

INFORMATION TO USERS

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

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

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

University Microfilms International

300 North Zeeb Road

Ann Arbor, Michigan 48106 USA

St. John's Road, Tyler's Green

High Wycombe, Bucks, England HP10 8HR

7824614

SMITH, ALTON BERNARD

A STUDY OF THE EDUCATIONAL EFFECTIVENESS OF
DESEGREGATION: A COMPARISON OF PUPIL
EDUCATIONAL PERFORMANCE BEFORE AND AFTER ONE
YEAR OF DESEGREGATION.

THE UNIVERSITY OF OKLAHOMA, PH.D., 1978

University
Microfilms
International

300 N. ZEEB ROAD, ANN ARBOR, MI 48106



1978

ALTON BERNARD SMITH

ALL RIGHTS RESERVED

THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

A STUDY OF THE EDUCATIONAL EFFECTIVENESS OF DESEGREGATION:
A COMPARISON OF PUPIL EDUCATIONAL PERFORMANCE BEFORE
AND AFTER ONE YEAR OF DESEGREGATION

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

By

ALTON BERNARD SMITH

Norman, Oklahoma

1978

A STUDY OF THE EDUCATIONAL EFFECTIVENESS OF DESEGREGATION:
A COMPARISON OF PUPIL EDUCATIONAL PERFORMANCE BEFORE
AND AFTER ONE YEAR OF DESEGREGATION

APPROVED BY

Charles S Butler

Glenn Smider

W. L. B. C.

Harold B. Brundage

DISSERTATION COMMITTEE

ACKNOWLEDGMENTS

I am particularly indebted to Dr. Charles E. Butler for his years of patience and guidance and to the members of my committee: Dr. Robert Bibens, Dr. Gladys Dronberger, and Dr. Glenn R. Snider.

A special thank you is in order for Dr. Wesley Beck, Shawnee Superintendent of Schools, for allowing me to complete this study, and to Mr. Paul Pounds, Principal, Jefferson School, and Mr. James Taffee, Principal, Washington School, for their assistance in supplying information relevant to this report.

A kudo to Ms. Barbara Parker for her assistance in processing the statistical data for this study and to the Shawnee New-Star for supplying this writer with newspaper material relevant to the background of the initiation and implementation of the desegregation of the Washington and Jefferson Schools.

An acknowledgment is made to the University of Oklahoma library staff and the Department of Education for their assistance in decreasing the time and cost for securing research material by means of improved technical services and administrative management.

A special acknowledgment is made to a man, scholar, unknown mentor, and friend who inspired me to continue to

pursue this degree despite the odds and his knowledge, Dr. Everett W. Thornton, Professor Emeritus, Oklahoma Baptist University.

A last, but not forgotten acknowledgment is made to my wife, Pattisue, and children, April and Tommy, for their patience and endurance.

TABLE OF CONTENTS

ACKNOWLEDGMENTS	iii
LIST OF TABLES.	vii
LIST OF FIGURES	x
Chapter	
I. INTRODUCTION.	1
Background of the Study	
Need for the Study	
Statement of the Problem	
Purpose of the Study	
Hypotheses	
Limitations	
Definitions	
Data Collection	
Organization of the Study	
II. REVIEW OF RELATED LITERATURE.	15
III. PROCEDURE AND METHODOLOGY	36
IV. PRESENTATION AND ANALYSIS OF THE DATA	40
Introduction	
Treatment of the Data	
Supplementary Information	
Summary of Findings	
Discussion	
V. SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS	68
Summary	
Findings	
Conclusions	
Recommendations	

APPENDIX A - CORRESPONDENCE 73

APPENDIX B - NEWSPAPER ARTICLES 77

APPENDIX C - RAW DATA USED IN ANALYSES. 91

APPENDIX D - MAPS 100

BIBLIOGRAPHY. 103

LIST OF TABLES

Table	Page
1. Sixth Grade Students for the Years 1976-77. . . .	37
2. Mean Scores and Standard Deviations of GPA by Race and Desegregation Level.	42
3. Analysis of Variance Table of Effects of Deseg- regation and Race on GPA.	43
4. Mean Scores and Standard Deviations of Attend- ance Records by Race and Desegregation Level. . .	44
5. Analysis of Variance Table of Effects of Deseg- regation and Race on School Attendance Records. .	44
6. Mean Standard Scores and Standard Deviations of MAT Total Math Subtest by Race and Desegregation Level	45
7. Analysis of Variance Table of Effects of Deseg- regation and Race on MAT Total Math Subtest Scores	46
8. Mean Standard Scores and Standard Deviations of MAT Total Reading Subtest Scores by Race and De- segregation Level	47
9. Analysis of Variance Table of Effects of Deseg- regation and Race on MAT Total Reading Subtest Standard Scores	47
10. Mean Standard Scores and Standard Deviations of MAT Language Subtest Scores by Race and Desegre- gation Level.	48
11. Analysis of Variance Table of Effects of Deseg- regation and Race on MAT Language Subtest Standard Scores.	49
12. Mean Standard Scores and Standard Deviations of MAT Science Subtest Scores by Race and Desegrega- tion Level.	50

Table	Page
13. Analysis of Variance Table of Effects of Desegregation and Race on MAT Science Subtest Standard Scores.	50
14. Mean Standard Scores and Standard Deviations of Social Studies Subtest Scores by Race and Desegregation Level.	51
15. Analysis of Variance Table of Effects of Desegregation and Race on MAT Social Studies Subtest Standard Scores	52
16. Mean Standard Total Reading Scores of Black and Indian Students Before and After School Desegregation	53
17. Mean Standard Total Math Scores of Black and Indian Students Before and After School Desegregation. . .	53
18. Mean Standard Language Scores of Black and Indian Students Before and After School Desegregation. . .	55
19. Mean Standard Science Scores of Black and Indian Students Before and After School Desegregation. . .	55
20. Mean Social Studies Standard Scores of Black and Indian Students Before and After School Desegregation.	56
21. Mean GPA Scores of Black and Indian Students Before and After School Desegregation	56
22. Mean Attendance Levels of Black and Indian Students Before and After School Desegregation	57
23. Summary of Mean Standard Scores of the Schools Under Study	58
24. Comparison of Standard Score Subtest Mean Differences Between 1975-76 and 1976-77	64
25. A Summary of the MAT Mean Standard Scores, GPA, and Attendance of Black and Indian Students	65
26. Data Used to Compute GPA Means.	92
27. Data Used to Compute Attendance Means	93
28. Data Used to Compute Total Math Subtest Means . . .	94
29. Data Used to Compute Total Reading Subtest Means. .	95
30. Data Used to Compute Language Subtest Means	96

Table	Page
31. Data Used to Compute Science Subtest Means.	97
32. Data Used to Compute Social Studies Subtest Means .	98
33. Data Used for Tables 16 - 22.	99

LIST OF FIGURES

Figure	Page
1. A Scattergram of the Mean MAT Subtest Standard Scores Before and After Desegregation of the Majority and Minority Groups	63

A STUDY OF THE EDUCATIONAL EFFECTIVENESS OF DESEGREGATION:
A COMPARISON OF PUPIL EDUCATIONAL PERFORMANCE BEFORE
AND AFTER ONE YEAR OF DESEGREGATION

CHAPTER I

INTRODUCTION

Background of the Study

In 1954, the United States Supreme Court issued its famous Brown Decision which had the practical results of eliminating racial segregation in public education and of initiating a heightened concern for equal educational opportunity throughout the nation. In a supplementary decision in 1955, the same court ordered school districts to move toward school desegregation as rapidly as possible.

Although many school districts acted immediately in response to the two decisions, others moved only after the enactment of the 1964 Civil Rights Act. This Act, through the provisions of Title VI created a federal monitoring agency, The Office of Civil Rights, and subjected segregated school systems to the loss of federal funds. Of equal importance, the Act empowered the U. S. Attorney General's office to initiate civil proceedings against school systems which were not making "good faith" efforts to dismantle segregated school systems.

Desegregation efforts of the past quarter century have clearly not totally dismantled the dual, segregated school systems, either in the South, the focal region of the original 1954 Decision or in the North where recent court decisions and other federal actions have been directed. Though the courts continue to be active in these matters, much of the responsibility for monitoring these continuing desegregation efforts lies with the Office of Civil Rights.

Though progress has been slow, it has been steady. However, questions continually arise relating to some of the basic premises upon which the 1954 Decision was based:

(1) That black students could not receive an equal educational opportunity in segregated schools.

(2) That the lack of equal educational opportunity was reflected in the achievement differences between black students and white students.

There is a consensus on the part of the general public that desegregation is sound social policy, but the research evidence of its educational effectiveness, presumed in the 1954 Decision, has yet to be validated. Clearly, it might be assumed that resistance to further desegregation efforts will continue, at least until such validity has been established.

The validation of the educational effectiveness of school desegregation has generally been hampered by such factors as inconclusiveness of research findings, limited geographical foci, limited independent variability foci, school

district variability, and financial resources.

Except for the Coleman Study in 1966 and those of the U. S. Civil Rights Commission in 1968 and 1973, there have been relatively few sound research attempts to assess the effects of school desegregation for the nation as a whole. Similarly, publicized assessment efforts by local school districts have been few. The paucity of such publicity supports the assumption that many districts have not attempted to measure post-desegregation educational effectiveness.

Thus, it is not clear whether or not the national policy of school desegregation has been educationally effective for the students of the nation. The few studies available suggest that black students generally improve their achievement and white students are unaffected.¹ Such conclusions can best be supported by studies conducted by individual school systems.

Need for the Study

This study was conducted to add to the general knowledge of the educational effects of school desegregation, to address some of the past deficiencies in prior research, and to generate knowledge concerning the effects of the desegregation process on the Shawnee Public Schools as a basis for improving the system's programs.

In addressing past deficiencies in related research, the study was regarded as valuable since, unlike most studies,

¹P. N. Prichard, The Effects of Desegregation on Student Success in the Chapel Hill City Schools. (Chapel Hill: North Carolina University, February, 1969a), p. 2.

it focused on a small non-rural city, rather than a Standard Metropolitan Statistical Area; it focused on grades and attendance, in addition to the commonly studied variable, academic achievement; it represented the broadest study of post-desegregation educational effects in the State of Oklahoma; and it represented an initial research effort of a school system to generate knowledge potentially useful in planning for more effective school desegregation and educational programs.

The review of the literature revealed only one Oklahoma study of academic achievement. This study examined the academic achievement of students in the court ordered cluster plan for Oklahoma City. In the study, Kraemer compared the academic achievement of students in the clustered schools with that of students in the non-clustered schools in the areas of Advanced Science and Mathematics.² In addition, nationally reported studies of post-desegregation educational effects focus often on academic achievement, but rarely on academic performance as indicated by grades and grade point averages and attendance patterns.

In 1975, the Shawnee, Oklahoma Public School System, like other school systems of the state and nation, was monitored by the Department of Health, Education and Welfare, Dallas, Texas Region, to determine if the district were in compliance with the regulations concerning student assignment and

²Ruth A. Kraemer, The Effects of the Cluster Plan on Mathematics and Science Students, Doctoral Dissertation, Published 1972, EDO7631911.

other practices set forth in the Adams v. Weinberger Decision. This decision applied to school districts identified as having one or more racially and/or ethnically disproportionate schools (Appendix A).

It was observed that at that time Jefferson Elementary School had a white/black ratio of 88/12, while Washington Elementary School had a white/black ratio of 63/37. After extended discussion, HEW and the Shawnee School System Board of Education agreed to restructuring the two elementary school zones (Washington-Jefferson) so that a more acceptable racial balance was achieved.

As a result of this reorganization, the Washington and Jefferson zones became the Washington-Jefferson zone. Washington School became a Fifth-Sixth Grade Center serving 160 students. Jefferson School remained a K-4 elementary school serving 370 children in the combined attendance zone.

Preparation for Further Desegregation

After being advised in late 1975 of the changes to be made, the central office staff and the principals of Washington and Jefferson Schools held two public meetings, one at each school, where parents and interested persons from each school zone were made aware of the facts concerning the grade changes. The grade changes were determined solely by the racial balance that was in existence at the time of this study. Jefferson School was to consist of grades K-4 and Washington School grades 5-6. The logistics of the movement of equipment and change in facilities took place during the summer of 1976. Both teaching

staffs were given the opportunity to express their views on the changes in school assignment. Next, the teachers were departmentalized so that all students in the fifth and sixth grades would have a homeroom teacher, but would have been taught by all four teachers in the sixth grade in the basic subjects (math, English, reading, and social studies). When school began in the fall of 1976, 90 per cent of the students from both schools were present at the Washington Center. The remaining 10 per cent requested transfers to other elementary schools. Students had been prepared for the transition by their parents during the summer of 1976 and were formally oriented at the beginning of school about the expectations to be made of them in the new program. The involved teachers were oriented during the summer through a series of in-service education programs relative to goals, objectives and procedures related to the reorganization.

Relevant Demographic Data

The Community

Shawnee, Oklahoma is located on Interstate Highway 40 approximately 40 miles east of Oklahoma City, Oklahoma. Its local economy is basically agrarian. However, within the last five years, light industry from the mid-western part of the United States (Michigan, Wisconsin, Illinois, etc.) has located north of the city but outside the Shawnee city limits. While school tax revenue has not increased directly from this industrial surge, it has indirectly done so by providing jobs and housing for local school patrons. The city has

approximately 30,300 persons living within its boundaries; this is a 20 per cent increase over the past 10 years. Oklahoma state statistics have listed Shawnee as the fifth fastest growing city in the state for 1976.³ Despite these optimistic growth patterns, Shawnee still consists largely of retired persons and persons who work in the greater Oklahoma City area.

The School System

At the time of this study, the Shawnee School System consisted of eight elementary schools (K-6), a junior high school (7-8), a mid-high school (9-10), and a high school (11-12).

The elementary school enrollment was approximately 2,300 students. They were more or less neighborhood schools with a limited transfer policy, which in effect, developed a de facto segregation posture, even though an open housing policy, controlled by local realtors and the economy of the times, did exist. Normally, it was in the seventh grade that total racial and ethnic desegregation began.

Washington and Jefferson Schools

There were many similarities in the Washington and Jefferson school zones besides being located in the southwest quadrant of the city. Each sixth grade had teachers with

³Oklahoma Employment Securities Commission, Research and Planning Division. Oklahoma Population Estimates. July, 1975, p. 14.

similar qualifications, sex, age, and teaching experience. Their geographic areas were approximately the same (one city block, except that Washington School was located in a city park and Jefferson School was located near a heavily traveled street). Both were located in light industrial and commercial areas. The number of school patrons differed by only a few hundred. The 1977 median income varied by \$3,000 and 1977 median housing prices differed by \$5,000 for families in the attendance areas. Washington School zone has since had added to it more public housing, both apartment and single-family dwellings. These additions have decreased the median housing difference so that it more closely resembles the Jefferson School zone median housing cost (see Appendix D for maps).

Statement of the Problem

This investigation was made to determine if school reorganization resulting in increased desegregation of selected schools affected the academic performance (grades), achievement (MAT) scores, and attendance of minority and majority students.

Specifically, this study was designed to answer the following questions:

1. Does further desegregating Washington and Jefferson schools by reorganizing their attendance zones result in any increase or decrease in the academic performance and achievement of minority and majority sixth grade students?
2. Does desegregating Washington and Jefferson schools by reorganizing their attendance zones result in any increase

or decrease in the school attendance of minority and majority sixth grade students?

3. To determine if the effects of desegregation on the academic achievement of minority students are similar or different in Shawnee, Oklahoma as it compares with other cities in the United States.

Purpose of the Study

The purposes of this study were (1) to provide research information relative to the academic effects of further school desegregation of the Shawnee Schools for program improvement purposes, (2) to determine if the Shawnee public schools is similar or dissimilar to other American public schools in process and results of desegregation efforts, (3) to substantiate or refute general findings relative to the effects of school desegregation, (4) to contribute to the current knowledge base in this important area.

Hypotheses

Relative to the problem questions, the following null hypotheses were tested:

- H₀₁ - There is no difference in the GPA of Caucasian and minority students after one year of desegregation.
- H₀₂ - There is no difference in the GPA of students in segregated and desegregated schools.
- H₀₃ - There is no interaction effect between race and school desegregation on the GPAs of students.
- H₀₄ - There is no difference in the attendance records of Caucasian and minority students after one year of desegregation.

- H₀₅ - There is no difference in the attendance records of students in segregated and desegregated schools.
- H₀₆ - There is no interaction effect between race and school desegregation on the attendance records of students.
- H₀₇ - There is no difference in the total math standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₈ - There is no difference in the total math standard scores on the MAT of students in segregated and desegregated schools.
- H₀₉ - There is no interaction effect between race and school desegregation on the total math standard scores of students on the MAT.
- H₀₁₀ - There is no difference in the total reading standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₁ - There is no difference in the total reading standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₂ - There is no interaction effect between race and school desegregation on the total reading standard scores of students on the MAT.
- H₀₁₃ - There is no difference in the language standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₄ - There is no difference in the language standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₅ - There is no interaction effect between race and school desegregation on the language standard scores of students on the MAT.
- H₀₁₆ - There is no difference in the science standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₇ - There is no difference in the science standard scores on the MAT of students in segregated and desegregated schools.

- H₀₁₈- There is no interaction effect between race and school desegregation on the science standard scores of students on the MAT.
- H₀₁₉- There is no difference in the social studies standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₂₀- There is no difference in the social studies standard scores on the MAT of students in segregated and desegregated schools.
- H₀₂₁- There is no interaction effect between race and school desegregation on the social studies standard scores of students on the MAT.

Limitations

1. This study was limited to the sixth grade students who were transported from Jefferson to Washington Elementary School during the 1976-77 school year and to those seventh grade students who attended these schools during the 1975-76 school year when they contained grades K-6.
2. This study was limited to the Metropolitan Achievement Test subtest mean standard scores, academic grades, and attendance records for each group of students.
3. This study was limited by the validity and reliability of the test instruments and formulae used.
4. This study was limited to the accuracy of the data acquired from the Shawnee School System.

Definitions

1. Bussing: the transportation by the use of busses of students from one educational environment to another.
2. MAT: The Metropolitan Achievement Test--used to test achievement in word knowledge, spelling, reading,

language, total reading, math concepts, math problem solving, total math, science, and social studies at the sixth grade level.

