E 3.5

Ø

This dissertation has been microfilmed exactly as received

69-18,453

HOLLAND, Robert Fount, 1932-THE EFFECTS OF TWO STUDY UNITS ON HIGH SCHOOL STUDENTS' ATTITUDES TOWARD NEGROES.

The University of Oklahoma, Ed.D., 1969 Education, administration

University Microfilms, Inc., Ann Arbor, Michigan

THE UNIVERSITY OF OKLAHOMA GRADUATE COLLEGE

THE EFFECTS OF TWO STUDY UNITS ON HIGH SCHOOL STUDENTS' ATTITUDES TOWARD NEGROES

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF EDUCATION

BY
ROBERT FOUNT HOLLAND
Norman, Oklahoma

1969

THE EFFECTS OF TWO STUDY UNITS ON HIGH SCHOOL STUDENTS' ATTITUDES TOWARD NEGROES

APPROVED BY

DISSERTATION COMMITTEE

ACKNOWLEDGEMENTS

The writer wishes to express his appreciation to Dr. Glenn R. Snider, chairman of his doctoral committee, for his persistent and perceptive direction of this study, and for his inspirational assistance and leadership throughout the writer's doctoral program. Gratitude is also expressed to Dr. Robert E. Ohm, Dr. O. D. Johns, and Dr. Robert F. Bibens, members of the writer's doctoral committee.

Sincere thanks are due to Mr. Thomas Lundblad, teacher at Parsons Senior High School, Parsons, Kansas, for his assistance in developing the teaching programs necessary for this study and for his excellent presentation of these programs in the classroom. Appreciation is also expressed to Mrs. Mary Hedrick, secretary at Parsons Senior High School, for her clerical assistance, and to Mrs. Karen Kirk for typing the final draft of this study.

The writer wishes to express his appreciation to his wife, LuCretia, and his children, Fount and Charla Raye, for their love and inspiration, and for the sacrificies which they had to make during the writer's doctoral program.

Special thanks are expressed to Lonnie and Carol Fuson, two friends.

TABLE OF CONTENTS

Pa	age
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vi
Chapter	
I. THE PROBLEM	1
Introduction Justification and Need for the Study Purpose of the Study Statement of the Problem Rationale for Two Experimental Study Units Hypotheses to be Tested Major Assumptions Delimitations of the Study Definition of Terms Population The Community Design and Procedure of the Study Treatment of the Data The Instrument Organization of the Study	
II. REVIEW OF RELATED RESEARCH	22
Design of the Experiment The Pretest-Posttest Instrument Instrument Validity and Reliability Administering the Pretest The Study Units Study Unit A Study Unit B Administering the Posttest Statistical Procedure	47
IV. PRESENTATION AND ANALYSIS OF DATA	78

																															Page
Cha	apter	•																													J
	٧.	SUM	ma	RY	,	CC	ONC	CLL	JS:	[0]	NS	Aì	ND.	RI	C(PΚ	Œ	/D/	\T]	(O)	IS	•	•	•	•	•	•	•	•	•	93
BII	BLIO	RAF	YH	,	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	99
API	PENDI	X A	1	•	•	•	•	•	•	•	•	•	•	•	•	•				•	•	•	•		•	•	•	•	•	•	105
API	PENDI	X E	3	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•		•	•	•	•	•	114
API	PENDI	хc	:	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	123
API	PENDI	ХI)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	130
API	PENDI	ΧE	:	•			•	•	•	•	•	٠	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•		•	132
API	PENDI	X F	•	•		•	•	•	•	•		•	•	•	•	•		•	•	•		•	•	•	•	•	•	•	•	•	134
API	PENDI	ΧG	;		•	•	•		•	•	•	•	•		•				•	•	•	•	•	•	•	•	•	•	•	•	136
API	PENDI	хн	Ī	•		•	•	•	•	•	•	•	•		•	•	•				•	•	•	•		•	•	•	•	•	138
API	PENDI	ХI		•		•	•	•	•	•	•	•	•		•	•	•			•	•				•		•	•	•	•	140
API	PENDI	ХJ	-	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	141
ΔDI	זרווגיזכ	y k																										_			142

