rules and regulations.	T	F
35.	Things like paper throwing or water fights are not likely to happen in this school.	T	F
36.	Most students here do not like to get into any kind of argument.	T	F
37.	Students almost always wait to be called on before speaking in class.	T	F
38.	This school has a big program of sports or physical education activities.	T	F
39.	Students sometimes make plans to do something bad to the school.	T	F
40.	Students do not get any special favors in this school.	T	F

Thank you for marking these sentences.

APPENDIX M

FORM B-Sc, ELEMENTARY SCHOOL ENVIRONMENT SURVEY,

PRINTED AT OKLAHOMA STATE UNIVERSITY

Form B-Sc

1.	Many students say that they do not like the rules made by the teachers.	T	F
2.	Many students do not behave while they are on the playground.	T	F
3.	This school teaches students to be polite.	T	F
4.	Students here are careful about taking good care of school property.	T	F
5.	Many students get into trouble with the teachers.	T	F
6.	Students know they should check with the teacher before they do something that might break a school rule.	T	F
7.	Students often break or mark school property.	T	F
8.	Students usually do not interrupt while someone else is talking.	T	F
9.	Students have to stay after school if they break school rules.	T	F
10.	The teachers seldom check to make sure that students finish their schoolwork.	T	F
11.	Students here learn that they should put their ideas into action.	T	F
12.	Students that the principal and teachers know will have it easier in this school.	T	F
13.	One way to get good grades in this school is to be nice to the teachers.	T	F
14.	In many classes, students sit in any seat they choose.	T	F
15.	People know who the smartest or the best liked students are in this school.	T	F
16.	Teachers will raise a student's grade if they think the student has worked very hard.	T	F
17.	Most of the teachers in this school are unfriendly.	T	F
18.	Many of the teachers go out of their way to help students.	T	F
19.	If students are unhappy in school, the teacher will call their parents.	T	F
20.	The teachers try to make sure that students get to know each other.	T	F
21.	This school seems to be an unfriendly place.	T	F
22.	Many teachers are too busy to talk to students about their problems or to give them extra help.	T	F
23.	In this school students ask other students to visit them at home.	T	F
24.	Many students help each other with their classwork.	T	F
25.	Students often take field trips to interesting places.	T	F
26.	In this school students have many chances to listen to music.	T	F
27.	In this school it's important to be just like everyone else.	T	F
28.	Students in this school do not think music is very important.	T	F
29.	Most students have very little interest in knowing about the problems of other countries.	T	F

30.	Many students try to understand why people do the things they do.	T	F
31.	Most students are interested in such things as poetry, music, or painting.	T	F
32.	In this school, many students talk about what's going on in the United States.	T	F
33.	Students get good grades without spending much time studying.	T	F
34.	Most of the teachers are very hard workers and they think the students should study hard too.	T	F
35.	Most students like to figure out the answers to questions that the teacher asks.	T	F
36.	Teachers seldom take their classes to the library so that students can look up information.	T	F
37.	In this school everyone is expected to do good work.	T	F
38.	Most students here put a lot of energy into everything they do.	T	F
39.	Students may take books from the library shelves without the help of the librarian.	T	F
40.	Students here care a lot about their school work.	T	F

Thank you for marking these sentences.

VITA

Clarence Lindel Silvertooth

Candidate for the Degree of

Doctor of Education

Thesis: COMPARISON OF ACHIEVEMENT, SELF-CONCEPT, AND ENVIRONMENT OF BUSED AND NON-BUSED WHITE FIFTH AND SIXTH GRADE CHILDREN

Major Field: Educational Administration

Biographical:

Personal Data: Born in Clovis, New Mexico, September 5, 1935, the son of Mr. and Mrs. Mack E. Silvertooth, Sr.

Education: Attended elementary school in Amarillo, Texas, and Waynoka, Oklahoma; graduated from Waynoka High School, Waynoka, Oklahoma, in 1954; received the Bachelor of Science degree with a major in Elementary Education from Oklahoma State University, Stillwater, Oklahoma, in May, 1960; received the Master of Education degree with a major in Public School Administration from Wichita State University, Wichita, Kansas, in May, 1965; completed the requirements for the Doctor of Education degree in December, 1974.

Professional Experience: Sixth grade teacher at Adams Elementary School, Wichita, Kansas, 1960-1964; teacher of physical education at Payne Elementary School, Wichita Kansas, 1964-1965; Assistant Principal at Kelly Elementary School, Wichita, Kansas, August, 1965-December, 1965; Principal at Linwood Elementary School, Wichita, Kansas, December 1965-1969; Principal at Mueller Elementary School, Wichita, Kansas, 1969-1973; Research Associate for the Oklahoma Public School Research Council, Stillwater, Oklahoma, 1973-1974.

Professional Organizations: Local, State, and National Education Associations; National Association of Elementary School Principals; Kansas Association of Elementary School Principals; Wichita Association of Elementary School Principals; Wichita Educational Administration Association; Phi Delta Kappa.