3. Standard Score: a converted raw score that expresses in a single common scale the results for all batteries of test forms in a subtest area (e.g. total reading).⁴

4. Schools: Jefferson and Washington Elementary Schools, Shawnee, Oklahoma.

5. Grades: A, B, C, D, and F which are associated with superior, excellent, good, fair, and poor academic performance.

6. Achievement: An index of learning as measured by the MAT scores expressed in raw scores, standard scores, percentiles, stanines, and grade equivalents (i.e. science, 79, 140, 99 percentile, 9, 9.9).

7. Academic Performance: letter grades received by students for work assigned by teachers (A, B, C, D, or F).

8. Transcript: an official record of a student's academic performance, achievement scores, and attendance record from kindergarten through the sixth grade.

9. Desegregation: the physical mixing of minority and majority students in public schools to achieve a representative racial and ethnic balance.

⁴Walter N. Durost, Harold H. Bixlie, J. Wayne Wrightstone, George A. Prescott, and Irving H. Balow, Teacher's Handbook. (Metropolitan Achievement Tests, Harcourt, Brace Jovanovich, 1971), p. 5.

10. Minority Students: a student who belongs to the racial group which is in the minority at a specific school.

11. Majority Students: a student who belongs to the racial group which is in the majority at a specific school.

12. Attendance: an officially recorded presence in a public school.

13. Race: Caucasian (white) and minority (black, Indian, and other).

14. GPA: Grade Point Average--a student's mean grades determined by assigning the numerical values 4 to 0 to letter grades A to F, respectively.

15. Curriculum: Total school learning experience under the control of the school including teaching methods, textbooks, etc.

Data Collection

In order to test the hypotheses of this study, the records of forty (40) randomly sampled students were statistically analyzed using factorial analyses of variance methods.

1. Race was acquired from student personal files.

2. MAT standard scores were acquired from a master MAT computer print-out.

3. GPA and attendance data were acquired from official school records and manually computed.

Chapter III describes fully the procedure and methodology utilized in the study.

Organization of the Study

The background of the study, the need for the study, the statement of the problem, purpose of the study, the hypotheses, the limitations, the definitions, the data collection, and the organization of the study are included in Chapter I. Chapter II reports the review of the related literature. Chapter III provides information concerning the procedures for the collection of the data, and relevant tables. Chapter IV describes the compilation of the data and the results. Chapter V contains a concise summary, findings, conclusions and recommendations for further research. The bibliography and appendices follow.

CHAPTER II

A REVIEW OF RELATED LITERATURE

Publications related to school desegregation subsequent to the 1954 and 1955 court decisions have been voluminous. Many of these publications have dealt with the process of desegregation, tracing the various steps taken in the implementation of desegregation plans. Others have dealt with attitudinal changes as they related to the desegregation process. Relatively few, compared to the number of schools implementing desegregation plans, have attempted to assess the academic effects of school desegregation. Even fewer have dealt with a comprehensive assessment of all grade levels. The bulk of these attempts have focused on the elementary and junior high school grades. Generally these lower level studies assessed achievement in the traditionally tested areas of reading, language, mathematics, science, and social studies. Only one study examined the academic variables of grade point averages and attendance.

Perhaps as important is the relatively short time frame within which most of the documented assessment studies were completed. It is clear that the bulk of the studies covered periods of time less than four years. Reported longitudinal studies concerning 13 years, K-12, were non-existent. It was

clear also, after a review of the literature, that the bulk of the reported studies of the educational effectiveness of school desegregation were done in either major metropolitan areas of 100,000 or more population or in smaller, university-based communities. There was a dearth of documented studies in other geographical locations.

In this compilation of research literature, the ERIC and GIPSY data retrieval systems and other books and materials were utilized. Some of the data were obtained from the Consultative Center for Equal Educational Opportunity, located at the University of Oklahoma, a federally funded organization for the facilitation of school desegregation and integration.

The review of literature reported is presented in the following non-chronological categories:

1. The Coleman Report Study
2. One-year studies
3. Two-year studies
4. Three-year studies
5. Summary

The Coleman Study

The most celebrated and controversial study of desegregation related academic achievement was completed by Dr. James Coleman of Harvard through a contract with the Office of Education, Department of Health, Education and Welfare in 1966. Dr. Coleman's study, initiated in part by a requirement of the 1964 Civil Rights Act, is represented in the literature as the most

comprehensive study of schools ever undertaken for its time and has been used by researchers on public school desegregation as a reference point from which to begin.⁵

The instrument used was completed in September and October, 1965. Teachers, principals, district superintendents, and pupils in the third, sixth, ninth, and twelfth grades from 4,000 public schools participated in the study.⁶ The Coleman report also studied six racial and ethnic groups: Negroes, American Indians, Puerto Ricans living in the continental United States, Mexican Americans, Oriental Americans, and white other than Mexican Americans and Puerto Ricans often called "white".⁷ More than 645,000 students were involved in the study. First grade students in only half the schools participated. "About 30 per cent of the schools selected for the survey did not participate; an analysis of the non-participating schools indicated that their inclusion would not have significantly altered the results of the survey."⁸ The students in this study were classified into five metropolitan regions (Northeast, Midwest, South, Southwest, and West) and three non-metropolitan areas (South, Southwest, and North and West).⁹

⁵U. S. Department of Health, Education and Welfare. Equality of Educational Opportunity. (Washington, D. C.: U. S. Government Printing Office, 1966), p. iii.

⁶Ibid., p. 8.

⁷Ibid., p. iii.

⁸Ibid., p. 8.

⁹Ibid., p. 9.

The survey addressed itself to four major questions:

1. What was the extent to which the racial and ethnic groups were segregated from one another in the public schools?
2. Did the public schools offer equal educational opportunities in terms of other criteria (laboratories, textbooks, libraries, curriculum, aptitude and achievement testing procedures, teacher characteristics, student characteristics, etc.) which were regarded as good indicators of educational quality?
3. Did the student's academic performances correspond to their standardized achievement test scores?
4. Was there a relationship between the kinds of schools students attended and their achievement?¹⁰

From this study, Dr. Coleman found that:

1. With the exception of Oriental Americans, the average minority pupil scored distinctly lower than the average white pupil on verbal and nonverbal tests at all five grade levels.
2. The gap between minority and majority students on verbal and nonverbal tests at the first grade level widened progressively through the twelfth grade.
3. In spite of national efforts to desegregate school systems, the schools had not been able to overcome the differences between minority and majority students in terms of school

¹⁰Ibid., p. iv.

achievement as measured by tests available in the schools studied.

4. The only minority group whose achievement surpassed that of the majority group students was the Oriental Americans, who at the first grade level, scored higher on nonverbal tests.¹¹

5. Minority and majority students in the North scored higher in achievement than students in the South.

6. The gap in achievement test scores between the Southern black and white students is greater than the gap between Northern black and white students.¹²

7. Socioeconomic status affected the achievement scores of all students studied.

8. The achievement of minority students is more affected by the strengths or weaknesses of school facilities, curriculum, and teachers than is the majority students' achievement.

9. It is for the most disadvantaged children that improvement in school quality will make the most difference in improving the achievement scores.¹³

One-Year Studies

Ann Arbor, Michigan, 1965

Carrigan studied academic achievement in the Ann Arbor, Michigan school system. Her study compared black and white students in three different school situations. School A was 80 per cent black. School B was less than 3 per cent black and School

¹¹Ibid., p. 20.

¹²Ibid., p. 21.

¹³Ibid.

C was 50 per cent black. School A was closed and its students were transferred to the six predominantly white schools, including School B in an effort to further desegregate the school system. Prior to the desegregation effort, students attended a special teaching program in the spring of the pre-transfer year. After one year, the desegregation effort was evaluated to determine, in part, its academic effectiveness using standardized tests of achievement. It was found that:

1. Black students transported from School A did not appreciably alter their academic achievement patterns;
2. Black students transported from School A and black non-transferred students from School C showed generally identical average post-transfer scores at some grade levels, but where differences did occur, they favored the non-transferred as often as the transferred students;
3. Black children tended to be more similar to one another across the three populations, than to white children within the same population;
4. Black-white achievement differences tended to favor the white child;
5. Where the general pattern was interrupted, it appeared to be black students from the transfer School A, who were positively affected.¹⁴

¹⁴P. M. Carrigan and D. Aberdeen. Some Early Effects of Compulsory Desegregation on Elementary School Children. (Ann Arbor Public Schools, Michigan. Washington, D. C.: American Research Association, March 2, 1970.)

Buffalo, New York, 1970

In Buffalo, New York Public Schools, Banks studied nearly 1,200 black students from segregated inner city schools who were bussed to schools where the population was primarily white. Black students in grades five to seven were bussed from six inner city schools to twenty-two receiving schools.¹⁵

The Stanford Achievement Test (SAT) was administered to all black and white students in grades five, six, and seven in both the sending black schools and the receiving predominantly white schools as a pre-test in June, 1967, prior to the actual desegregation.¹⁶

The findings of the pre-test were as follows:

1. White students' pre-test scores indicated that they were ahead of minority students in each grade.

2. Black desegregated students and black segregated students who remained in inner city schools started at approximately the same point, except for grades seven and eight where the desegregated students were ahead of the non-desegregated black students.¹⁷

In June of 1968, the SAT was again administered as a post-test to the same group. Banks found:

¹⁵R. Banks and M. E. DiPasquale, A Study of the Educational Effectiveness of Integration: A Comparison of Pupil Achievement Before and One Year After Integration; A Survey of the Attitudes of Principals, Teachers, Parents and Pupils Involved in the Program. (New York: Buffalo Public Schools, 1970), p. 1.

¹⁶Ibid., p. 3.

¹⁷Ibid., p. 4.

1. Black desegregated students in classes with white students made greater gains in academic achievement than did Negro students who remained in segregated schools.¹⁸

2. Black desegregated students gained in mean growth (.83) at a rate higher than the non-desegregated black students whose mean growth was .56.¹⁹

3. White students did not suffer losses in academic achievement as a result of the desegregation.²⁰

4. The post-test scores showed that the Caucasian students gained the most in one year at each grade level and in mean growth (1.23).²¹

These same results were also found in a longitudinal study in the greater New Haven, Connecticut schools.²²

Broward County, Florida, 1974

In Broward County, Florida, the California Test of Basic Skills was used as the standardized achievement test to see if desegregation had any effect on the achievement of 731 students (353 whites and 378 blacks).²³ It was found that of the

¹⁸Ibid., p. 1.

¹⁹Ibid., p. 5.

²⁰Ibid., p. 1.

²¹Ibid., p. 5.

²²Alexander Plante, Segregation and Early Education, Integrated Education, May-June, 1971, pp. 49-51.

²³M. Justin and J. Thabit, Black and White Achievement Before and After Integration. Intellect, April, 1974, pp. 448-9.

48 factors tested, there were no significant gains or losses in mean achievement of either black or white students at the .05 level of confidence when test results subsequent to desegregation were compared with those prior to desegregation. After desegregation the means were generally lower than before. Rather than waiting for the long-term effects to be observed this one-year study attempted to examine only the immediate effects of desegregation and achievement.²⁴

North Carolina, 1970

In a study of 608 white students, 127 Lumbee Indian students, and 680 black students in a newly, racially desegregated North Carolina school system, Maynor sought to determine whether or not and to what extent student achievement was affected by student race or ethnic grouping and teacher role or ethnic grouping. The California Achievement Test was given to students in grade six through twelve and was readministered with the California Test of Mental Maturity the following spring. From these instruments, it was found (1) that black students performed better after desegregation than before; (2) white and Indian students experienced no negative effects in achievement from desegregation, and (3) teacher ethnic or racial identification did not significantly affect student performance except in the area of language.²⁵

²⁴Ibid.

²⁵W. Maynor. Academic Performance and School Integration: A Multi-ethnic Analysis. (Unpublished doctoral dissertation, Duke University, 1970).

Maynor states that Stallings found similar results in his study of the Louisville, Kentucky Public Schools that indicated after one year of desegregation, white students experienced no negative effects while black students performed better than they did before desegregation.²⁶

Tacoma, Washington, 1970

Maynor's findings (North Carolina) were supported by Laurent's study of the Tacoma, Washington Public Schools in which he found that neither race nor ethnic composition of school per se, considered alone or interactively seemed to have had a substantial effect on academic performance when other relevant variables were controlled. Of the 96 four group comparisons, only four indicated racial differences. Three of the four were racial effects: white students scored higher than black students in Primary Mathematics, Intermediate Language Arts, and Intermediate Composite.²⁷ In addition, Caucasian students in non-segregated schools achieved at a significantly higher level than Caucasian students in de facto segregated schools.

The general findings of the Tacoma investigation supported results of carefully planned research studies completed in other locales that there was little evidence from which to

²⁶W. Maynor and W. B. Katzenmeyer, Academic Performance and School Integration: A Multi-ethnic Analysis. Journal of Negro Education, Winter, 1974, 43 (1), p. 36.

²⁷J. A. Laurent. Do Pupil Race and/or School Racial Balance Affect Academic Performance? (Bulletin, Eugene, Oregon: Oregon School Study Council, December, 1970), p. 27.

infer a direct causal relationship between school racial composition and academic performance when appropriate controls have been exercised for the possible effects of known relevant variables. Less adequately designed studies such as Wolman, 1964, and Radin, 1966, have found the same lack of relationship.²⁸

Two-Year Studies

Clark County School District, Las Vegas, Nevada, 1974

Clark County School District, Las Vegas, Nevada found, as a result of a longitudinal study of 1973-74 fifth graders, that black students significantly improved in reading, spelling, math computation, math concepts, math problem solving, and total mathematics between the beginning of grade four (October, 1972) and the end of grade five (April, 1974) and that white students indicated a positive improvement in math computation and a significant decline in language.

It appears that both groups improved their scores when they were compared to the National Norm. However, black students gained significantly in six of the nine subtests.

The results of this study indicated that black students improved their achievement levels. Regardless, a gap still existed between the achievement of black and white students and was not eliminated in two years of desegregation.²⁹

²⁸Ibid.

²⁹Clark County School District, Desegregation Report, (Las Vegas, Nevada: Author, July, 1974), p. 19.

Grand Rapids, Michigan, 1974

In 1972, the Grand Rapids City Public Schools matched sixty-eight inner-city black and white elementary students who were bussed to outlying schools in the district with sixty-eight black and white students who remained in inner-city schools.³⁰

"Bussed and control groups were equated, by individually matched pairs, in regard to sex, race, grade level, residential area, and base-line academic achievement level."³¹

MAT results two years later, in 1974, showed no significant differences in achievement between bussed and control groups (non-bussed) in either the total reading or the total mathematics subtests of the MAT.³²

White Plains, New York, 1968

Johnson, in his study of the White Plains Schools, New York, stated that "busing is harmful to children in receiving schools (almost always white middle-class youngsters). The educational standards of these schools must be lowered to accommodate colored children."³³ The White Plains, New York school

³⁰J. Schellenberg and J. Halteman, Bussing and Academic Achievement: A Two Year Follow-Up. Urban Education, January, 1976, X (4), p. 364.

³¹Ibid.

³²Ibid.

³³Ibid.

district was among the first to do something about de facto desegregation. In April, 1964, their policy, which was implemented in September, 1964, was that no school should have less than 10 per cent or more than 30 per cent Negro enrollment.³⁴

An analysis of the academic achievement of White Plains students subsequent to desegregation, indicated that white students were not adversely affected by the racial balance plan. Some were doing better than comparable groups did in the same schools prior to desegregation. Black students transferred from the center city made greater academic progress than black students who remained in the center city following desegregation. An example of this progress of black students is indicated by the fact that, of a 90 per cent black group of students from the center city area in the third grade when desegregation began, 45 per cent of them made at least two years of progress in one or more test areas (word meaning, paragraph meaning, arithmetic reasoning, and arithmetic computation). By contrast, only 25 per cent of center city black students made the same progress between the third grade (1960) and the fifth grade (1962).³⁵

The White Plains study was limited and only looked at "before" and "after" achievement using Stanford Achievement Tests of third and fifth grade desegregated white students from

³⁴Ibid.

³⁵Ibid., p. 46.

previously all or mostly white schools and students in a predominantly Negro group that previously attended center city schools.

However, the White Plains study results clearly indicated that the effect of the desegregation plan was not generally negative and in some instances was positive.³⁶

Three-Year Studies

Austin, Texas, 1971, (Sacramento, California; Evanston, Illinois, 1971; Hartford, Connecticut, 1969)

In Austin, Texas, it was found that black students desegregated into classes with white students achieved at a higher level, academically, than did their counterparts who remained in the segregated schools. White student academic achievement did not decrease as a result of bussing. White students from segregated white classes were not affected by bussing and they grew in achievement at a normal rate. Black students who remained in segregated black classes continued to gain academically at a lower rate of achievement.³⁷

Similar results were experienced in the Sacramento City Unified District, California from 1964 to spring, 1971. In this instance, the school focused on the elementary and junior high school programs designed to alleviate or reduce the effects of de facto segregation in the elementary segment.³⁸

³⁶Ibid., p. 47.

³⁷J. J. Connery, The Pupil Bussing Program in District Four: A Fourth Report. (Austin Area Project, August, 1971).

³⁸Sacramento City Unified School District. Summary of the Assessments of the District's Integration Programs 1964-1971. (Research Report Series 1971-72, No. (), Author, September 28, 1971.

In desegregated schools, it seems clear that white children continue to learn at their expected rate. Some longitudinal studies that reinforce this position were conducted in Evanston, Illinois from 1968-1971 and Hartford, Connecticut from 1967-1969. Similarly, after three years of desegregation at Riverside, California, school authorities found that white children's achievement did not sag and they did not learn at the expense of the black children. In fact, black children's achievement rates rose so rapidly that they exceeded that of white children. These findings were duplicated in Jackson, Michigan and New Albany, Indiana. Even when the achievement rate of black students did not equal or exceed that of white students, in all cases, it did increase.³⁹

Riverside, California, 1966

Singer dealt with the assumptions that sometimes are made in a longitudinal study--that tests are comparable from grade to grade. This assumption was tested in another longitudinal study of the Riverside, California Unified School District where anglos, blacks, and Mexican-Americans were desegregated. The results showed no change in relative achievement that could be attributed to desegregation. As a final check, an analysis of covariance was used to statistically test growth in achievement over the primary and intermediate grades. These results, again, confirmed that desegregation had no achievement

³⁹M. Weinberg, White Children in the Desegregation Process. (Western Regional School Desegregation Projects; Riverside California: California University, November, 1971), p. 1.

effect on the anglo, black, or Mexican-American students.⁴⁰ Interpretation of the results of the Riverside studies was supported by the Coleman Report in that anglo achievement was not reduced, but blacks and Mexican-American's achievement was not improved as a consequence of desegregation.⁴¹

Another study of the Riverside Unified School District by Purl found that the achievement level of bussed students had not increased; the gap between bussed students and other students was as wide in 1970 as in 1966. The gap between low-achieving students and other students widened as they grew older.⁴²

However, in Boston where there were some increases in student achievement, the study concluded that school bussing programs may have been achieving very little toward increasing academic achievement and too late to be effective.⁴³

None of the studies (Boston, White Plains, Ann Arbor, or Riverside) were able to demonstrate conclusively that desegregation has had an effect on academic achievement as measured by standardized tests. With the results of the Coleman study

⁴⁰H. Singer, Effect of Integration on Achievement of Anglos, Blacks and Mexican-Americans. (California: State Office of Compensatory Education, March 3, 1970), p. 11

⁴¹Ibid., p. 15.