•

LIST OF TABLES

		Page
Table		
I.	Size, Sex and Race Composition of the Three Groups	49
II.	Application of Bartlett's Test for Homogeneity of Variances for the Three Groups	50
III.	Homogeneity of Pre-Experiment Attitudes Between Experimental Group A and Control Group	53
IV.	Homogeneity of Pre-Experiment Attitudes Between Experimental Group A and Experimental Group B	53
٧.	Homogeneity of Pre-Experiment Attitudes Between Experimental Group B and Control Group	54
VI.	Chi Square Goodness of Fit Test for Assumption of Normality	80
VII.	Test of Significance Applied to the Difference Between the Raw Score Gains of Group A and Control Group	82
VIII.	Test of Significance Applied to the Difference Between the Raw Score Gains of Group B and Control Group	84
IX.	Test of Significance Applied to the Difference Between the Raw Score Gains of Group A and Group B	85
х.	Test of Significance Applied to the Difference Between the Raw Score Gains of Males in Group A and Group B	86
XI.	Test of Significance Applied to the Difference Between the Raw Score Gains of Females in Group A and Group B	87
XII.	Test of Significance Applied to the Difference Between the Raw Score Gains of the Upper Intelligence Levels of Group A and Group B	88

		Page
Table		
XIII.	Test of Significance Applied to the Difference Between the Raw Score Gains of the Middle Intelligence Levels of Group A and Group B	89
XIV.	Test of Significance Applied to the Difference Between the Raw Score Gains of the Lower Intelligence Levels of Group A and Group B	90

THE EFFECTS OF TWO STUDY UNITS ON HIGH SCHOOL STUDENTS' ATTITUDES TOWARD NEGROES

CHAPTER I

THE PROBLEM

Introduction

The late Martin Luther King's famous "I've Got a Dream" speech was more than an expression of hope for the Negro race - it was a restatement, a summation of the "American Dream" which rests at the foundation of this country, and which has in large part motivated its people to build the strongest and most prosperous nation in the history of mankind.

That this country's great dream has never fully blossomed into reality is brought into focus by the fact that circumstances made it necessary for Rev. King to spell out to this nation of declared humanitarians that a large segment of its population was still being denied the very basic human rights which were assured every citizen by declaration and constitution nearly 200 years ago. This denial is based on the meanest of all reasons - skin color.

Of all the great social and technical upheavals which have rocked this nation during the Fifties and Sixties none is more traumatic, more capable of destruction than the one of human

relations - a dimension which Americans have tried to ignore for too many years. At the core of this problem are the attitudes of prejudice and the practices of discrimination which White America has used to suppress Black America.

Noar put the nation's racial situation in its proper perspective when she declared that "The most serious unsolved human relations problem in the nation is wide-spread racism." Snider placed himself in agreement with this position by writing that "The general problem of improving the understanding and behavior of individuals and groups toward one another is perhaps the most crucial issue we face." President Johnson illuminates the importance of securing human rights for the American Negro with the statement that "Nothing is of greater significance to the welfare and vitality of this nation than the movement to secure equal rights for Negro Americans."

The Negro in the United States has been denied fair and equitable treatment by those very institutions which Americans revere so much, and which were established to protect and promote the worth and dignity of each individual. In far too many cases our institutions of law, justice, government, economics and religion have been used to

¹Gertrude Noar, <u>Prejudice and Discrimination</u> (New York: Anti-Defamation League of B'nai B'rith, 1964), p. 5.

²Glenn R. Snider, "Educational Leadership, An Analysis," <u>The Bulletin of the National Association of Secondary-School Principals</u>, Vol. 38 (April, 1965), p. 94.

³Lyndon B. Johnson, forward to the "The Negro American," Daedalus, Vol. 4 (Fall, 1965), p. 743.

downgrade rather than promote the equal status of the Negro.

But even more ironic than this is the fact that public education, the one institution which can best bring about the unity and brotherhood of man by destroying the erroneous biases which separate Black and White, has been but a mockery to the task by refusing to accept its responsibility of exposing racial prejudice for the fallacy that it is.