⁴²M. C. Purl and J. Dawson, The Achievement of Pupils in Desegregated Schools. (California: Riverside Unified School District, March, 1971), p. 11.

⁴³H. J. Walberg, An Evaluation of an Urban-Suburban School Bussing Program: Student Achievement and Perception of Class Learning Environments. (February, 1971).

and other evaluations of remedial programs (e.g. Head Start), many experts may not be surprised at this finding. To date, there has been no published report of any strictly educational reform which has been proven to affect academic achievement. School desegregation programs have been proven to be no exception.⁴⁴

Chapel Hill, North Carolina, 1966

"In the Fall of 1966 the Chapel Hill City Schools completely desegregated in grades six through twelve. The following year a geographical zone plan was adopted to insure a racial balance at every grade level and in every school of the Chapel Hill School System. Thus, Chapel Hill became one of the first school systems of the South to complete the integration of students and faculty in all its schools."⁴⁵

As a result of the Chapel Hill study of the effectiveness of its desegregation plan, the following conclusions were reached:

1. The white students scored above national norms on Sequential Tests of Educational Progress (STEP) while black students' mean scores fell in the below average percentile range.

2. There were no significant negative effects on the

⁴⁴D. J. Armor, The Evidence of Bussing. (Research Report No. 28), Public Interest, Summer, 1972, p. 99

⁴⁵Prichard, Effects of Desegregation, p. 1.

academic achievement of either race.⁴⁶

3. Black students made significant positive changes in their math scores at the fifth and seventh grade levels, while white students experienced this change only at the fifth grade level.

4. Reading achievement scores indicated no significant changes in any grade level.

5. Reading or math achievement scores at the ninth grade level were not affected by race.

6. Neither race experienced significantly different attendance patterns. However, black male students in the seventh and ninth grade levels had the lowest attendance figures during the second year of desegregation.

7. In general, black students of the Chapel Hill School System passed a lower percentage of their classes than did white pupils during the period of this study.⁴⁷

Waco, Texas, 1974

In Waco, Texas, it was found that bussing black students to previously all white schools to achieve racial balance did not increase the achievement of the bussed students. After two years, both bussed minority students who were transported to previously all white schools and non-bussed minority students showed a decline in the level of achievement performance as measured by the California Achievement Test. Bussed students' reading scores

⁴⁶Ibid., p. 2.

⁴⁷Ibid., p. 4.

and total battery scores were determined by T-tests to be significantly lower than those of non-bussed students. While bussed and non-bussed students' achievement scores dropped at the end of the two-year period, the achievement scores made by bussed students were significantly lower.⁴⁸ Felice states that "the results of this study are inconclusive concerning the benefits of bussing for black student achievement, but school desegregation does appear to reverse the direction of some of the determinants of high achievement performance."⁴⁹

Summary

This review of literature reported the results of 18 studies of school desegregation in the United States. While not exhaustive, they represent an appropriate cross section of the studies that are reported in the literature. Relative to these studies, the following conclusions appear warranted:

1. White students generally have not changed their academic achievement and performance patterns, while adapting to new school environments which could have had a negative effect on their academic performance and achievement.

2. Indian students have experienced a pattern similar to that of white students, but at a lower level.

⁴⁸L. G. Felice, The Effects of School Desegregation on Minority Group Student Achievement and Self Concept: An Evaluation of Court Ordered Bussing in Waco, Texas. (Final Report, Research Development Foundation, Waco, Texas, National Center for Educational Research and Development--DHEW-OE, Washington, D.C.: Regional Research Program, June, 1974a), p. 99.

⁴⁹L. G. Felice, Bussing in Waco, Texas. Integrated Education, July-August, 1974b, p. 25.

3. Mexican-American students have experienced increases in their academic performance and achievement, but to a lesser degree than the white and Indian students.

4. Of the four groups who have decreased, remained stable, or increased in their academic performance and achievement, it has been the black students who have made the largest gains.

5. There was only one study that used attendance as a variable (Chapel Hill) in evaluating desegregation and achievement.

6. None of the studies were of metropolitan areas that had less than 100,000 persons.

7. Generally, preparation for school desegregation, in terms of faculty in-service, education or programs, community education, or student involvement was limited, non-existent, or unreported. Conditions, therefore, were generally not present for successful desegregation or integration efforts.

8. The legacy of the segregated school system and its effects on majority and minority youngsters clearly was not overcome in a period of from one to three years.

9. These studies indicated that the academic achievement patterns of minority and non-minority students for one, two, and three year periods were similar after physical desegregation.

10. Apparently, achievement discrepancies between minority and majority students widen progressively from elementary to secondary school levels.

11. Desegregation, in terms of academic achievement, remains a relatively unresearched area.

Therefore, one could conclude from the literature that black students, Mexican-American students, Indian students, and white students in that order have made the most progress in achievement and academic performance from desegregation.

CHAPTER III

PROCEDURES AND METHODOLOGY

The purpose of this investigation was to determine if desegregation, brought about by the process of reorganizing two school zones, increased or decreased the academic performance (grades), achievement (MAT scores), and attendance of minority and majority students.

Prior to conducting this research, conferences were held with Dr. Wesley Beck, Superintendent, Shawnee Public Schools, to secure permission to do this study, and with the principals, Mr. Paul Pounds, Jefferson School, and Mr. James Taffee, Washington School, to acquire information on how they implemented the desegregation plan agreed upon with The Department of Health, Education, and Welfare.

The Shawnee News-Star was contacted for background material reporting school board and other public meetings dealing with the initiation and implementation of the desegregation plan (see Appendix B).

Population and Sample

A stratified random sample of ten majority and ten minority students was selected using a table of random numbers⁵⁰

⁵⁰E. W. Minium. Statistical Reasoning in Psychology and Education. (New York: John Wiley and Sons, Inc., 1970), p. 454.

for each year of the study thereby selecting 40 students from the student population of 177 students shown in Table 1.

TABLE 1
SIXTH GRADE STUDENTS FOR THE YEARS
1975-77 OF THE TARGET SCHOOLS

School	Year	Majority	Minority
Washington	75-76	12	7
Jefferson	75-76	46	6
WA-JEFF	76-77	85	21
Total		143	34

Instrumentation

1. The Metropolitan Achievement Test was the primary instrument utilized in this study. It consisted of subtests designed to measure how much pupils have learned in important content and skill areas of the school curriculum (Language, Total Reading, Total Math, Science, and Social Studies). The subtests were also designed to help teachers initiate instruction based on students' needs and differences and to evaluate the effects of previous instruction. These subtests help school administrators evaluate schoolwide progress so that they might organize, plan, implement, and evaluate curriculum changes.⁵¹

⁵¹Walter N. Durost, Harold H. Bixlie, J. Wayne Wrightstone, George A. Prescott, and Irving H. Balow, Teacher's Directions for Complete or Partial Batteries or Separate Reading Tests. (Metropolitan Achievement Tests, Harcourt, Brace Jovanovich, 1970), p. 3.

The test was given in March of 1976 and 1977 to Shawnee elementary students and was administered over a three-to-four-day period by each sixth-grade teacher. The answer forms were consolidated by school and sent by the Shawnee School System Central office staff to the Psychological Corporation scoring service in Iowa City, Iowa. The following test information was provided and sent to the school district:

1. An alphabetical class test roster was furnished to each school for each teacher's class. The roster reported each student's national and local norms in terms of stanines, percentile ranks, grade equivalents, and standard scores. This report also included the mean and median scores, verified the number of students taking the test, and provided grade equivalents for the mean and median raw scores.

2. A master alphabetical listing for the entire sixth-grade was sent with the packet of individual school folders with the same information stated above.

3. Parent reports were included for informational purposes and for future conferences with teachers, counselors, and administrators.

4. Permanent individual adhesive strips with the test results were furnished and placed in each student's permanent record folder for future reference.

5. The race, attendance, and grade point average were obtained from official school records.

Statistical Treatment

After the sample was taken, the students' grade point average, attendance, and Metropolitan Achievement Test subtest standard scores were computed manually by this writer, using appropriate statistical methods.

With this data, IBM cards were keypunched and processed utilizing a University of North Carolina Psychometric Laboratory computer program for a two-way ANOVA (analysis of variance) to test hypotheses 1-21 by a series of seven 2 x 2 factorial ANOVA. The hypotheses were tested at the .05 significance level.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Introduction

This study was designed to determine the effect of school desegregation on Grade Point Averages (GPA), school attendance, and school achievement determined by standardized test scores of majority and minority students.

Utilizing procedures described in Chapter III, data were collected from student records from one elementary school and one junior high school in Shawnee, Oklahoma. These data were tabulated and used to test the following hypotheses:

- H_{01} - There is no difference in the GPA of Caucasian and minority students after one year of desegregation.
- H_{02} - There is no difference in the GPA of students in segregated and desegregated schools.
- H_{03} - There is no interaction effect between race and school desegregation on the GPAs of students.
- H_{04} - There is no difference in the attendance records of Caucasian and minority students after one year of desegregation.
- H_{05} - There is no difference in the attendance records of students in segregated and desegregated schools.
- H_{06} - There is no interaction effect between race and school desegregation on the attendance records of students.
- H_{07} - There is no difference in the total math standard scores on the MAT of Caucasian and minority students after one year of desegregation.

- H₀₈ - There is no difference in the total math standard scores on the MAT of students in segregated and desegregated schools.
- H₀₉ - There is no interaction effect between race and school desegregation on the total math standard scores of students on the MAT.
- H₀₁₀- There is no difference in the total reading standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₁- There is no difference in the total reading standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₂- There is no interaction effect between race and school desegregation on the total reading standard scores on the MAT.
- H₀₁₃- There is no difference in the language standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₄- There is no difference in the language standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₅- There is no interaction effect between race and school desegregation on the language standard scores of students on the MAT.
- H₀₁₆- There is no difference in the science standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₇- There is no difference in the science standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₈- There is no interaction effect between race and school desegregation on the science standard scores of students on the MAT.
- H₀₁₉- There is no difference in the social studies standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₂₀- There is no difference in the social studies standard scores on the MAT of students in segregated and desegregated schools.

H_{021} - There is no interaction effect between race and school desegregation on the social studies standard scores of students on the MAT.

Treatment of the Data

Hypotheses 1 - 21 were tested by a series of seven 2 x 2 factorial analyses of variance as follows:

H_{01} - There is no difference in the GPA of Caucasian and minority students after one year of desegregation.

H_{02} - There is no difference in the GPA of students in segregated and desegregated schools.

H_{03} - There is no interaction effect between race and school desegregation on the GPA of students.

Means and standard deviations of GPA by race and amount of school desegregation are shown in Table 2. Results of the 2 x 2 analysis of variance are shown in Table 3.

TABLE 2

MEAN SCORES AND STANDARD DEVIATIONS OF GPA
BY RACE AND DESEGREGATION LEVEL

	Caucasian	Minority
Before Desegregation	$\bar{X} = 3.018$ S.D. = 0.607	$\bar{X} = 2.340$ S.D. = 0.818
After Desegregation	$\bar{X} = 2.954$ S.D. = 0.487	$\bar{X} = 2.595$ S.D. = 0.583

TABLE 3

ANALYSIS OF VARIANCE TABLE OF EFFECTS OF
DESEGREGATION AND RACE ON GPA

Source	SS	df	MS	F
Within Cells	14.539	36	0.404	
Race	2.688	1	2.688	6.657*
Desegregation	0.091	1	0.091	0.226
Race/Desegregation	0.254	1	0.254	0.630

$\alpha = .05$. Critical value of $F(1,36) = 4.11$.

Reject H_{01} .

Fail to reject H_{02} .

Fail to reject H_{03} .

H_{04} - There is no difference in the attendance records of Caucasian and minority students after one year of desegregation.

H_{05} - There is no difference in the attendance records of students in segregated and desegregated schools.

H_{06} - There is no interaction effect between race and school desegregation on the attendance records of students.

Means and standard deviations of attendance records by race and desegregation level are shown in Table 4. Results of a 2 x 2 analysis of variance are shown in Table 5.

Fail to reject H_{04} .

Fail to reject H_{05} .

Fail to reject H_{06} .

TABLE 4

MEAN SCORES AND STANDARD DEVIATIONS OF ATTENDANCE
RECORDS BY RACE AND DESEGREGATION LEVEL

	Caucasian	Minority
Before	$\bar{X} = 167.700$	$\bar{X} = 168.000$
Desegregation	S.D. = 7.484	S.D. = 7.951
After	$\bar{X} = 161.600$	$\bar{X} = 165.400$
Desegregation	S.D. = 9.186	S.D. = 7.951

TABLE 5

ANALYSIS OF VARIANCE TABLE OF EFFECTS OF DESEGREGATION
AND RACE ON SCHOOL ATTENDANCE RECORDS

Source	SS	df	MS	F
Within Cells	2,118.394	36	58.844	
Race	42.031	1	42.031	0.714
Desegregation	189.210	1	189.210	3.215
Race/Desegregation	30.619	1	30.619	0.520

$\alpha = .05$. Critical value of F (1,36) = 4.11.

- H_{07} - There is no difference in the total math standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H_{08} - There is no difference in the total math standard scores on the MAT of students in segregated and desegregated schools.
- H_{09} - There is no interaction effect between race and school desegregation on the total math standard scores of students on the MAT.

Means and standard deviations of total math standard scores by race and desegregation level are shown in Table 6. Results of the 2 x 2 analysis of variance are shown in Table 7.

TABLE 6

MEAN STANDARD SCORES AND STANDARD DEVIATIONS OF MAT TOTAL MATH SUBTESTS BY RACE AND DESEGREGATION LEVEL

	Caucasian	Minority
Before	$\bar{X} = 100.70$	$\bar{X} = 89.40$
Desegregation	S.D. = 12.18	S.D. = 16.43
After	$\bar{X} = 89.80$	$\bar{X} = 82.90$
Desegregation	S.D. = 7.22	S.D. = 9.72

TABLE 7

ANALYSIS OF VARIANCE TABLE OF EFFECTS OF DESEGREGATION
AND RACE ON MAT TOTAL MATH SUBTEST STANDARD SCORES

Source	SS	df	MS	F
Within Cells	5085.00	36	141.250	
Race	828.08	1	828.08	5.86*
Desegregation	756.88	1	756.88	5.36*
Race/Desegregation	48.40	1	48.40	0.34

$\alpha = .05$. Critical value of $F(1,36) = 4.11$.

Reject H_{07} .

Reject H_{08} .

Fail to reject H_{09} .

H_{010} - There is no difference in the total reading standard scores on the MAT of Caucasian and minority students after one year of desegregation.

H_{011} - There is no difference in the total reading standard scores on the MAT of students in segregated and desegregated schools.

H_{012} - There is no interaction effect between race and school desegregation on the total reading standard scores on the MAT.

Means and standard deviations of total reading standard scores by race and desegregation level are shown in Table 8. Results of the 2×2 analysis of variance are shown in Table 9.

Reject H_{010} .

Reject H_{011} .

Fail to reject H_{012} .

TABLE 8

MEAN STANDARD SCORES AND STANDARD DEVIATIONS OF MAT TOTAL
READING SUBTEST SCORES BY RACE AND DESEGREGATION LEVEL

	Caucasian	Minority
Before	$\bar{X} = 97.50$	$\bar{X} = 79.50$
Desegregation	S.D. = 14.29	S.D. = 13.65
After	$\bar{X} = 84.00$	$\bar{X} = 71.80$
Desegregation	S.D. = 11.78	S.D. = 14.01

TABLE 9

ANALYSIS OF VARIANCE TABLE OF EFFECTS OF DESEGREGATION
AND RACE ON MAT TOTAL READING SUBTEST STANDARD SCORES

Source	SS	df	MS	F
Within Cells	6,528.61	36	181.35	
Race	2,280.07	1	2,280.07	12.57*
Desegregation	1,123.60	1	1,123.60	6.20*
Race/Desegregation	84.10	1	84.10	0.46

$\alpha = .05$. Critical value of F (1,36) = 4.11

H₀₁₃- There is no difference in the language standard scores on the MAT of Caucasian and minority students after one year of desegregation.

H₀₁₄- There is no difference in the language standard scores on the MAT of students in segregated and desegregated schools.

H₀₁₅- There is no interaction effect between race and school desegregation on the language standard scores of students on the MAT.

Means and standard deviations of language standard scores by race and desegregation level are shown in Table 10. Results of the 2 x 2 analysis of variance are shown in Table 11.

TABLE 10

MEAN STANDARD SCORES AND STANDARD DEVIATIONS OF MAT LANGUAGE SUBTEST SCORES BY RACE AND DESEGREGATION LEVEL

	Caucasian	Minority
Before Desegregation	$\bar{X} = 102.70$ S.D. = 21.25	$\bar{X} = 90.00$ S.D. = 16.73
After Desegregation	$\bar{X} = 86.70$ S.D. = 12.05	$\bar{X} = 74.20$ S.D. = 11.01

TABLE 11

ANALYSIS OF VARIANCE TABLE OF EFFECTS OF DESEGREGATION AND RACE ON MAT LANGUAGE SUBTEST STANDARD SCORES

Source	SS	df	MS	F
Within Cells	8,979.80	36	246.44	
Race	1,587.58	1	1,587.58	6.37*
Desegregation	2,528.08	1	2,528.08	10.14*
Race/Desegregation	0.10	1	0.10	0.00

$\alpha = .05$. Critical value of $F(1,36) = 4.11$.

Reject H_{013} .

Reject H_{014} .

Fail to reject H_{015} .

H_{016} - There is no difference in the science standard scores on the MAT of Caucasian and minority students after one year of desegregation.

H_{017} - There is no difference in the science standard scores on the MAT of students in segregated and desegregated schools.

H_{018} - There is no interaction effect between race and school desegregation on the science standard scores of students on the MAT.

Means and standard deviations of science standard scores by race and desegregation level are shown in Table 12. Results of the 2×2 analysis of variance are shown in Table 13.

Reject H_{016} .

Reject H_{017} .

Fail to reject H_{018} .

TABLE 12

MEAN STANDARD SCORES AND STANDARD DEVIATIONS OF MAT SCIENCE
SUBTEST SCORES BY RACE AND DESEGREGATION LEVEL

	Caucasian	Minority
Before	$\bar{X} = 96.60$	$\bar{X} = 80.10$
Desegregation	S.D. = 10.32	S.D. = 13.68
After	$\bar{X} = 85.60$	$\bar{X} = 77.40$
Desegregation	S.D. = 8.46	S.D. = 8.29

TABLE 13

ANALYSIS OF VARIANCE TABLE OF EFFECTS OF DESEGREGATION AND
RACE ON MAT SCIENCE SUBTEST STANDARD SCORES

Source	SS	df	MS	F
Within Cells	3,906.10	36	108.50	
Race	1,525.21	1	1,525.21	14.06*
Desegregation	469.22	1	469.22	4.32*
Race/Desegregation	172.22	1	172.22	1.59

$\alpha = .05$. Critical value of $F(1,36) = 4.11$.

H_{019} - There is no difference in the social studies standard scores on the MAT of Caucasian and minority students after one year of desegregation.

H_{020} - There is no difference in the social studies standard scores on the MAT of students in segregated and desegregated schools.

H_{021} - There is no interaction effect between race and school desegregation on the social studies standard scores of students on the MAT.

Means and standard deviations of social studies standard scores are shown in Table 14. Results of the 2 x 2 analysis of variance are shown in Table 15.

TABLE 14

MEAN STANDARD SCORES AND STANDARD DEVIATIONS OF SOCIAL STUDIES SUBTEST SCORES BY RACE AND DESEGREGATION LEVEL

	Caucasian	Minority
Before Desegregation	$\bar{X} = 98.00$ S.D. = 11.04	$\bar{X} = 83.6$ S.D. = 12.22
After Desegregation	$\bar{X} = 89.10$ S.D. = 10.86	$\bar{X} = 76.0$ S.D. = 11.45

TABLE 15

ANALYSIS OF VARIANCE TABLE OF EFFECTS OF DESEGREGATION AND RACE
ON MAT SOCIAL STUDIES SUBTEST STANDARD SCORES

Source	SS	df	MS	F
Within Cells	4,619.30	36	128.31	
Race	1,890.59	1	1,890.59	14.73*
Desegregation	680.60	1	680.60	5.30*
Race/Desegregation	4.22	1	4.22	0.86

$\alpha = .05$. Critical value of $F(1,36) = 4.11$.

Reject H_{019} .

Reject H_{020} .

Fail to reject H_{021} .

Supplementary Information

There were not enough minority students enrolled in the two schools being studied to break down the group by specific races for the purpose of completing the type of analyses done above. However, there were some differences in the scores of Indian and black students that make it imperative to look closely at the scores of the total minority population in each area.

Table 16 shows the mean standard scores, the differences in the means, and the range of scores within each cell for MAT Total Reading subtests of black and Indian students.

Table 17 indicates the mean standard scores, the differences in the means, and the range of scores within each cell for MAT Total Math subtests of black and Indian students.

TABLE 16

MEAN TOTAL READING STANDARD SCORES OF BLACK AND INDIAN STUDENTS BEFORE AND AFTER SCHOOL DESEGREGATION

	Black	Indian
Before Desegregation	$\bar{X} = 71.8$ Range = 56-85 n = 5	$\bar{X} = 93.0$ Range = 71-127 n = 8
After Desegregation	$\bar{X} = 66.9$ Range = 48-87 n = 15	$\bar{X} = 81.3$ Range = 74-92 n = 6
Mean Difference	- 4.9	- 11.7

TABLE 17

MEAN TOTAL MATH STANDARD SCORES OF BLACK AND INDIAN STUDENTS BEFORE AND AFTER SCHOOL DESEGREGATION

	Black	Indian
Before Desegregation	$\bar{X} = 81.6$ Range = 59-107 n = 5	$\bar{X} = 99.3$ Range = 87-117 n = 8
After Desegregation	$\bar{X} = 80.9$ Range = 75-89 n = 15	$\bar{X} = 88.7$ Range = 77-107 n = 6
Mean Difference	- .7	- 10.6

Table 18 indicates the mean standard scores, the differences in the means, and the range of scores within each cell for MAT language subtests of black and Indian students.

Mean standard scores, the differences in the means, and the range of scores within each cell for the MAT science subtest of black and Indian students are shown in Table 19.

Mean standard scores, the differences in the means, and the range of scores within each cell for MAT social studies subtest of black and Indian students are shown in Table 20.

Mean scores, the differences in the means, and the range of scores within each cell for GPAs of black and Indian students are shown in Table 21.

Table 22 indicates the mean scores, the differences in the means, and the range of scores within each cell for attendance levels of black and Indian students.

Table 23 summarizes the MAT subtest mean standard scores of minority and white students for 1975-76 and 1976-77 school years.

Summary of Findings

1. Hypothesis 1 was rejected as a difference was found in the mean Grade Point Average of Caucasian and minority students after one year of desegregation. The difference was significant at the .05 level.

2. Hypothesis 2 was not rejected. There was no significant difference in the Grade Point Average of students in segregated and desegregated schools.

TABLE 18

MEAN LANGUAGE STANDARD SCORES OF BLACK AND INDIAN STUDENTS
BEFORE AND AFTER SCHOOL DESEGREGATION

	Black	Indian
Before Desegregation	$\bar{X} = 83.8$ Range = 75-98 n = 5	$\bar{X} = 101.6$ Range = 71-150 n = 8
After Desegregation	$\bar{X} = 73.6$ Range = 60-93 n = 15	$\bar{X} = 77.3$ Range = 64-92 n = 6
Mean Difference	- 10.2	- 24.3

TABLE 19

MEAN SCIENCE STANDARD SCORES OF BLACK AND INDIAN STUDENTS
BEFORE AND AFTER SCHOOL DESEGREGATION

	Black	Indian
Before Desegregation	$\bar{X} = 74.4$ Range = 62-86 n = 5	$\bar{X} = 90.4$ Range = 64-113 n = 8
After Desegregation	$\bar{X} = 73.8$ Range = 57-93 n = 15	$\bar{X} = 78.3$ Range = 69-88 n = 6
Mean Difference	- .6	- 12.1

TABLE 20

MEAN SOCIAL STUDIES STANDARD SCORES OF BLACK AND INDIAN STUDENTS BEFORE AND AFTER SCHOOL DESEGREGATION

	Black	Indian
Before Desegregation	$\bar{X} = 77.0$ Range = 62-89 n = 5	$\bar{X} = 92.1$ Range = 78-116 n = 8
After Desegregation	$\bar{X} = 73.2$ Range = 55-91 n = 15	$\bar{X} = 77.3$ Range = 64-91 n = 6
Mean Difference	- 3.8	- 14.8

TABLE 21

MEAN GPA SCORES OF BLACK AND INDIAN STUDENTS BEFORE AND AFTER SCHOOL DESEGREGATION

	Black	Indian
Before Desegregation	$\bar{X} = 1.95$ Range = .67-3.0 n = 5	$\bar{X} = 2.7$ Range = 1.5-3.8 n = 8
After Desegregation	$\bar{X} = 2.60$ Range = 1.86-3.71 n = 15	$\bar{X} = 2.92$ Range = 2.33-3.75 n = 6
Mean Difference	+ .65	+ .22

TABLE 22

MEAN ATTENDANCE LEVELS OF BLACK AND INDIAN STUDENTS
BEFORE AND AFTER DESEGREGATION

	Black	Indian
Before Desegregation	$\bar{X} = 170.8$ Range = 165.5-175 $n = 5$	$\bar{X} = 165.6$ Range = 159- 172.5 $n = 8$
After Desegregation	$\bar{X} = 164.5$ Range = 148-174 $n = 15$	$\bar{X} = 165.6$ Range = 150.5- 173 $n = 6$
Mean Difference	- 6.3	- 1.0

TABLE 23
SUMMARY OF MEAN STANDARD SCORES OF THE SCHOOLS UNDER STUDY

Washington-Jefferson School Sample				
	Caucasian		Minority	
MAT Subtest	75-76	76-77	75-76	76-77
Total Reading	97.5	84.0	79.5	71.8
Language	102.7	86.7	90.0	74.2
Total Math	100.7	89.4	89.8	82.9
Science	96.6	80.1	95.6	77.4
Social Studies	98.0	89.1	83.6	76.0

3. Hypothesis 3 was not rejected. There was no significant interaction effect of race and status of desegregation on the Grade Point Average of students.

4. Hypothesis 4 was not rejected. There was no significant difference in the attendance records of minority and Caucasian students after one year of desegregation.

5. Hypothesis 5 was not rejected. There was no significant difference in the attendance records of students in segregated and desegregated schools.

6. Hypothesis 6 was not rejected. There was no significant interaction effect of race and status of desegregation on the attendance levels of students.

7. Hypothesis 7 was rejected. There was a difference in the MAT Total Math standard scores of Caucasian and minority students one year after desegregation, significant at the .05 level.

8. Hypothesis 8 was rejected. There was a significant difference in the MAT Total Math standard scores of students in segregated and desegregated schools. This difference was significant at the .05 level.

9. Hypothesis 9 was not rejected. There was no significant interaction effect of race and status of desegregation on the MAT Total Math standard scores of students.

10. Hypothesis 10 was rejected. There was a difference in the Total Reading standard scores of Caucasian and minority students after one year of desegregation. This was significant at the .05 level.

11. Hypothesis 11 was rejected. There was a significant difference in MAT Total Reading standard scores of students in segregated and desegregated schools. These differences were significant at the .05 level.

12. Hypothesis 12 was not rejected. There was no significant interaction effect of race and status of desegregation on the MAT Total Reading standard scores of students.

13. Hypothesis 13 was rejected. There was a difference in the MAT Language standard scores of minority and Caucasian students after one year of desegregation, significant at the .05 level.

14. Hypothesis 14 was rejected. There was a difference in the MAT Language standard scores of students in the segregated and desegregated schools. The difference was significant at the .05 level.

15. Hypothesis 15 was not rejected. There was no significant interaction effect between race and status of desegregation on the MAT Language standard scores of students.

16. Hypothesis 16 was rejected. There was a difference in the MAT Science standard scores of Caucasian and minority students after one year of desegregation. The difference was significant at the .05 level.

17. Hypothesis 17 was rejected. There was a significant difference in the MAT Science standard scores of students in segregated and desegregated schools. The difference was significant at the .05 level.

18. Hypothesis 18 was not rejected. There was no significant interaction effect of race and status of desegregation on the MAT Science standard scores of students.

19. Hypothesis 19 was rejected. There was a difference in the MAT Social Studies standard scores of Caucasian and minority students after one year of desegregation, significant at the .05 level.

20. Hypothesis 20 was rejected. There was a difference in the MAT Social Studies standard scores of students in segregated and desegregated schools. This difference was significant at the .05 level.

21. Hypothesis 21 was not rejected. There was no significant interaction effect of race and status of desegregation on the MAT Social Studies standard scores of students.

Discussion

Of the 21 hypotheses tested, hypotheses 1, 7, 8, 10, 11, 13, 14, 16, 17, 19, and 20 were rejected. Caucasian students achieved significantly higher than minority students on the total mathematics, total reading, language, science, and social studies subtests of the MAT. In addition, Caucasian students achieved significantly higher grade point averages than black students. Both groups scores were lower in achievement in all academic areas in the desegregated schools than were their scores in the segregated schools.

There are signs, however, that the academic performance gap between Caucasian and minority students is being closed. Table 2 indicates that the mean grade-point averages (GPA) of

minority and Caucasian students differed slightly after further desegregation. While it was not statistically determined if pre-desegregation GPAs for the two groups were significantly different, it might be inferred that they were in light of the rejection of Hypothesis 1.

It can be observed in Table 24 that the majority and minority students studied registered decreases in all achievement areas. However, minority students did close the gap in the area of mean standard scores for each MAT subtest.

One might infer that minority students, although acquiring lower scores, moved closer toward educational parity with Caucasian students and the presence of greater numbers of minority students had a more beneficial effect on minority students than on Caucasian students.

It could be that a strength of minority students is the ability to function relatively better in periods of change and temporary instability. This perhaps highlights the generalization that the minorities are able to "make do" more effectively than Caucasians. Though no supporting evidence exists, it may be that teachers made extra efforts to meet the educational needs of minority students during this period.

Supplementary Findings

Though the sample size prevented adequate statistical treatment, data concerning Indian and black students suggest intriguing phenomena. Mean subtest scores for minority students were highly influenced by the scores of Indian students.

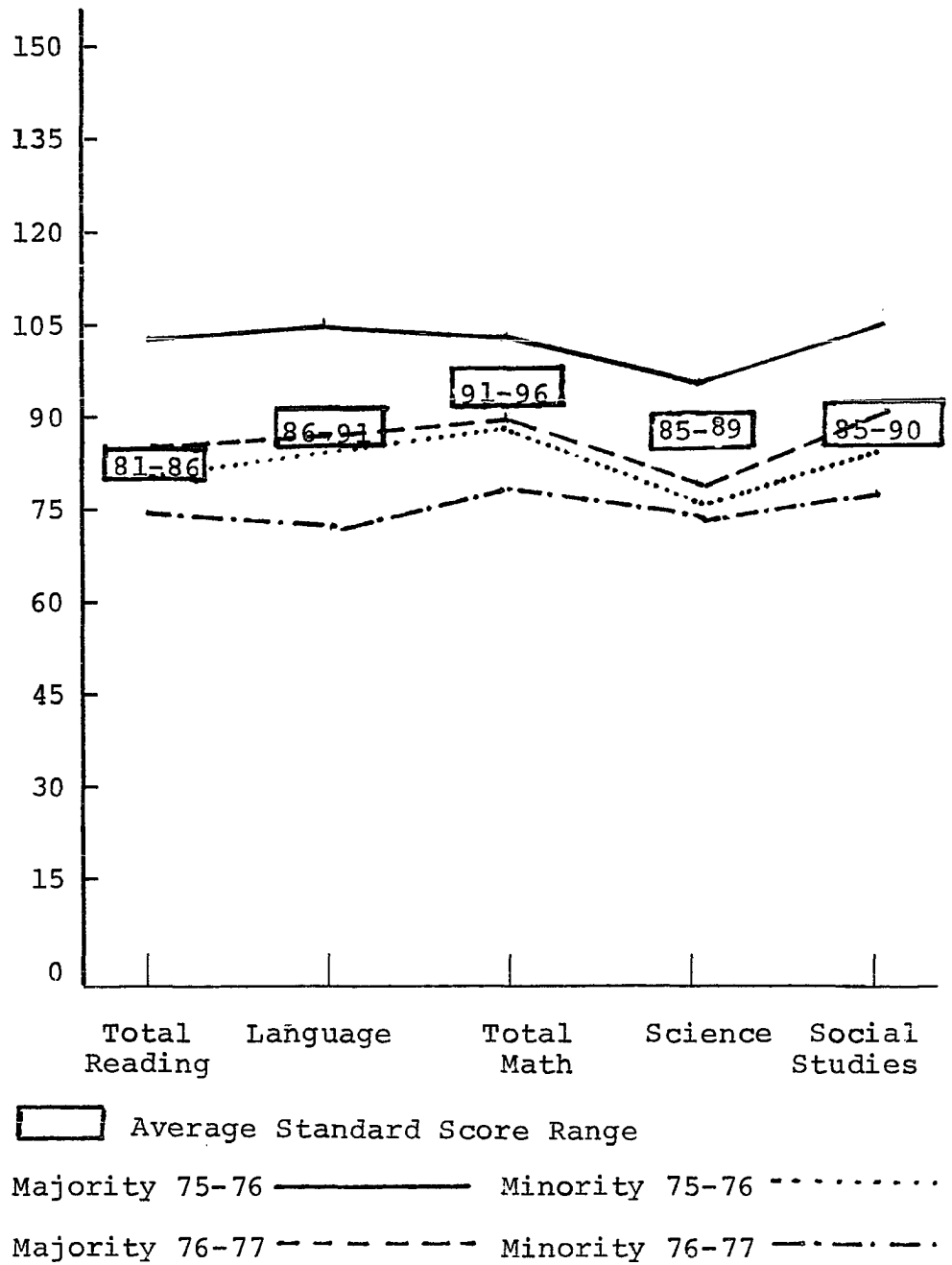


Figure 1.--The mean MAT subtest standard scores before and after desegregation of the majority and minority groups.

TABLE 24

COMPARISON OF STANDARD SCORE SUBTEST MEAN DIFFERENCES
BETWEEN 1975-76 AND 1976-77

MAT Subtest	Majority	Minority	Differences
Total Reading	- 13.5	- 7.7	- 5.8
Language	- 16.0	- 15.8	- .2
Total Math	- 10.9	- 6.5	- 4.4
Science	- 11.0	- 2.7	- 8.3
Social Studies	- 8.9	- 7.6	- 1.3

But Indian students showed very dramatic decreases in total reading, total math, language, science, and social studies, following further desegregation of the two schools. Black students showed decreases in all subtest areas. However, Indian and black students achieved higher grade point averages, but unlike black students, Indian students maintained their pre-desegregation attendance levels (Table 25). This observation might imply that the further desegregation of the school setting introduced additional factors that heightened the perceived competitive nature of the school work and transgressed accepted Indian values of cooperation. Bluntly put, with the increase in the number of black students, Indian students simply quit. The phenomena can be observed in moderately desegregated high schools in athletics, particularly basketball. This observation raises the question of the racial balance "tipping point," beyond which the increase of black students becomes

TABLE 25

A SUMMARY OF THE MAT MEAN STANDARD SCORES, GPA, AND ATTENDANCE
OF BLACK AND INDIAN STUDENTS

Year	Social Studies	Total Reading	Total Math	Language	Science	GPA	Attendance	n
1975-76								
Black	77.0	71.8	81.6	83.8	74.4	1.95	170.8	5
Indian	92.1	93.0	99.3	101.6	90.4	2.70	165.6	8
1976-77								
Black	73.2	66.9	80.9	73.6	73.8	2.60	164.5	15
Indian	77.3	81.3	88.7	77.3	78.3	2.92	165.6	6

highly threatening both to Caucasian students and to other minority students.