Education is the most effective tool at our disposal for bringing about proper human relations and for toppling the walls of prejudice and discrimination which keep the Negro from his rightful place in our society.

Noar emphasized the schools' responsibility for promoting good human relations in the following statement:

The school....is confronted with the necessity of teaching about prejudice and discrimination as facts of life, as conditions which prevent the full development of every person, as problems that must be solved, if democracy is to function here and be accepted around the world. Through learning experiences in the school, the youth of the land must be confronted with both the truths we hold to be self-evident and our failure to act accordingly with respect to minority groups. 1

The following is part of a general statement of problems about human relations adopted by the Human Relations Committee of the Oklahoma Curriculum Improvement Commission and the Southwest Center for Human Relations Studies:

It must be realized that much conflict and bitter controversy in the American society exists because millions of people have never had access to the truth regarding

¹ Noar, op. cit., p. 5.

peoples of different race, nationality, religion, and social, political, and economic status.

The truth about prejudices against the Negro race must be taught in America's public schools because "It is in the elementary and secondary school classrooms of the nation that the biases, prejudices, and intolerance of a future generation may be averted."²

Justification and Need for the Study

"Those who make peaceful revolution impossible will make violent revolution inevitable." This admonition by President John F. Kennedy holds great implications for public schools in America. The violent revolution being carried on by Negroes in this country is in large measure traceable to our classrooms where American educators have failed to let peaceful revolution bring about the destruction of prejudiced attitudes commonly held by Whites toward the Negro.

The very fact that a desegregation issue exists at this late date is an indictment against educators who have failed to provide the leadership which could have brought about the inevitable much earlier. But even more serious is the attitude of many school teachers and administrators that once this "trouble-some" desegregation is completed things will settle back to "normal."

The Teacher and Improved Human Relations Education in the School, prepared by the Human Relations Committee of the Oklahoma Curriculum Improvement Commission and the Southwest Center for Human Relations Studies (Oklahoma City: The Oklahoma State Department of Education, 1966), p. 5.

²Snider, <u>op. cit.</u>, p. 82.

Not until prejudiced attitudes and discrimination are destroyed will the school's responsibilities to Negro citizens be fulfilled. And not until this fulfillment is realized will America move any closer toward its goal of equality for all men. The problem is well phrased by Petergorsky who pointed out that "....the challenge of racism in America can be met only when we are prepared to complete the unfinished business of American democracy."

Desegregation is slowly making headway in this country's schools, but in far too many instances schools have not progressed toward true integration which should and must be the ultimate objective. The terms desegregation and integration are wrongly used synchromously, and this misconception prevents many educators from realistically facing the true problem. Desegregation implies an interracial school while integration is defined as "....the absence of any racial distinctions within each school and system, whether such distinctions flow from the pressures of the administration or teachers or from the private preferences of students." In reference to the same problem, Green stated:

"...incorporating Negro or other minority students into an all-White school for the first time may bring about an interracial school but not necessarily an integrated school. An interracial school is one in which students of varying racial

David W. Petergorsky, "On Combating Racism," <u>Race Prejudice</u> and <u>Discrimination</u>, ed. by Arnold M. Rose (New York: Alfred A. Knopf, <u>Inc.</u>, 1951), p. 537.

²"A Theoretical Continuum for Stages of School Desegregation" (The Consultative Center for School Desegregation, Southwest Center for Human Relations Studies, University of Oklahoma), p. 1. (Mimeographed).

backgrounds are found; an integrated school is one in which students of varying racial backgrounds are found and a mutual interaction between them occurs. Mutual interaction between all segments of the student population is necessary if meaningful social and academic learning is to occur."