With respect to GPA, a few observations might be made. First, the GPA of minority students and their achievement, as measured by the MAT, are incompatible. Apparently, academic performance is not closely correlated to academic achievement. This suggests that the achievement instruments do not adequately measure what minority students know or that minority group students are favored with higher grades. One suspects the former would be tough to defend. Secondly, the GPA mean score perhaps indicates the ability of minority group students to function effectively in the "system" in terms of completing the tasks necessary to earn grade averages within .5 of those earned by Caucasian students. Minority students apparently perform better than they take tests. This contention is the root position of those who argue for less emphasis on standardized test scores as an overriding criterion for admission into many schools, professions, and occupations.

It could be speculated that the failure of the Shawnee school district and American public schools to achieve a greater reduction in the achievement differences between Caucasian and minority students is the result of inadequate teacher preparation and curriculum assessment prior to implementing the plan for further desegregation of the student populations in this school area. Quite possibly, the situation stems from the absence of role models inherent in the failure or inability to attract and hire minority school teachers and other educators.

Perhaps, the legacy of the segregated school system is much too powerful and pervasive to erase in the period of time covered by this study. These are concerns which should come to the attention of school leaders for discussions as an internal step in continuing efforts to improve equal educational opportunities for all students, particularly minority students.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

It was the purpose of this investigation to determine if racial desegregation achievement through the process of reorganizing two school areas in an Oklahoma School District increased or decreased student academic performance (grades), achievement (MAT scores), and attendance of Caucasian and minority students.

This study consisted of a stratified random sample of 40 students taken from a sixth grade student population of 177 students from Washington and Jefferson Elementary Schools during the school years 1975-1977 in Shawnee, Oklahoma.

The Metropolitan Achievement Test subtests mean standard scores of the sample groups were statistically studied by the use of a 2 x 2 ANOVA to compare pre- and post-desegregated students with each other on specific parts of the Metropolitan Achievement Test (Total Reading, Total Math, Science, Social Studies, and Language) to determine if there were any differences in the academic achievement of the minority and Caucasian students. These differences were significant at the .05 level on all tests. A significant difference was found to exist between Caucasian and minority students in GPA after further desegregation.

There were no significant differences in the attendance levels of minority and Caucasian students. There were no interaction effects, but race and desegregation separately were both critical factors leading to differences in achievement for both majority and minority students.

Findings

The rejected hypotheses indicated that race and the extent of desegregation in the two schools were factors leading to differences in achievement on the part of minority and Caucasian students. Caucasian students achieved significantly higher than minority students on all subtests of the Metropolitan Achievement Test and in grade point average. This was true despite the decrease in second year mean standard scores. It was also found that the differences between the two groups decreased.

Of the 21 hypotheses, the following were rejected:

- H₀₁ - There is no difference in the GPA of Caucasian and minority students after one year of desegregation.
- H₀₇ - There is no difference in the total math standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₈ - There is no difference in the total math standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₀ - There is no difference in the total reading standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₁ - There is no difference in the total reading standard scores on the MAT of students in segregated and desegregated schools.

- H₀₁₃- There is no difference in the language standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₄- There is no difference in the language standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₆- There is no difference in the science standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₁₇- There is no difference in the science standard scores on the MAT of students in segregated and desegregated schools.
- H₀₁₉- There is no difference in the social studies standard scores on the MAT of Caucasian and minority students after one year of desegregation.
- H₀₂₀- There is no difference in the social studies standard scores on the MAT of students in segregated and desegregated schools.

Conclusions

It was concluded that:

1. Desegregation did not generally have significant negative effects on students' academic performance.
2. Desegregation did not generally have a negative effect on Caucasian students' academic performance (grades), but did affect their academic achievement (MAT Scores). Minority students generally were positively affected as compared with the majority students in their academic achievement (MAT Scores) and performance (grades) even though lower MAT subtest standard scores were attained.
3. Desegregation did not have a negative effect on attendance levels of minority and Caucasian students.
4. Desegregation did not reduce prior differences in

academic achievement and performances between Caucasian and minority students in the short time of one year even though lower MAT subtest scores were achieved.

5. Expectations of dramatic improvement in student academic performance and achievement did not result from short-term desegregation efforts.

Recommendations

Based on this study, it is recommended:

1. That further research be initiated by the Shawnee School System and similar school districts to assess the educational effectiveness of school desegregation and to modify the curriculum, teaching methods, etc., with the goal of attaining a fully integrated school system.

2. That additional research be conducted that focuses on the desegregation-related performance and achievement of minority students, specifically Indian students, in the Shawnee Public Schools.

3. That a diagnostic review of Metropolitan Achievement Test results and grade point averages or equivalents of Shawnee students at all grade levels tested be completed to determine what actions need to be taken to further improve the curriculum of the entire Shawnee Public School System so that all students have a better opportunity for an equal education.

4. That a person responsible to the Superintendent of schools be designated to coordinate the research activities of the Shawnee School system, including the effects of school

desegregation on school achievement, curriculum, etc., with the goal of attaining equal educational opportunity for all students.

APPENDIX A

CORRESPONDENCE



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

REGIONAL OFFICE
1114 COMMERCE STREET
DALLAS, TEXAS 75202

OFFICE OF
THE REGIONAL DIRECTOR

October 8, 1975

Dr. R. R. Westfall, Superintendent
Shawnee Public Schools
10th and Harrison
Shawnee, Oklahoma 74801

Dear Superintendent Westfall:

Thank you for the courtesies extended to Meses. Maxey Marshall and Cydronia Valdez of our staff, during their recent visit to the Shawnee, Oklahoma, Public Schools. The purpose of the visit was to gather information relative to student assignment policies and practices pursuant to the requirements of the Adams v. Weinberger Court Order for districts having one or more racially and/or ethnically disproportionate schools. In addition, information was obtained regarding the district's practice, policy or procedure in the area of recruitment, hiring and promotion of professional staff members, according to the Policies on Elementary and Secondary School Compliance with Title VI of the Civil Rights Act of 1964.

The findings of the review are as follows:

1. Student Assignment to Schools

- a. In 1965-66, the district operated ten elementary (1-6) schools. One school, Dunbar Elementary, was 100% nonminority.
- b. At the close of the 1965-66 school year, the Dunbar school was closed. Allegedly, 53, or 50 percent, and 79, or 40 percent, minority students were sent to the Franklin and Washington schools respectively.
- c. According to information reviewed, in 1966-67 Franklin had a total student population of 213 students (99, or 46.5% nonminority; and 114, or 53.5% minority). Washington's student population was 230 (99, or 46.5% nonminority, and 68, or 29.6% minority). The total district minority percentage was 10.2 percent.
- d. For the 1974-75 school year, Washington Elementary had a student enrollment of 216 (82, or 38% minority, and 134, or 62% nonminority). The district's minority percentage was 16.5 at the elementary level.

Page Two - Dr. A. A. Westfall

The minority student enrollment at the Washington School deviates from the district-wide minority percentage at the elementary level by 20 percent. Therefore, the district is required to develop a student assignment plan which will eliminate the disproportionate student enrollment, as required by the Adams v. Weinberger Court Order, Civil Action No. 3095-70, in accordance with Title VI of the Civil Rights Act of 1964.

Furthermore, it is our understanding that the Acme Elementary School was annexed to the Shawnee Public School District in 1970. At that time Acme was 39 percent minority (predominately American Indian). Presently, the school's population is 49.8 percent minority (predominately American Indian). This school has been identified as a school for students having special needs, and therefore, receives state allocated Johnson O'Malley funds.

Inasmuch as we are not requiring further desegregation steps at the Acme School, the district has a continuing obligation to assure that American Indian students so assigned are eligible to participate in the special programs provided and approved by the Oklahoma State Department of Education. Accordingly, the district has a responsibility to assure our Office that further concentration of minority students at Acme will not be created as a result of inter/intra district transfers, or any other discriminatory student assignment practices.

2. Personnel

a. In 1956-57, the year prior to desegregation, the district employed 13, or 8 percent, black teachers and 150, or 92 percent white teachers.

b. For the 1957-58 school year, the district employed six black teachers and 163 white teachers. At the close of the subject school year, the Dunbar High School (all black) was eliminated, and the contracts of seven black teachers were not renewed. Subsequent to the 1958-59 school year, there has been a further reduction of four black teachers.

c. For the 1974-75 school year, the district employs only two black teachers. Therefore, there has been a total reduction of eleven black teachers since the year prior to desegregation. During that same period, and subsequent to the 1964-65 school year, the district has employed a total of four black teachers, all replacements, as compared to the employment of 58 additional nonminority teachers.

We have concluded that this substantial loss of black teachers and simultaneous gain of Anglo teachers during the desegregation process is a direct result of the district's failure to recruit and employ professional personnel on a nondiscriminatory basis. This is a violation of Title VI of the Civil Rights Act of 1964 and implementing regulations and policies.

The foregoing also is evidence that the district has failed to utilize objective and reasonable nondiscriminatory standards to determine professional

Page Three - Dr. R. R. Westfall

staff to be employed. In order to remedy the effects of the preceding discriminatory activities and violations of Title VI of the Civil Rights Act of 1964, and implementing regulations and thereby forestall the institution of administrative enforcement actions against the district, we must require that you submit an affirmative action plan to this Office. In order for this plan to be acceptable it must provide that you will use affirmative means to correct the effects of your actions by submitting:

(1) An affirmative action plan utilizing objective, non-racial criteria for the recruitment, hiring, assignment, promotion, demotion and dismissal of professional staff. Such an affirmative action plan must be designed to increase effectively the percentage of minority teachers to that which existed the year prior to desegregation.

(2) A statement of assurance and the development of steps to be taken by the district to prevent any further disproportionate reduction of minority staff.

(3) A statement of assurance that the district will consider the employment and promotion of minorities into positions from which they have been previously excluded when administrative positions in the district including principals and assistant principals become available.

(4) A statement of assurance that upon achievement of the desired goals, the district will continue to employ its professional staff by utilizing objective, nonracial, reasonable and nondiscriminatory criteria in the recruitment, employment, and promotion of its professional staff.

(5) A statement of assurance that the district will maintain adequate information and/or records necessary to document its affirmative action efforts. Such data should be maintained and accessible to this Office as may be deemed necessary for a determination as to the district's continuous compliance with Title VI of the Civil Rights Act of 1964.

(6) A statement of assurance that the district will report to the Office for Civil Rights on its progress in achieving the goals of the plan. These reports will include all administrative actions taken relative to demotions, dismissals, resignations, and newly hired professional staff (teachers, principals, assistant principals, coaches, assistant coaches, etc.) and a racial/ethnic/sex identification of the persons involved. The reports will also list vacancies by grade levels, subject and/or positions which exist at each reporting date.

APPENDIX B

NEWSPAPER ARTICLES

City School System Given HEW Orders

Editor's Note: This is the first of a two-part series on a review made of the Shawnee school system by HEW. The first part deals with HEW directives regarding student assignment to schools and student assignment to educable mentally handicapped classes. The second part will deal with HEW directives regarding the district's practice in recruitment, hiring and promotion of professional staff members, according to Title VI of the Civil Rights Act of 1964.

By MARSHA HAYDEN
Of The News-Star Staff

After an in-depth survey of the Shawnee public system, the Department of Health, Education and Welfare has asked that affirmative action be taken to alleviate any discriminatory practices in student assignments and recruitment, hiring and promotion of personnel.

HEW ordered that action be taken in three areas: student

assignments to schools, personnel, and student assignment to educable mentally handicapped classes.

According to the HEW survey, the minority student enrolment at Washington Elementary School deviates from the district-wide minority percentage and the district will eliminate the disproportionate student enrolment. The enrolment ratio must be in accordance with Title VI of the Civil Rights Act of 1964.

Students Transfers

According to Dr. Leahn Westfall, school superintendent, 30 black students and preferably 50 must be transferred from Washington to one of the elementary schools except Franklin or Acme. Franklin now meets HEW requirements for racially proportionate schools but an influx of black students would put it in the disproportionate category.

In addition to transferring the black students from Washington at least 30 white students must be transferred into Washington.

Dr. Westfall said that he will meet with school attorney, Jim Winterringer, Washington principal James Taffee, and members of the central office staff early this week to discuss the HEW order. The school superintendent said John A. Bell, of the chief elementary and secondary education branch, Region VI Office for Civil Rights, Dallas, would be contacted and asked to give suggestions in regards to compliance.

Special Board Meeting

As soon as information has been gathered, a special meeting of the Shawnee Board of Education will be called. The board must approve the desegregation plan for

HEW, Page 4

(Continued From Page One)

Washington school.

"One possibility we will research is volunteer student transfers," Dr. Westfall said. However, he said he feels that very few students would want to interrupt their academic year with a transfer.

Dr. Westfall said he understood that funds would be made available to assist in the desegregation process, though no official word had been received on this.

One use of the funds would be to provide transportation for students being transferred.

The school system will have to rely on Horace Mann, Jefferson Lee, Sequoyah, Will Rogers and Wilson for transfers to and from Washington.

Acme Reviewed

Acme School, which was reviewed by HEW, is not eligible to participate.

In the memorandum to the school administration HEW wrote: "inasmuch as we are not requiring further desegregation steps at the Acme School, the district has a continuing obligation to assure that American Indian students so assigned are eligible to participate in the special programs provided and approved by the Oklahoma State Department of Education. Accordingly, the district has a responsibility to assure our office that further concentration of minority students at Acme will not be created as a result of inter-district transfers or any other discriminatory student assignment practices."

The HEW survey revealed that Acme is presently 49.8 per cent minority (predominately American Indian). Acme has been identified as a school for students having special needs, and therefore, receives state allocated Johnson O'Malley funds.

Dr. Westfall said he is confident that the desegregation of Washington can be worked out smoothly.

"As a parent and knowing the schools and personnel, I would have no hesitation in sending my youngster to Washington School," he said.

The school qualified for Title I funds which allows Washington to have aides, materials and programs which the other schools do not have.

Handicapped Classes

HEW also indicated that the Shawnee schools were in violation of standards prescribed by the State Board of Education for placement of students to educable mentally handicapped classes.

HEW's survey showed that for the 1974-75 school year there were 24 students enrolled in educable mentally handicapped classes at Central Junior High School. Of that number, 13 students' I.Q.'s were 75 and above.

Tuesday, October 21, 1975

School District Violates Civil Rights Act Of 1964

Editor's Note: This is the second of a two-part series on an in-depth survey of the Shawnee school system by the Department of Health, Education and Welfare.

**By MARSHA HAYDEN
Of The News-Star Staff**

After reviewing Shawnee school district's policies regarding personnel, the Department of Health, Education and Welfare has decreed that the district is in violation of Title VI of the Civil Rights Act of 1964 and must take affirmative steps or face enforcement actions.

Members of the HEW regional office in Dallas visited in Shawnee during the summer to gather information relative to student assignment policies to schools.

In addition, information was obtained regarding the district's practice in area of recruitment, hiring and promotion of professional staff members.

In its review of school personnel, HEW concluded that a "substantial loss of black teachers and simultaneous gain of Anglo teachers during the desegregation process is a direct result of the district's failure to recruit and employ professional personnel on a nondiscriminatory basis. This is a violation of Title VI of the Civil Rights Act of 1964 and implementing regulations and policies.

"The foregoing is evidence that the district has failed to utilize objective and reasonable nondiscriminatory standards to determine professional staff to be

employed."

In order to forestall enforcement actions, HEW ordered the school districts to take six steps:

—Submission of an affirmative action plan utilizing objective, non-racial criteria for the recruitment, hiring, assignment, promotion, demotion and dismissal of professional staff. Such an affirmative action plan must be designed to increase effectively the percentage of minority teachers to that which existed the year prior to desegregation.

—Statement of assurance and development of steps to be taken by the district to prevent any further disproportionate reduction of minority staff.

—Statement of assurance that the district will consider the em-
School District, Page 4

(Continued From Page One)

ployment and promotion of minorities into positions from which they have been previously excluded when administrative positions in the district including principals and assistant principals become available.

—Statement of assurance that upon achievement of the desired goals, the district will continue to employ its professional staff by utilizing objective, nonracial, reasonable and nondiscriminatory criteria in the recruitment, employment and promotion of its professional staff.

—Statement of assurance that the district will maintain adequate information and/or records necessary to document its affirmative action efforts. Such data should be maintained and accessible to this Office (Dallas regional HEW office) as may be deemed necessary for a determination as to the district's continuous compliance with Title VI of the Civil Rights Act of 1964.

—Statement of assurance that the district will report to the Office for Civil Rights on its progress in achieving the goals of the plan.

These reports will include all administrative actions taken relative to demotions, dismissals, resignations and newly hired professional staff and a racial-ethnic-sex identification of the persons involved. The reports will also list vacancies by grade levels, subject and positions which exist at each reporting date.

In writing its report to the Shawnee school administration, HEW observed that in 1956-57, the year prior to desegregation, the district employed 13, or eight per cent, black teachers and 150 or 92 per cent white teachers.

Citing statistics from 1957-58, HEW wrote that in that school term the district employed six black teachers and 163 white teachers. At the close of the school year, Dunbar High School (all black) was eliminated, and the contracts of seven black teachers were not renewed. Subsequent to the 1958-59 school year, there had been a further reduction of four black teachers.

HEW also wrote: "For the 1974-75 school year, the district employs only two black teachers. Therefore, there has been a total reduction of 11 black teachers since the year prior to desegregation.

During that same period, and subsequent to the 1964-65 school year, the district has employed a total of four black teachers, all replacements, as compared to the employment of 58 additional non-minority teachers.

Dr. Leahn Westfall, school superintendent, said that HEW has concluded that the system employs only two black teachers. Actually, the system employed two black teachers and one black principal in 1974-'75 and has employed an additional black for this school term.

"There is no problem in providing an affirmative action

plan in the employment and promotion of minority personnel," Dr. Westfall said.

The problem which the school system faces is finding minority teachers to employ.