Thus, the school's responsibility for helping secure full and equitable citizenship for the American Negro goes well beyond desegregation all the way to integration. There are several avenues open to educators striving to reach this point, but the most important and most fruitful one of all is classroom instruction. Rose and Rose wrote:

The provision of accurate information about minority groups.... tends to break stereotypes and satisfy natural curiosity regarding the causes of differences between minority and dominant groups. Some people's prejudices are based on misinformation, and correct information will tend to counteract them. Correct information about minorities and about discrimination in our society is especially important for children, since it will tend to block the inculcation of prejudiced traditions.²

One of the problems which face administrators and teachers in desegregated schools is the development of instructional methods which are best suited for modifying the negative attitudes of White students toward Negroes. That such attitudes can be changed by instruction is reasonably well verified by research. One example is a study recently completed by Earnest who found that the teaching of

ريت و

¹Robert L. Green, "After School Integration-What? Problems in Social Learning," <u>The Personnel and Guidance Journal</u>, Vol. 44 (March, 1966), p. 704.

²Arnold M. and Caroline B. Rose, eds., <u>Minority Problems</u> (New York: Harper & Row, Publishers, 1965), p. 393.

a special unit on human relations significantly and favorably changed the attitudes of ninth-grade students toward minority groups. 1

Even though this and other similar studies are highly significant in pointing the way for curriculum improvement, educators must continue to search for better and more efficient ways to teach human relations. Schools are under increasing pressure by Negro groups, and others sympathetic to their cause, to teach courses in Negro history and to use materials devoted exclusively to the Negro race. Many schools have responded to this pressure with compliance. Green pointed out a possible danger in this approach:

"...historians make a basic error when they assume that Negroes should receive a special place or annex in our history and literature books. Historians have the obligation to present the Negro as a part of the whole rubric and not as a special group with its own aims, goals, and accomplishments.²

This situation forces educators to face the question: Can we best modify attitudes toward Negroes by isolating the Negro for study, or can we be more effective by attacking the problem from a broader human relations approach of which the Negro is one very important part? In contemplating this question we must consider the concepts of generality and specificity as they relate to prejudice. On this

¹Carol Wayne Earnest, "The Effects of Two Teaching Methods in Modifying Ninth-Grade Pupils' Attitudes Toward Minority Groups" (unpublished doctoral dissertation, College of Education, University of Oklahoma, 1968).

²Green, op. cit., p. 708.

point, Himelohoch wrote:

In digging down to the roots of prejudice, social scientists have long been dissatisfied with the conception of the individual as a bundle of separate likes and dislikes. It is fairly common knowledge that if a person is anti-Jewish, or anti-Negro, he is usually both. Indeed, experience indicates such people hate "other races" in general.

By nature, prejudice is prolific and dynamic and is seldom singular. "Seeds of any prejudgement have a way of scattering throughout the mind and thoughts of a man and setting the pattern for his thinking and behaving in many areas." Stagner stated that well-organized attitudes, such as those about nationalism, religion, economics, and race, involve strong emotions and are not modified by a barrage of propaganda or the mere presentation of information. He argued that the greatest need for schools is the availability of research studies concerned with the modification of attitudes, particularly those attitudes which are ego-involved and highly emotional such as the ones toward race. 3

In schools where the matter of school desegregation has been settled, the greater problem of instruction must be taken up without delay. Hansen offered the following directive to schools which are interracial:

The design for instruction in American education deserves

¹ Jerome Himelhoch, "A Personality Type Associated With Prejudice," Rose and Rose, op. cit., p. 487.

²Richard Y. Reed, "Prejudices: Effects on Children," a reprint from Childhood Education (January, 1960), p. 1.

³Ross Stagner, "Attitudes," <u>Encyclopedia of Education Research</u>, ed. by Walter S. Monroe (New York: The Macmillan Company, 1950), p. 80-82.

close examination. What has been done should not be directly related to desegregation, though...it seems clearer now than it did five years ago that desegregation prepared the ground for a total attack upon the improvement of instruction...the issues are drawn, not on who should be taught where, but on philosophical principles of education, methods, techniques, and choice of content.

The problem for educators is not whether they should attempt to develop attitudes, since this will happen anyway, but to determine the best possible process, to devise the most effective methods for changing negative attitudes, particularly toward Negroes.

Research reveals that most of the work done in the area of attitude modification has been directed toward teaching for change as opposed to not teaching for change. Since we know that attitudes are not innate but learned, and that attitudes can be modified by instruction, it is time for research to assist educators in developing the most effective methods for changing attitudes toward Negro citizens.

Herein lies the need for the present study. It was designed to compare the effectiveness of two such approaches in teaching. The benefit may be to the public schools whose responsibility it is to go beyond desegregation to integration, to better human relations. The benefit will be to students, both Negro and White, and to a

¹Carl F. Hansen, cited by Kenneth Morland, "Token Desegregation and Beyond," Rose and Rose, op. cit., p. 234.

²Earnest, <u>loc. cit.</u>

³Ralph Edwards, "The Development and Modification of the Elusive Attitude," <u>Educational Forum</u>, Vol. 28 (March, 1964), p. 355.

nation which must complete the business of American democracy if it is to realize the full contributive potential of its diversified population.

Purpose of the Study

The purpose of this study was to determine which of two study units designed to favorably change the attitudes of White students toward Negroes was more effective in achieving this objective in a senior high school which has been desegregated for an extended number of years.

Statement of the Problem

The problem was to determine the comparative effectiveness of two study units designed to favorably change the attitudes of White eleventh and twelfth grade students toward Negroes in selected areas of racial conflict and misunderstanding. More specifically, it was intended to discover if the two study units (Study Unit A and Study Unit B) would effect any statistically significant difference in attitudes toward Negroes for the following groups and subgroups:

(1) between the two experimental groups; (2) between corresponding sexes of the two experimental groups; (3) between three corresponding intelligence levels of the two experimental groups; and

(4) within each of the two experimental groups.

Rationale For Two Experimental Study Units

As pointed out in the statement of the problem, two different experimental study units, Study Unit A and Study Unit B, were developed. Study Unit A was a human relations unit entitled

"Minority Groups in America," and was concerned with the study of human relations problems faced by various minority groups in America. Study Unit A was taught to Experimental Group A and Study Unit B was taught to Experimental Group B.

The problem, specifically, was to determine if the attitudes of White students toward Negroes could be more favorably changed by an isolated study of the Negro or by a broader study of all minority groups. The rationale underlying this particular approach was that, according to research, prejudiced attitudes are general in nature rather than specific. In other words, a person who displays prejudiced attitudes toward any minority group will also display prejudiced attitudes toward Negroes, and vice versa.

E. Terry Prothro in 1953. In his study, Prothro attempted to determine the general nature of prejudice by discovering the relationship between attitudes toward Negroes and other minority groups. From his findings, Prothro concluded that individuals who were favorable toward Negroes were generally favorable toward other groups, and that individuals who had unfavorable attitudes toward Jews and other ethnic groups were generally anti-Negro. A more detailed report of Prothro's research may be found on page 42 of this study.

Another piece of research which was supportive of the stated rationale was one conducted by T. W. Adorno and associates at the

¹E. Terry Prothro, "Ethnocentrism and Anti-Negro Attitudes in the Deep South," The Journal of Abnormal and Social Psychology, Vol. 47 (Jan., 1952), pp. 105-108.

University of California. Adorno had his subjects score minority group attitude subscales and Negro attitude subscales and compared the results. On the basis of an obtained correlation of .74, he concluded that persons with negative attitudes toward other minority groups also held negative attitudes toward Negroes.

On the basis of these findings, the researcher hypothesized that prejudiced attitudes toward Negroes could be modified as effectively, if not more so, by a study of all minority groups as they could be by an isolated study of Negroes.

Hypotheses to be Tested

 $^{
m HO}$ 1 There is no statistically significant difference in the attitudes toward Negroes of Experimental Group A after being taught Study Unit A.

 $^{
m HO}2$ There is no statistically significant difference in the attitudes toward Negroes of Experimental Group B after being taught Study Unit B.

HO₃ There is no statistically significant difference in attitudes toward Negroes between the two experimental groups whether taught Study Unit A or Study Unit B.

 ${
m HO}_{4}$ There is no statistically significant difference in attitudes toward Negroes between the two corresponding male groups whether taught Study Unit A or Study Unit B.