"For the 1975-'76 school term, we actively recruited black applicants for the positions that were open," Dr. Westfall said.

"Of the 346 new applicants, nine were black. Three blacks applied for elementary positions and six blacks for secondary positions. We hired every black that had similar qualifications to white applicants."

HEW ordered the district to take immediate corrective action steps to retest, re-evaluate or reassign the 13 students. Such steps should include:

- Actions taken to eliminate the existence of the overinclusion of minority students in the special education classes for the educable mentally handicapped (EMH).

- Racial ethnic breakdown of EMH students retested, re-evaluated or reassigned to groups or classes which satisfy the State Board of Education.

- Racial—ethnic breakdown of test administrators.

- Efforts taken or to be taken to insure that nonracial non-discriminatory criteria are utilized for the placement of students in EMH classes.

Dr. Westfall said that the State Department of Education has been asked to come in and evaluate the EMH classes this week. Floyd Burks, assistant administrator, and Jeane Ratliff, psychometrist, are also working on meeting HEW's requirements for the EMH classes.

Thursday, October 30, 1975

School Board Eyes Busing Solution In Special Meet

By JIM BRADSHAW

A Jefferson-Washington school attendance zone was among highly preliminary proposals approved Wednesday by the Shawnee Board of Education for referral to the federal HEW office, toward compliance with the Civil Rights Act.

Supt. Leahn Westfall told the board he learned, through contact with the HEW office, that the Shawnee district will not have to invoke a busing and desegregation plan this school year.

Dr. Westfall said he was advised, however, that the school system must be prepared to implement a plan by the opening of the fall term next year.

The superintendent termed the Jefferson-Washington attendance center as probably the most workable and compatible of three tentative alternatives advanced for HEW study.

The plan would move

Washington pupils, kindergarten through fourth grade, to Jefferson school. Jefferson children, kindergarten through fourth grade, would remain at Jefferson.

Jefferson pupils, grades five and six, would be moved to Washington school. Washington's fifth and sixth graders would remain at Washington.

The net effect would be to retain Jefferson as a school for kindergarten through fourth grade, and Washington for fifth and sixth grades.

Children affected would be those in a Washington-Jefferson attendance center, which would be the area within the present Washington and Jefferson districts. The northern Washington and southern Jefferson boundaries are contiguous.

Busing Plan

The Office of Civil Rights, within

Board Advised

Dr. Westfall had advised the board, earlier, that the HEW office has insisted on receiving some word from the local school district by Nov. 6, as to how the school board intends to comply with the Civil Rights Act.

"We believe we have the alternatives. We need to discuss it and have some direction from the board as to the course to take," the superintendent said in a preliminary briefing.

Dr. Westfall related that in contact with John A. Bell, of the Civil Rights Office of HEW in Dallas, Bell made it clear the school system here wouldn't be required to put a busing plan in force this school year.

Bell "is expecting some response as to how you intend to desegregate, but is not expecting that it be complied with this year," Dr. Westfall said.

He said he inferred from Bell that the local school system is to work out a plan for Washington this year and put it into effect at the beginning of the fall term, 1976.

the Department of Health, Education and Welfare, has been directed by the courts to force the Shawnee school district to implement a busing plan, acceptable for relieving racial imbalance at Washington school.

Of the two other proposals approved by the board at Wednesday's special session, one would rely on voluntary transfer of students to Washington.

Dr. Westfall said this is likely unrealistic and impractical, simply due to a lack of prospective volunteers. That was the general feeling among some of the board members, as well as board attorney Jim Winterringer.

The other proposal, also practically ruled out at this time would set up two other zones for school attendance purposes.

One would contain the Prince Hall Village Apartments at the southwest corner of the city, which

School Board, Page 4

(Continued From Page One)

has 45 minority students. The proposal would bus these students to predominately white schools "on the basis of the best possible assignment."

The other zone would contain the Country Club Apartments, and students residing there would be bused to Washington.

There are 26 majority students in this apartment complex, northwest of Bryan-Highland. Dr. Westfall explained. But 12 of these are currently on transfer to the rural Grove school district, he said.

The school board stressed, after approving the proposals, that the board was not binding itself to any of them—that the proposals were being forwarded to satisfy a HEW correspondence request.

In this respect, Dr. Westfall's letter to HEW stated, "no student wishes to interrupt his present academic year by transferring in the middle of the school year to a new school, a new teacher and a different program."

The superintendent noted that the minority situation at Acme school is satisfactory and that no busing plan will be required there for integration purposes. Acme has a 38.67 per cent minority enrolment—second only to Washington's 48.16 per cent.

Washington currently has 218 pupils, with 113 white, 78 black and 27 Indian. Jefferson has 380 pupils, with 350 white, 1 black, 26 Indian, 2 Spanish-American, and 1 Oriental.

Dr. Westfall said the Jefferson-Washington proposal would transfer 144 Washington, kindergarten through fourth graders, to Jefferson, based on this year's enrolment. A total of 133 Jefferson fifth and sixth graders would move to Washington.

Dr. Westfall said, in the event the Washington-Jefferson attendance zone plan becomes a reality, he would "make sure that there is no school program in Shawnee better than at Washington and Jefferson.

Pupils To Retain Friends

He said the proposal would enable pupils to retain their friends and the same teachers.

Dr. Westfall said he, elementary co-ordinator Floyd Burks, attorney Winterringer, and others in the administration had spent considerable time on the busing and integration question and that the Washington-Jefferson plan seemed most feasible at this time.

He said other cities, such as Oklahoma City and Muskogee, had set up attendance centers. In such cases, each school within those cities, was affected. He noted only two would be affected here.

Dr. Westfall said he found, in talking to state Department of Education people, that no lotteries have been used in determining which students will be bused.

Winterringer, stressing the fact that Shawnee will be required to make a move one way or the other, recalled that "HEW is under a court order to do something about us.

"It's a fact of life," he declared, emphasizing Shawnee's plight.

Board members present and approving the preliminary proposals, for forwarding by letter to HEW, were Roy Marler, president; Clois DeLoach; Gale Izard; Paul Milburn; Judy Marcum, and Wright Wiles.

Sunday, November 2, 1975

School District Forbids Any Sex Discrimination

It is the policy of the Shawnee school district (I-93) not to discriminate on the basis of sex in its educational program or employment process and practices, as required by Title IX of the educational amendments, Superintendent Leahn Westfall said Thursday.

"The Shawnee school district is aware of Title IX and its provisions and intends to comply with them," Dr. Westfall said.

He announced that in compliance with Section 86.8, the Shawnee school district has designated Gene C. Hill, administrative assistant, to coordinate the district's Title IX efforts. Hill will be responsible for investigation of any complaint brought to the district under Title IX.

"Any student or employee of the Shawnee public school system who feels that they have been discriminated against on the basis of sex in the educational program or employment should notify Mr. Hill at his office in the Administration Building, Tenth and Harrison," Dr. Westfall added.

Hill said plans are under way to conduct a school district self-evaluation, in terms of the

regulation, to determine whether any of its policies or practices need modification to bring them into compliance with Title IX.

"Title IX is, indeed, far-reaching in its sweep," Dr. Westfall noted. "It forbids sex discrimination in any education institution receiving federal assistance. This includes the nation's 16,000 public school systems and nearly 2,700 post-secondary institutions, according to HEW."

Hill said the school district "intends to approach Title IX enforcement in a constructive spirit.

"To our great credit, Shawnee school district is already moving in good faith to end sex discrimination," Hill added.

Casper W. Weinberger, Secretary of Health, Education and Welfare, in a written statement to all school districts that receive federal funds, said:

"For those who are not trying in good faith to end discrimination against women, I have one message: We can wait no longer.

"Equal education opportunity for women is the law of the land—and it will be enforced."

Friday, November 7, 1975

Advisory Group Asked In Busing Controversy

By JIM BRADSHAW

About 125 to 150 parents of Washington and Jefferson elementary school children proposed Thursday night that the Shawnee school board appoint a citizens advisory committee to study the integration busing issue.

The group met in Jefferson school, opposed to a preliminary Board of Education proposal that would bus only Washington and Jefferson children to satisfy demands of the Department of Health, Education and Welfare.

The Jefferson-Washington parents called on each member of the school board to appoint five persons from his or her ward to serve on the advisory committee and come up with an alternative busing plan.

John Edgin, who moderated the Thursday night meeting, said board members and administrators, including Supt. Leah Westfall and Elementary Coordinator Floyd Burks, were generally receptive to the advisory committee request.

Edgin said parents in the Jefferson-Washington district favor participation by each school toward achieving a satisfactory busing plan.

Under the highly tentative proposal advanced by the school board, and referred to the HEW office in Dallas, only children in the Washington and Jefferson districts would be affected.

Jefferson would be made a school for grades, kindergarten through fourth, and Washington would be retained as a school for fifth and sixth graders.

Washington pupils, kindergarten through fourth grade, would be transported to Jefferson. Fifth and sixth graders from Jefferson would be transported to Washington.

HEW has ordered the Shawnee school district to implement a busing plan by the fall semester, 1976, to meet requirements of the 1964 Civil Rights Act.

Board members present at the Thursday night session included Roy Marler, Wright Wiles, Clois DeLoach, Judy Marcum, and Gale Izard.

Tuesday, November 11, 1975

Education Board Approves Panel To Resolve School Busing Issue

By MARSHA HAYDEN
Of The News-Star Staff

After hearing from a spokesman for a group of Jefferson School parents, the Shawnee Board of Education voted Monday night to form a citizens' advisory committee which can work with the board in resolving the school integration busing issue.

The recommendation was approved that each board member will nominate three persons from his ward to serve on the committee with the entire board agreeing on the nominations from ward 4. The

resignation of ward 4 board member Paul Fairchild was formally accepted by the board Monday.

HEW Demands

The Department of Health Education and Welfare has ordered that Washington School must be desegregated by the fall term 1976. A preliminary Board of Education proposal suggested that students be bused between Washington and Jefferson schools to satisfy the demands of HEW.

Approximately 125 to 150 parents of Washington and Jefferson elementary students met last week and objected to the tentative proposal.

Scott Hill spoke to the school board Monday night and said that the citizens' advisory committee was a suggestion to help deal with the current situation and any future situations.

"I'm not here to argue with the proposal," Hill said, "but the citizens would like to assist in implementation of a plan.

Board Will, Page 4

(Continued From Page One)

"I wish you would consider the appointment of citizens from all over the community as an advisory committee."

Hill said that the committee could be used as a broad base to give input to the board as well as a sounding board for the board's proposals.

Spokesman For Group

The spokesman for the Jefferson school group also said that a committee would be useful in establishing a line of communications between the board and the community.

Board president Roy Marler appointed a committee of Paul Milburn, Wright Wiles and Clois DeLoach to make recommendations on guidelines for the advisory group.

A special board meeting has been called for 7:30 p.m. November 24 to present the guidelines and names for the advisory committee. A definite meeting place was not decided upon, but will either be the city commission chambers or Board of Education building.

Another parent meeting has been set for 7 p.m. November 17 in Washington School as a follow-up to last week's Jefferson School meeting.

Dr. Leahn Westfall, superintendent of schools, told the board that the administration and school officials were in the process of implementing those specific things required by HEW to eliminate sex discrimination in the public schools. Gene Hill has been appointed as a direct contact person for complaints in the school system regarding discrimination.

At the recommendation of school attorney Jim Winterringer the board adopted a new student code

to bring Shawnee policies in line required by governmental authorities. The code explicitly defines student offenses, and enforcement of rules.

In other action the board authorized the administration to advertise for bids on a new delivery van, leasing of another bus for the transportation fleet and replacement of a portion of the roof at the T & I building.

The parents organization of Faith 7 Workshop was given permission to build a 45 x 45 foot extension on the east side of the boys' workshop. The stipulation was made that Dr. Westfall be allowed to approve final plans to see that the extension met with school requirements. No request for financial aid was made.

The employment of Carolyn Miller as a first grade instructor at Washington School was approved and a substitute teacher's contract for Carla Jo O'Dell was approved.

Advisory Group Asked In Busing Controversy

By JIM BRADSHAW

About 125 to 150 parents of Washington and Jefferson elementary school children proposed Thursday night that the Shawnee school board appoint a citizens advisory committee to study the integration busing issue.

The group met in Jefferson school, opposed to a preliminary Board of Education proposal that would bus only Washington and Jefferson children to satisfy demands of the Department of Health, Education and Welfare.

The Jefferson-Washington parents called on each member of the school board to appoint five persons from his or her ward to serve on the advisory committee and come up with an alternative busing plan.

John Edgin, who moderated the Thursday night meeting, said board members and administrators, including Supt. Leahn Westfall and Elementary Coordinator Floyd Burks, were generally receptive to the advisory committee request.

Edgin said parents in the Jefferson-Washington district favor participation by each school toward achieving a satisfactory busing plan.

Under the highly tentative proposal advanced by the school board, and referred to the HEW office in Dallas, only children in the Washington and Jefferson districts would be affected.

Jefferson would be made a school for grades, kindergarten through fourth, and Washington would be retained as a school for fifth and sixth graders.

Washington pupils, kindergarten through fourth grade, would be transported to Jefferson. Fifth and sixth graders from Jefferson would be transported to Washington.

HEW has ordered the Shawnee school district to implement a busing plan by the fall semester, 1976, to meet requirements of the 1964 Civil Rights Act.

Board members present at the Thursday night session included Roy Marler, Wright Wiles, Clois DeLoach, Judy Marcum, and Gale Izard.

Tuesday, November 25, 1975

Board Approves Integration Study Group Structure

By MARSHA HAYDEN
Of The News-Star Staff

After considerable discussion, the Shawnee Board of Education agreed upon the structure of a citizens advisory committee which is being organized to make suggestions on the integration of Washington School.

A special board meeting had been called for Monday night so each member could present names of three persons willing to serve on the committee.

After the names were presented, board members spent over 30 minutes debating the imbalance which existed—one school had no representatives on the committee while another had four representatives.

Ward 6 member Gale Izard proposed that the committee be structured so that each board member's three appointments would stand, and that the citizens committee be authorized to appoint additional members to give each school in the Shawnee district at least two representatives.

The proposal was unanimously accepted by the board.

Meeting Planned

Committee members approved Monday night will be notified by letter of their appointment by the superintendent of schools, Dr. Leah Westfall, and instructed that the first meeting of the citizens advisory committee has been called for 7 p.m. Monday in the Board of Education building.

Committee members also will be informed of the guidelines established. One of their first duties will be to complete selection of members.

The board appointed Scott Hill as temporary chairman of the citizens advisory committee.

The committee will have until February 1 to research methods of integration and present their suggestions to the school board.

Guidelines Set

Approved by the board were the following guidelines and responses—
School, Page 4

(Continued From Page One)
sibilities of the committee:

—Primary purpose to gather information in regard to possibilities for integrating Washington School.

—To research, discuss and prioritize alternative methods and the better alternatives available for the Shawnee system that will have the possibility of being accepted by HEW for the Board of Education.

—To use individual or group contacts with patrons of the community, the Board of Education, school administration, HEW, State Department of Education and persons in other communities familiar with integration process in compiling this information.

—When completed to present to

the Board the results of their work in the form of an advisory board recommendation.

—To continue as a standing committee until the Board takes final action on a particular plan for implementing HEW's requirements.

Paul Milburn said that the suggestions of the citizens advisory committee would be considered carefully but the "final decision rests solely with the Board of Education."

Appointments to the committee are listed below:

Paul Milburn, Ward 1—Bill Ford, Judy Deem, Betty Kasterke.

Wright Wiles, Ward 2—Scott Hill, Marylois King, Frank Bauman.

Clois DeLoach, Ward 3—Walton Trent, George Word, Mr. Wilburn.

Consensus of board, Ward 4—

Jim Lynam, Raymond Block, Barbara Goodson. (Ward 4 representative Paul Fairchild resigned early in November.)

Judy Marcum, Ward 5—Kay Barrick, Bob Scrutchins, Warren Heatley.

Gale Izard, Ward 6—Margaret Eby, Richard Davis, Johnny Youell.

Roy Marler, Outlying—Bob Thompson, Larry Sevier. (Marler has one additional appointment to confirm.)

In the only other action taken during the meeting, board members approved a form to be used in the evaluation of the superintendent of schools.

The next board meeting will be at 7 p.m. December 8 in the City Commission chambers.

Tuesday, December 9, 1975

Board Of Education Endorses Pairing Of School Districts

By MARSHA HAYDEN
Of The News-Star Staff

The Shawnee Board of Education endorsed the pairing of Washington and Jefferson school districts Monday night to eliminate the minority disproportionment which currently exists at Washington Elementary School.

The board took the action in its regular monthly meeting. The Shawnee school system had been ordered by the Department of Health, Education and Welfare to desegregate Washington School and present an acceptable affirmative action plan to the HEW regional office in Dallas or face court action.

The board was advised also that a suit may be filed in the U.S. District Court for the Western District of Oklahoma.

Fred Gipson, member of the Seminole law firm of Berry and

Gipson, wrote the board members that he has been retained to represent Mrs. Billie Williams, a former employe of the Shawnee school district.

In his letter Gipson said, "It is my belief that the termination of her employment as a secretary at Horace Mann Elementary School was unlawful and resulted in a violation of her constitutional rights."

Signs Petition

Gipson further said that the evidence in this case is clear that Mrs. Williams was terminated for signing the grand jury petition.

"I hope that litigation of this question can be avoided by restoring Mrs. Williams to her former position. If not, I propose to file suit in the U.S. District Court for the Western District of

Oklahoma within 15 days for damages and injunctive relief," Gipson wrote.

"Prior to that time, I would be happy to meet with you or your attorney to discuss this matter."

The board did not take any action on the letter and Dr. Leah Westfall, superintendent of schools, said he stood by the administration's actions.

The Board of Education was given until December 10 to respond to HEW's orders or face court action. Commissioner John A. Bell, elementary and secondary branch of the Region IV HEW office in Dallas, told the system if an acceptable plan was not presented legal machinery would be set in motion to place Shawnee Public Schools under court orders to implement the requirements of Title VI. Bell said it was necessary

Pairings, Page 4

(Continued From Page One)

that this machinery be set in motion because of the lateness of the hour and that with an acceptable response the documents now being prepared would not be served.

Dr. Westfall said he had read the proposed plan to Bell and the plan had been accepted.

The school superintendent said, he asked Bell if the administration and Board of Education would be held to the statements contained in the response. Dr. Westfall said that Bell carefully failed to respond to the question.