HO₅ There is no statistically significant difference in attitudes toward Negroes between the two corresponding female

¹T. W. Ardorno, et. al., The Authoritarian Personality (New York: Harper and Brothers, Publishers, 1949), p. 113.

groups whether taught Study Unit A or Study Unit B.

HO₆ There is no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the upper intelligence level whether taught Study Unit A or Study Unit B.

 $^{
m HO}$ 7 There is no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the middle intelligence level whether taught Study Unit A or Study Unit B.

HO₈ There is no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the lower intelligence level whether taught Study Unit A or Study Unit B.

Major Assumptions

For purposes of this study it was necessary to make the following assumptions:

- 1. A modified version of Carmichael's <u>Scale to Measure</u>

 Attitudes Toward Any Minority Group¹ and Earnest's <u>A Survey of</u>

 Attitudes Toward Minority Groups² was appropriate for a pretest and posttest instrument.
 - 2. The Lorge-Thorndike Intelligence Test (verbal form)

Warren Carmichael, "An Instrument to Measure Attitudes and Opinions Toward Human Relation Issues" (unpublished doctoral dissertation, College of Education, University of Oklahoma, 1968).

²Farnest, loc. cit.

was an appropriate instrument to use for subgrouping the two experimental groups into three corresponding intelligence levels.

Delimitations of the Study

The study was limited to the students who were enrolled in the two Sociology classes and the two Psychology classes at Parsons Senior High School, Unified School District #503, Parsons, Kans., during the first semester of the 1968-69 school year. This included 90 juniors and seniors, 30 in each of the two Sociology classes and 30 who were selected from the two Psychology classes. Both Sociology classes were taught by the same certified social studies teacher. This person did not teach either of the two Psychology classes.

The study was further limited to determining the changes in attitudes of White students toward Negroes in selected areas of conflict and misunderstanding. Negro students who were in the classes were administered both the pretest and the posttest instrument, but their statistics were excluded from the analysis.

Definitions of Terms

- 1. Experimental Group A--Those White students who elected to take Sociology during the first semester of the 1968-69 school year at Parsons Senior High School, USD #503, Parsons, Kans., and who were placed in the second period class. These students were taught Study Unit A.
- 2. Experimental Group B--Those White students who elected to take Sociology during the first semester of the 1968-69 school year

at Parsons Senior High School, USD #503, Parsons, Kans., and who were placed in the fourth period class. These students were taught Study Unit B.

- 3. Control Group--Those White students who elected to take Psychology during the first semester of the 1968-69 school year at Parsons Senior High School, USD #503, Parsons, Kans., and who were selected from either the second or fourth period classes. These students were not taught either of the Study Units or in any other way designed to change their attitudes toward Negroes or minority groups.
- 4. Study Unit A--This study unit was designed and taught to favorably change the attitudes of White students toward Negroes. It consisted of the following topics: (1) The Reasons for and Effects of Prejudice and Discrimination Against Negroes; (2) Prevalent Misconceptions About the Negro Race; (3) The Status of the American Negro in Selected Areas of Our Society; (4) Contributions of the American Negro; (5) Human Rights and the American Negro; and,
- 5. Study Unit B--This study unit was designed and taught to favorably change the attitudes of students toward minority groups. It consisted of the following topics: (1) The Reasons for and Effects of Prejudice and Discrimination Against Minority Groups; (2) Prevalent Misconceptions About Minority Groups; (3) The Status of Minority Groups in Selected Areas of Our Society; (4) Contributions of America's Minority Groups; and, (5) Human Rights and American Minority Groups.

6. Attitudes—(1) The attitudes of a person or group with respect to a social object or phenomenon such as a person, race, institution, or trait; (2) Readiness to respond in a certain way (such as impartially, agressi ely, positively, or negatively) to a given social phenomenon.¹

Population

All White eleventh and twelfth grade students who were enrolled in the two Sociology classes and selected students who were enrolled in the two Psychology classes at Parsons Senior High School, USD #503, Parsons, Kans., comprised the population for this study. All Negro students who were in the classes were administered the pretest and posttest instrument, but their statistics were not considered in the analysis.