Michael Warwick, of the Winterringer, Winterringer and Warwick law firm, said it was his opinion that the Board would not be held to this plan if it could find a suitable replacement and implement it before the start of school in 1976.

The plan accepted by the board proposes to send all kindergarten through fourth grade students in Jefferson and Washington school attendance zones to Jefferson School while fifth and sixth graders in the area would attend Washington School.

Based on present enrolment figures, 402 kindergarten through fourth grade students would be attending Jefferson School. Of

these 402 students, 52 would be Blacks, 32 Indians, one Spanish-American, one Oriental and 316 Caucasian and others. This would mean a minority percentage of 21.39, well within the 35.72 per cent required under Title IV.

Washington School would have 196 fifth and sixth graders of which 27 would be Blacks, 21 Indians, one Spanish-American and 147 Caucasian and others for a total of 25 per cent minority.

The school system would purchase two new 66-passenger buses to transport these students.

Included in the letter to HEW is a detailed response in regard to the system's affirmative action plan in the employment of minority personnel.

The board and the administration concurred that the Citizens' Advisory Committee should continue to function with their original directive—to work on an overall integration plan to submit to the school board no later than Feb. 1, 1976.

Dr. Westfall said he was asking that the Advisory Committee meet Monday evening in the Board of Education building.

Dr. Westfall said that the letter with the proposal for desegregation should keep the Shawnee system from coming under the court's

jurisdiction.

In other action the board voted:

—To accept the bid of \$4,170 from Keas Superior Bus Co., Oklahoma City, for a 66-passenger bus. The lease rate is per year with a three year contract. Other bids were read from Standard Equipment Sales, \$4,250, and Wayne Bus Sales, \$4,200.

—To accept the bid of \$7,511.50 from Patterson Roofing Co., Shawnee, for T & I roof repair. Other bids were from Oklahoma Roofing and Sheet Metal, \$8,050, and Fries Roofing, Norman, \$8,750.

—To accept the resignation of Mrs. Lucerne Cooley, special education teacher at Acme School.

—To grant maternity leave to Mrs. Judy Collins, special education teacher at Mid High School.

—To employ Miss Shirley Ann Daugherty, fifth grade teacher at Sequoyah School, and Miss Elaine Park, first grade teacher at Wilson School.

—To extend the discipline policy on bus conduct.

The next board meeting will be at 5 p.m. December 16 when an executive session will be called to discuss the evaluation forms prepared by board members on the school superintendent.

Saturday, January 22, 1977

Local School Busing Plan Going Smoothly

By VIRGINIA BRADSHAW
Of The News-Star Staff

How is Shawnee's new school pairing plan working?

"I like it really well. I think Washington is a nice school," answered Tammy Davis, 12, 519 W. Wallace.

She's a sixth grader who had attended Jefferson grade school since kindergarten. Her little brother still goes there.

Tammy said she felt badly about leaving Jefferson at first. But she "didn't know how nice this school was and stuff."

She doesn't get bused. Her parents drive her to and from Washington Elementary School.

Wesley Abney, 9, a Jefferson fourth grader who lives at 601 S. Park, does ride one of the two buses the system bought to meet HEW's integration dictum.

"It's pretty fun. Better than walking in the cold," Wesley says.

"Beautifully," is the word both

principals, Paul Pounds of Jefferson and James Taffee of Washington, used in describing how the plan is working that puts all fifth and sixth graders in the two districts at Washington and all kindergarten through fourth graders at Jefferson.

"I think our kids in both schools will be more prepared for junior high than those from other schools who have not had the experience of racial mixture," Mrs. Marylois King, 512 N. Park, president of the new Wa-Jeff PTA, said.

She's one of the reasons things have gone so smoothly, Taffee said.

"We still don't think it's right, but I don't know of a person who hasn't accepted it," she said.

"I have heard parents say, 'last year I was opposed to it but my kids are getting along so fine now, I'm sorry I griped.'" Pounds said.

He added that he had heard no

negative comments, "only positive ones."

Pounds believes that the quality of education has improved some; teachers are "all interested in the children and concerned," are planning instruction together and are assisted by new aides.

Money spent at the two schools can be concentrated on those particular levels.

"Kids have no problem adjusting," Taffee said at Washington school. "It's the parents who have to adjust."

"Basically, I think the parents knew they had to go with it, and they didn't want it to be a flop. And it hasn't."

The black principal continued that "no one wants their child bused. That's universal." But a number were already being bused to Washington before the pairing plan, he said.

He believes members of
Busing, Page 4

(Continued From Page One)

Shawnee's black community were "happy to see this take place. I never heard anyone resent this."

The comments might have sounded unbelievable to some Shawnee residents 18 months ago ... or even a year ago.

The bombshell that Shawnee had to achieve a better racial balance at elementary level hit in spring, 1975.

The city was one of about 10 state school districts on a list issued by the U.S. Department of Housing, Education and Welfare. Some of the schools were later removed from the list.

The shell exploded when patrons realized HEW meant business. "It was about October, 1975, when we saw that Shawnee was out of proportion," Mrs. King said.

"The only school affected at that time was Washington, with 48.16 per cent minority enrollment," she said.

HEW guidelines say you can't have over 20 per cent of the total system's minority average at any one school, the PTA president explained. The system average was 15.72 per cent, "so that made Washington definitely over by about 32 per cent."

"Shock" was her reaction when she read about it in the News-Star after a school board meeting. The Washington-Jefferson pairing plan was proposed as the solution.

Mrs. King has had children at Jefferson 10 years this year. Her youngest child, Rori, is a second grader and another daughter, Teake, is in fourth.

This is the last year they will ever be in the same school, "if it stays like this. This is sad to me," she said.

Unfairness

"No one that I talked to ever made the statement that they opposed the pairing plan because of black students," Mrs. King said. Pounds echoed the statement.

"The only thing was the unfairness of two attendance zones out of nine being affected by this," Mrs. King said.

"If you live on one side of Broadway, they have to be bused, but if you live on the other side, they don't. It was a traumatic experience. You feel like you're picked on."

"If we had four schools in Shawnee, it might have been different. The majority felt like this," she explained.

A Concerned Citizens meeting was called at Jefferson and a second at Washington. Then superintendent Dr. Leahn Westfall and Floyd Burks, assistant superintendent, attended and were informative, she said.

"We had 250 to 300 here. There were people in the halls and everywhere." A "nice crowd" was at the Washington meeting but it was the second meeting and "not quite so many" attended.

A citizens advisory committee composed of at least three representatives from all Shawnee grade schools began meeting around November, 1975.

"The first meeting we had, everybody who was appointed was there. I don't know how they all felt, most didn't say anything," Mrs. King continued.

The people who "served faithfully to the end of the committee" were from attendance zones affected, Jefferson, Washington, Acme and Horace Mann. The latter two were not over the limit "but they were getting close," she said.

There was also "a lady from Sequoyah and a Wilson mother."

Among the most active workers from the black community were George Word, retired principal of former Dunbar school, the Rev. C. Wilburn and Archile Webber.

The committee came up with three alternatives. One was the one school-one grade idea. "I thought it would entail busing the majority of Shawnee children and I see no point in that."

The second was a two division plan in which a line would be drawn north-south through the city with first-second, third-fourth, and fifth-sixth grades at separate schools.

"Serious drawback was the divisive effect of splitting the town," she said.

Third plan was "almost the same, with two grades per school plus neighborhood kindergartens. That would be the plan that affected the least amount of little children."

Tight Schedule

The HEW office in Dallas first gave a March 15 deadline, later moved up to Jan. 1.

"The school board was working on a tight schedule. To implement

any of these would have taken time which we didn't have."

The pairing plan "was the quickest way. It had already been started, HEW had already accepted this plan.

"I don't think there is any true bitterness, if you think about the dates we had to work with," Mrs. King said.

The pairing plan was accepted. "Timewise and for economy, it was the most acceptable," Pounds said.

Putting it into operation was "a gigantic task, to say the least," the Jefferson principal said. "It took a lot of reorganization. Even those who were staying at their school had much moving to do."

They had about three months before school was out last year and actual moving was done in the first week of June.

Four teachers went from Jefferson to Washington. They are Mike Potter, Linda Berry, Mildred Flowers and Mary Watson.

Moving from Washington to Jefferson where Carolyn Miller, Roberta Raymer, Jo Ella Pinner, Linda Belford, Mary Monroe and Judy Brawner, teacher of the impaired hearing class.

"Big" furniture was moved from Jefferson to Washington and the little chairs and tables were trucked north. The transaction took about two and a half days.

"Little Hectic"

Everything went fine the first day of school. It was a "little hectic" getting the bus schedules worked out but Mrs. Charles Brown, a parent, rode the younger children's bus the first few days to see they got off at the right place.

"One little boy rode the entire route," Pounds said. "When I met the bus, he was still on it. And another little boy couldn't find the way to the south end of our building.

But they weren't upset. "They couldn't have cared less."

The children have gotten along "fine," Pounds said. "You would never know it had ever been different. There have been no problems among the children whatsoever."

Jefferson's enrolment is about 400 and was 380 last year. Washington had 163 in October, compared with 218 a year earlier.

Washington had 78 black and 27 Indian students in October, '75.

This October it had 20 blacks, 11 Indians.

Jefferson had one black, and 26 Indians last fall; 42 blacks and 28 Indians in October, 1976.

Last year Washington's minority percentage was 48.16, this year it is 20.3. Jefferson's percentage was 7.89 last year and today is 19.3 per cent.

Mrs. King heads the new combined PTA, with a membership of from 175-200. It is not a good representation of both schools yet, but Washington had no parent organization, Mrs. King said.

"Anytime you start something new, you have to wait a while" to get full participation, "but the parents we do have are really working."

A bean supper fund raiser was a "fantastic" success, well attended by people from both schools, she said. Funds will be "split down the middle" to benefit both schools.

Washington has a new media center and a certified physical education instructor whose presence releases more time to other teachers.

Jefferson has the county's only impaired hearing class, 10 Follow-Through classes and a school breakfast program.

Is it permanent? "I would recommend it for other schools if the parents would work and be as cooperative as these two groups have been," Taffee said.

APPENDIX C

RAW DATA USED IN ANALYSES

TABLE 26

DATA USED TO COMPUTE GPA MEANS

	Caucasian	Minority
Before	3.29	1.71
	3.17	3.14
Desegregation	3.00	2.25
	3.38	3.86
	2.50	2.00
	3.40	2.88
	3.88	1.75
	1.63	1.20
	2.93	1.75
	3.00	2.86
After	2.25	3.00
	3.67	3.75
Desegregation	2.75	3.00
	3.29	3.00
	3.75	1.86
	3.33	2.50
	3.25	2.37
	2.25	2.14
	2.86	2.33
	3.14	2.00

TABLE 27
DATA USED TO COMPUTE ATTENDANCE MEANS

	Caucasian	Minority
Before	161.0	171.0
	175.0	159.5
Desegregation	172.5	165.5
	169.0	175.0
	168.0	172.5
	167.5	159.0
	172.0	164.0
	169.5	170.0
	149.5	172.0
	173.0	171.5
After	152.5	165.0
	146.4	171.0
Desegregation	169.5	159.5
	171.0	167.0
	175.0	174.0
	157.5	170.0
	168.0	148.5
	162.0	168.0
	160.0	173.0
	154.0	158.0

TABLE 28

DATA USED TO COMPUTE TOTAL MATH SUBTEST MEANS

	Caucasian	Minority
Before	95	89
	104	99
Desegregation	106	94
	110	107
	94	108
	94	87
	115	103
	73	59
	110	68
	106	80
After	86	89
	89	107
Desegregation	92	82
	80	78
	100	78
	102	78
	88	78
	80	75
	90	88
	91	76

TABLE 29

DATA USED TO COMPUTE TOTAL READING SUBTEST MEANS

	Caucasian	Minority
Before	120	71
	92	92
Desegregation	102	77
	103	85
	87	99
	97	77
	115	97
	70	69
	89	56
	100	72
After	91	87
	70	92
Desegregation	94	74
	86	80
	89	48
	97	53
	74	70
	64	70
	78	80
	97	64

TABLE 30
DATA USED TO COMPUTE LANGUAGE SUBTEST MEANS

	Caucasian	Minority
Before	104	71
	97	114
Desegregation	109	76
	114	98
	88	114
	85	76
	150	106
	71	75
	98	88
	111	82
After	85	92
	73	92
Desegregation	84	73
	85	68
	100	65
	111	64
	83	79
	69	73
	87	76
	90	60

TABLE 31
DATA USED TO COMPUTE SCIENCE SUBTEST MEANS

	Caucasian	Minority
Before	103	64
	93	91
Desegregation	95	77
	103	83
	85	92
	98	79
	117	103
	80	62
	92	64
	100	86
After	86	93
	74	88
Desegregation	92	73
	84	76
	89	69
	101	70
	78	74
	74	79
	88	83
	90	69

TABLE 32

DATA USED TO COMPUTE SOCIAL STUDIES SUBTEST MEANS

	Caucasian	Minority
Before	114	79
	89	92
Desegregation	100	81
	107	89
	90	108
	92	83
	114	89
	81	62
	93	80
	100	73
After	84	91
	80	91
Desegregation	101	72
	83	77
	96	65
	103	55
	80	80
	71	77
	94	82
	99	70