Both Sociology and Psychology at Parsons Senior High School were one semester electives and were open to all juniors and seniors. During the first semester of the 1968-69 school year there were two classes of Sociology with 33 students in each. There were 31 students in one of the two Psychology sections and 34 in the other. From these two Psychology classes, 30 students were selected to serve as a control group.

Each of the three groups used in the study contained 30 White students - 15 males and 15 females. There were three Negro students in both of the experimental groups, three in the second period Psychology class and four in the fourth period Psychology

Carter V. Good, ed., <u>Dictionary of Education</u>, (New York: McGraw-Hill Book Company, Inc., 1959), p. 48.

class. Percentile scores from the Lorge-Thorndike Intelligence Test (verbal form) were used to divide each group into three intelligence levels. Each level contained five males and five females. The Lorge-Thorndike is administered to all sophomore students at Parsons Senior High School. New students to the school are given the test shortly after their enrollment.

The Community

Parsons is a community of approximately 15,000 people and is located in the extreme southeast corner of Kansas. It was founded in the late 1800's when the Missouri, Kansas and Texas Railroad established a depot at a crossroads near the present site.

The economic base of the community is composed of small industries, diversified farming, and daries. Major industries located in Parsons are the M.K.T. Railroad, a mobile homes factory, a clothing factory, a saw mill, an extensive state hospital for mentally retarded children, a meat packing company, and an army ammunition plant reactivated in 1967.

With the exception of those individuals who moved in when the ammunition plant was reactivated, the city's population was reasonably stable. About 10 per cent of the population was Negro. The community was primarily Protestant; however, there was a large minority of Catholics. Communities to the east of Parsons have sizable elements of third and fourth generation Italians and Germans. The ancestors of these individuals were attracted to the area primarily by the strip mining industry.

Educational institutions located in Parsons include five public elementary schools, one three-year public junior high school, one three-year public senior high school, two Catholic elementary schools, one Catholic four-year high school and one county junior college. The public secondary schools have been desegregated since 1950 and the public elementary schools since 1958.

Design and Procedure of the Study

An experimental design called the "Before and After Control-Group Design" was used for the proposed study. An instrument to measure attitudes toward Negroes was used for pretesting and post-testing of all subjects before and after the two experimental study units were taught to the two experimental groups of students.

To conduct the study it was necessary to establish three groups of students comparable in size, sex, intelligence and ethnic makeup. One group, the second period Sociology class which met from 9:05 a.m. until 10:00 a.m., was designated Experimental Group A. A second group, the fourth period Sociology class which met from 11:05 a.m. until noon, was designated Experimental Group B. A third group, students selected from the second and fourth period Psychology classes, was designated as the control group. Pre-enrollment for these two courses was taken during April 1968, and the students sectioned into the two classes during the summer of 1968. New students who elected to take these courses were sectioned at the beginning of the 1968 69 school year.

¹Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1965), p. 308.

Students at Parsons Senior High School were administered the Lorge-Thorndike Intelligence Test (verbal form) during the second semester of their sophomore year. Percentile scores from these tests were used to divide the three groups into corresponding levels of intelligence. Using these scores, students in the three groups were paired according to intelligence.

Each of the three groups contained 30 White students - 15 males and 15 females. There were three Negro students in the two experimental groups, three in the second period Psychology class and four in the fourth period Psychology class. Each intelligence level contained five males and five females.

A modified version of Carmichael's <u>Scale to Measure Attitudes</u>

<u>Toward Any Minority Group</u>, and <u>Farnest's A Survey of Attitudes</u>

<u>Toward Minority Groups</u> was administered to all three groups as a pretest instrument. After the two experimental groups were taught the special study units, the instrument was again administered as a posttest.

Treatment of the Data

Data for statistical treatment consisted of individual students' net gain or loss scores determined by subtracting the posttest results from the pretest results. All hypotheses were tested by using the "t" test to determine significance of difference at the .05 level.

¹Carmichael, loc. cit.

²Earnest, loc. cit.