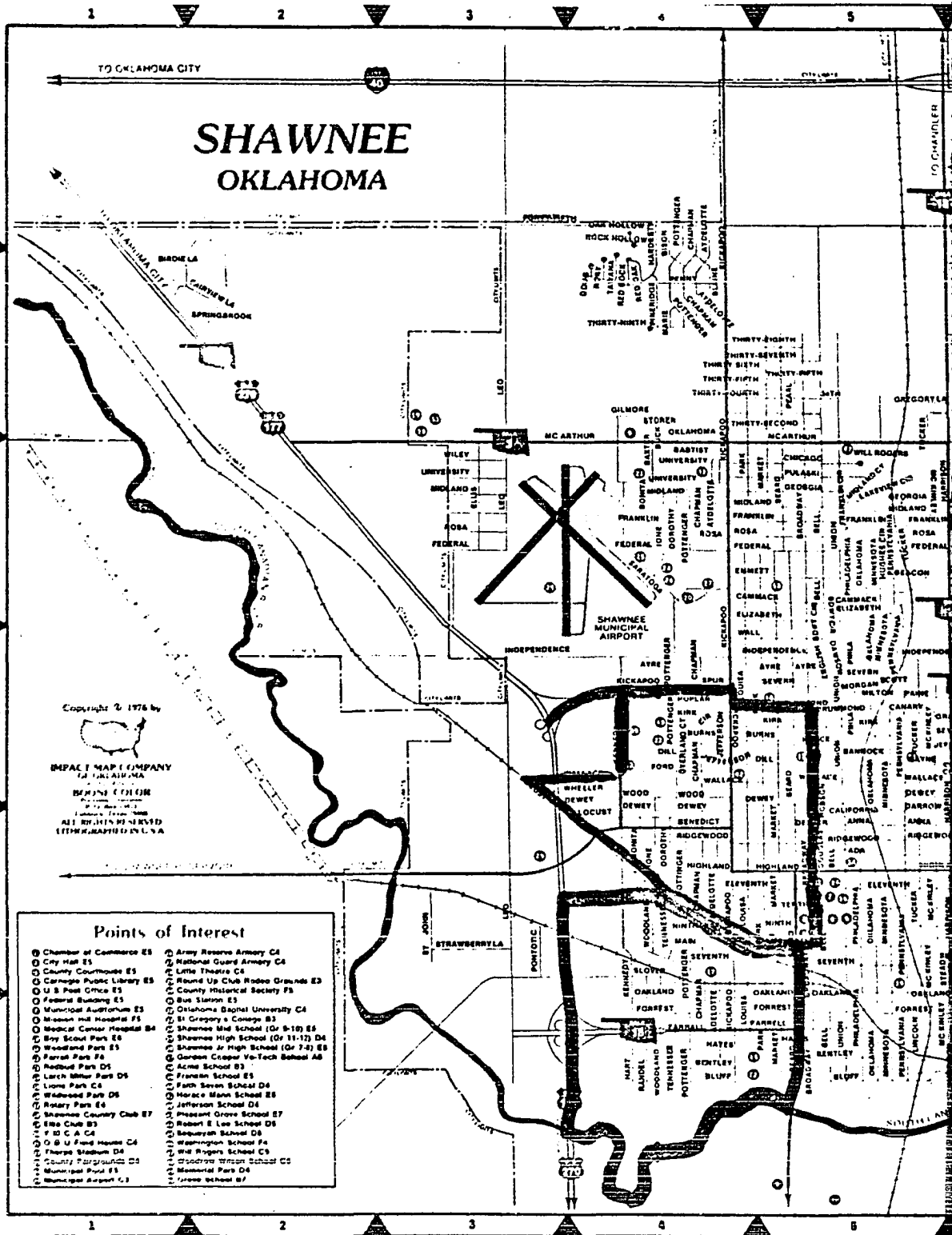
TABLE 33

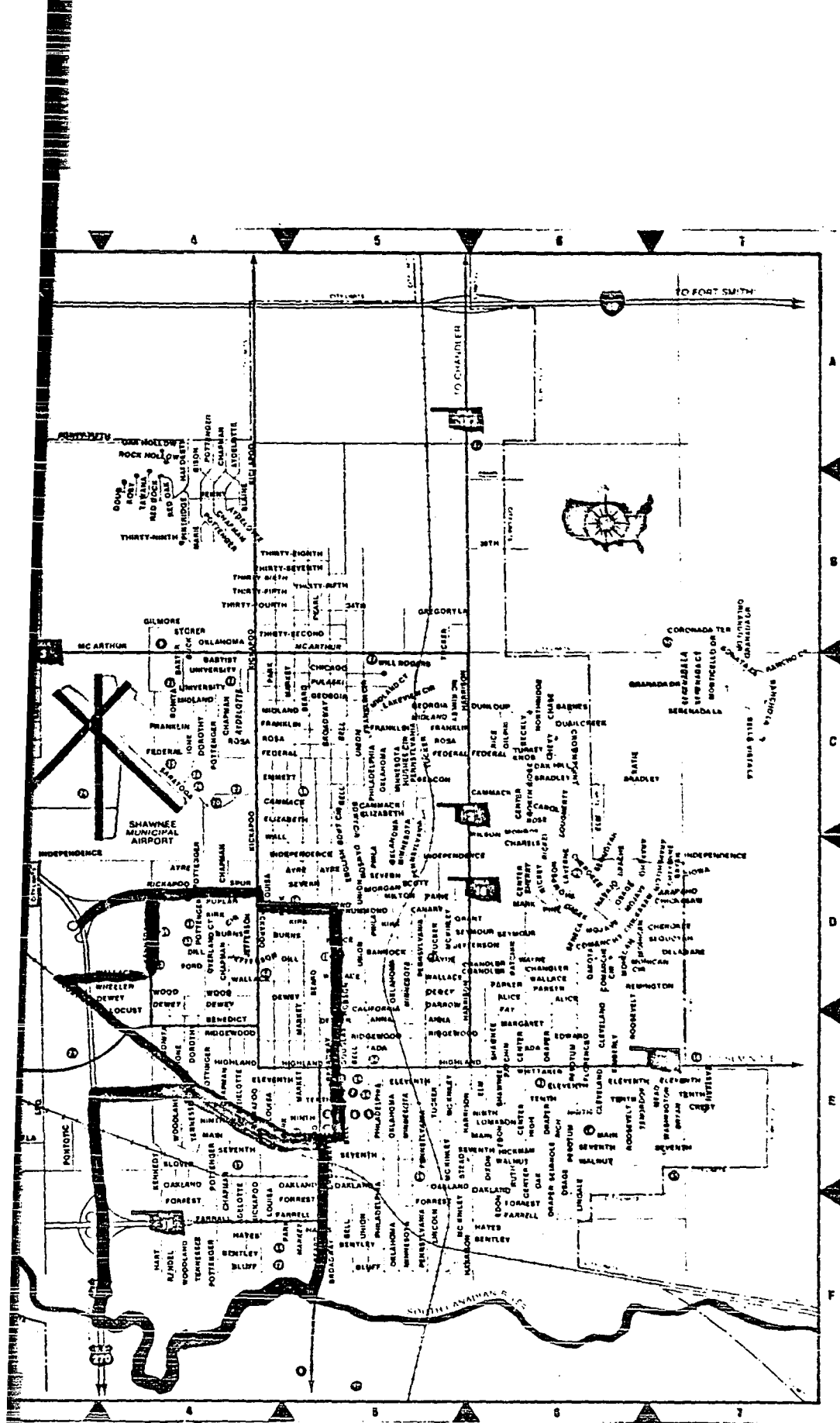
DATA USED FOR TABLES 16-22

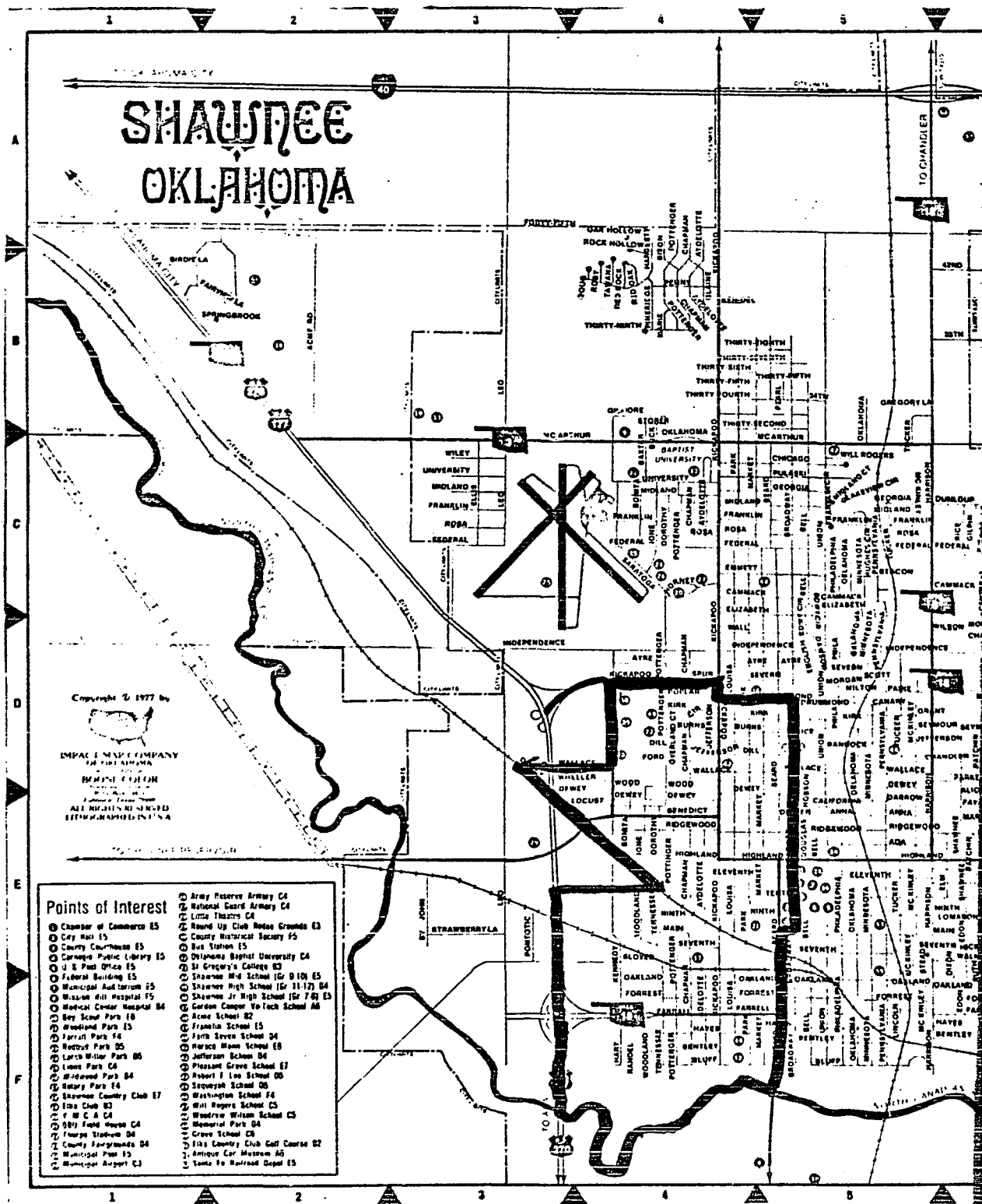
	Race	Social Studies	Total Reading	Total Math	Language	Science	GPA	Atten- dance
Before Desegregation	B	81	77	94	76	77	2.67	165.5
	I	92	92	99	114	91	3.30	159.5
	B	80	56	68	88	64	.67	172.0
	I	79	71	89	71	64	1.50	171.0
	B	73	72	80	82	86	1.67	171.5
	I	89	97	103	106	103	1.67	(moved)
	B	89	85	107	98	83	3.00	175.0
	I	108	99	108	114	92	3.06	165.0
	B	62	69	59	75	62	1.75	170.0
	I	83	77	87	76	79	3.29	168.5
	I	78	88	92	85	87	2.88	164.0
	I	116	127	117	150	113	3.86	172.5
	I	92	93	99	97	94	2.00	159.0
After Desegregation	B	91	87	89	92	93	3.00	165.0
	I	82	80	88	76	83	2.33	173.0
	B	65	48	78	65	69	3.71	171.0
	B	77	70	75	73	79	1.86	174.0
	B	70	64	76	60	69	2.63	174.0
	B	55	53	78	64	70	2.29	166.0
	B	77	80	78	68	76	2.14	163.5
	B	80	70	78	79	74	2.14	168.0
	B	86	80	98	93	82	2.06	158.0
	B	72	60	86	69	69	3.13	173.5
	B	62	65	79	77	70	2.50	156.5
	I	72	74	82	73	73	3.00	159.5
	B	58	59	79	70	57	2.50	170.0
	I	91	92	107	92	88	2.63	150.5
	B	76	73	85	81	76	3.00	167.0
	I	70	72	82	64	69	2.88	169.0
	I	64	81	77	73	73	3.75	171.0
	I	85	89	96	86	84	3.25	148.0
	B	74	71	78	70	76	2.14	157.0
	B	78	64	78	73	75	2.75	172.0
	B	77	60	78	70	72	2.37	148.7

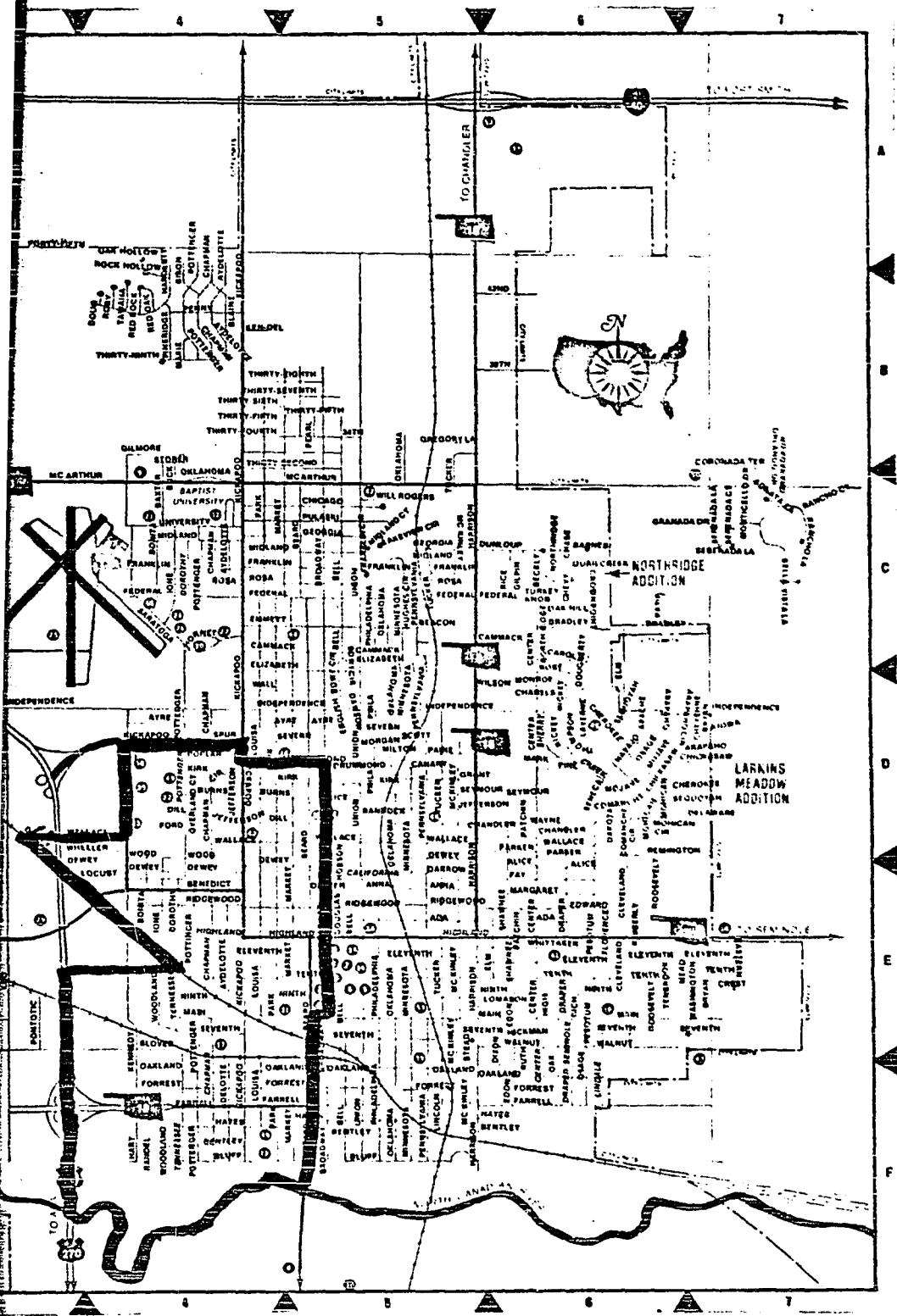
APPENDIX D

MAPS









BIBLIOGRAPHY

Periodicals

- Armor, D. J. "The Evidence on Busing." (Research Report No. 28) Public Interest, 1972, pp. 90-126.
- Crain, R. L. "School Achievement and the Academic Achievement of Negroes." Sociology of Education, Winter, 1971, 44 (1), pp. 1-25.
- Felice, L. G. "Busing in Waco, Texas." Integrated Education, July-August, 1974b, pp. 24-25.
- Janssen, P. A. "Busing." Saturday Review, September 16, 1972, p. 68.
- Jenks, C., and Brown, M. "The Effects of Desegregation on Student Achievement: Some New Evidence From the Equality of Educational Opportunity Survey." Sociology of Education, Winter, 1975, 48, p. 140.
- Johnson, D. F. "Achieving Racial Balance--The White Plains Story: A Comprehensive Report." School Management, January, 1968, 12, (1).
- Justin, M., and Thabit, J. "Black and White Achievement Before and After Integration." Intellect, April, 1974, pp. 458-9.
- Luneman, A. "Desegregation and Achievement: A Cross Sectional and Semi-longitudinal Look at Berkeley, California." Integrated Education, Fall, 1973, pp. 439-46.
- Maynor, W., and Katzenmeyer, W. B. "Academic Performance and School Integration: A Multi-ethnic Analysis," Journal of Negro Education, Winter, 1974, 43 (1), pp. 30-8.
- Orfield, G. "Examining the Desegregation Process," Integrated Education, May, 1974, 13 (3), pp. 127-230.
- Prichard, P. H. "Effects of Desegregation on Student Success in the Chapel Hill City School." Integrated Education, November-December, 1969b, pp. 33-5.

- Robinson, D. W. "An Interview with Christopher Jencks." Phi Delta Kappan, 54 (4), pp. 255-7.
- Rookey, T. J. "Children as Checkers." Integrated Education, September-October, 1975, pp. 39-40.
- Schellenberg, J., and Halteman, J. "Bussing and Academic Achievement: A Two Year Follow-Up." Urban Education, January, 1976, X (4), pp. 357-68.
- "Segregation and Early Education." Integrated Education, May-June, 1971, pp. 49-51.
- U. S. Commission on Civil Rights. "Desegregation in Ten Communities." The Crisis, May, 1974, pp. 165-66 (Author, July, 1973).

Studies

- Banks, R., and DiPasquale, M. E. A Study of the Educational Effectiveness of Integration: A Survey of the Attitudes of Principals, Teachers, Parents, and Pupils Involved in the Program. New York: Buffalo Public Schools, 1970.
- Beers, J. S., and Reardon, J. Achievement and Attitudinal Changes Associated with School District Reorganization, April, 1974.
- Carrigan, P. M., and Aberdeen, D. Some Early Effects of Compulsary Desegregation on Elementary School Children, (Ann Arbor Public Schools, Michigan), Washington, D. C.: American Research Association, March 2, 1970.
- Clark County School District. Desegregation Report. Las Vegas, Nevada: Author, July, 1974.
- Connery, J. J. The Pupil Busing Program in District Four: A Fourth Report. (Austin Area Project), August, 1971.
- Prichard, P. N. The Effects of Desegregation on Student Success in the Chapel Hill City Schools. Chapel Hill: North Carolina University, February, 1969a.
- Purl, M. C., and Dawson, J. The Achievement of Pupils in Desegregated Schools. California: Riverside Unified School District, March, 1971, pp. 147-154.
- Siggers, K., and others. Desegregation in Sacramento, Berkeley, Pasadena and Shaker Heights (Ohio). (Western Regional School Desegregation Projects), Riverside, California: California University, June, 1971.

Singer, H. Effects of Integration on Achievement of Anglos, Blacks, and Mexican-Americans. California: State Office of Compensatory Education, March 3, 1970.

Walberg, H. J. An Evaluation of an Urban-Suburban School Busing Program: Student Achievement and Perception of Class Learning Environments. February, 1971.

Weinberg, M. White Children in the Desegregation Process. (Western Regional School Desegregation Projects), Riverside, California: California University, November, 1971, pp. 40-1.

Dissertations

Kraemer, Ruth A. The Effects of the Cluster Plan on Mathematics and Science Students. Doctoral Dissertation, Published, 1972, ED07631911.

Maynor, W. Academic Performance and School Integration: A Multi-Ethnic Analysis. Unpublished Doctoral Dissertation, Duke University, 1970.

Book

Minium, E. W. Statistical Reasoning in Psychology and Education. New York: John Wiley and Sons, Inc., 1970.

Reports

Felice, L. G. The Effects of School Desegregation on Minority Group Student Achievement and Self Concept: An Evaluation of Court Ordered Busing in Waco, Texas. (Final report, Research Development Foundation, Waco, Texas, National Center for Educational Research and Development--DHEW-OE), Washington, D. C.: Regional Research Program, June, 1974a.

Hope, J. III. Twenty Years After Brown: Equality of Educational Opportunity. A report of the U. S. Commission on Civil Rights, March, 1975.

Oklahoma Employment Security Commission. Research and Planning Division. Oklahoma Population Estimates. Author, July, 1975.

Sacramento City Unified School District. Summary of the Assessments of the District's Integration Programs 1964-1971. (Research Report Series 1971-72, No. 9), Author, September 28, 1971.

U. S. Department of Commerce. 1970 Census of Population Number of Inhabitants, U. S. Summary PC(1)-A1, December, 1971.

U. S. Department of HEW. Equality of Educational Opportunity. Washington, D. C.: U. S. Government Printing Office, 1966.

Pamphlets

Durost, Walter N.; Bixlir, Harold H.; Wrightstone, J. Wayne; Prescott, George A.; and Balow, Irving H. Teacher's Directions for Complete or Partial Batteries or Separate Reading Tests, Metropolitan Achievement Tests, Harcourt, Brace and Jovanovich, 1970.

Durost, Walter N.; Bixlir, Harold H.; Wrightstone, J. Wayne; Prescott, George A.; and Balow, Irving H. Teacher's Handbook. Metropolitan Achievement Tests, Harcourt, Brace and Jovanovich, 1971.

Bulletin

Laurent, J. A. Do Pupil Race and/or Schools Racial Balance Affect Academic Performance? (Bulletin), Eugene, Oregon: Oregon School Study Council, December, 1970.

Speech

Pettigrew, T. The Case for School Integration. (Addressed at Special Institute on Problems of School Desegregation), New York: Teacher's College, Columbia University, July 10-12, 1968.

Document

Plante, Alexander. "Segregation and Early Education." Integrated Education, May-June, 1971, pp. 49-51.