The Instrument

The pretest-posttest instrument was a modification of Carmichael's attitude scale and Earnest's attitude survey instrument. Carmichael's scale is an unstructured Q-sort instrument consisting of 80 items designed to determine attitudes in the areas of race, religion, socio-economics, education, the judiciary and government. Q-methodology is particularly suited to determining an individual's attitude toward some social phenomenon.

Each of the 80 items on Carmichael's scale was validated by a jury of judges who were experts in the field of human relations. The reliability of the scale was established by correlating the sort, re-sort scores of several individuals.

Earnest made use of Carmichael's scale, but changed the administrative and scoring procedures from that of the Q-sort to one which could be more adequately used with large groups. Earnest's instrument is designed so that each participant responds to all items with either "yes," which indicates agreement with the statement, or "no," which indicates disagreement with the statement.

The Earnest instrument was subjected to three trial administrations before it was considered useable. The first trial was to a group of 100 teachers and college students preparing to become teachers. The second and third trials were to two separate groups of 40 ninth-grade students.

Earnest¹ supported his contention that Q-methodology was inappropriate for use with large groups with Kerlinger's observation that:

One can rarely work with sufficiently large samples in Q. It is not a method well-suited to cross-sectional or large sample purposes. One does not draw a random sample of persons for study with Q. While Stephenson argues the point vigorously, there is no escaping the inability of the investigator using Q to generalize the populations of individuals. Q therefore always requires cross-sectional supplementation.

Since the samples for the present study was considered large, the instrument used was designed for administrative ease and efficiency.

Organization of the Study

The present study consists of five chapters. In addition to the statement of the problem, Chapter I includes major divisions describing the study, its need and statistical treatment.

A review of research related to the study is presented in Chapter II. Chapter III describes the design of the study and the procedure involved in its completion.

Chapter IV is devoted to a presentation and analysis of the data. Analysis of the data will include the results of the statistical treatment involved in the study, and acceptance or rejection of the hypotheses. Chapter V provides a summary of the study, conclusions based on the findings, and recommendations.

grand the contract the

¹Earnest, op. cit., p. 18, citing Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1965), p. 594.

CHAPTER II

REVIEW OF RELATED RESEARCH

Studies concerned with the phenomenon of human attitudes are numerous and varied in concentration and approach. They range from relatively simple studies of small populations to highly complex and extensive analyses of data collected from hundreds of subjects.

Those experiments which deal directly with the modification of attitudes are readily available and date back to the late 1920's, evidence that educators and social scientists have been concerned for many years with the feasibility of changing the way people feel toward certain social objects or conditions. In most of these experiments the variable has been some type of educational experience, i.e., personal contacts, social science courses, minority group courses, selected materials, etc.

Two common characteristics of most studies are that they have dealt primarily with college students and they have been devoted to experimental designs which measure attitude change following a stimulus as compared with attitude change with no stimulus introduced. Studies with populations consisting of high school students are not plentiful, and those comparing the effectiveness

of two or more methods designed to provoke favorable attitude change are even more rare. In most instances, studies devoted to racial attitudes are multi-racial in design. Very few are concerned only with White attitudes toward the Negro race, and the results of these few are inconclusive or conflicting.

The review of related research as presented in this study was arranged in chronological order except where it was deemed necessary to break this pattern to group similar studies for purposes of comparison, and to present periodic summaries of relevant studies.

One of the first significant studies on racial prejudice was conducted by Young¹ in 1927. Young's experiment was designed to determine the influence that a college course on American race problems might have on the prejudices of college students toward minority groups. He was specifically concerned with their prejudices about the innate mental ability of minority groups.

The population for this study consisted of 450 students who were divided into two groups. Group I consisted of students who took the course on race problems the first semester and Group II was comprised of students who took the course the second semester.

Young used a pretest-posttest experimental design with a test instrument that required the students to rank twenty nationality

¹Donald Young, "Some Effects of A Course in American Race Problems on the Race Prejudice of 450 Undergraduates at the University of Pennsylvania," The Journal of Abnormal and Social Psychology, Vol. 22 (1927-28), pp. 235-242.

groups according to their inborn mental ability. At the conclusion of the experiment he found that only two per cent of the first group believed that all races and nationalities were equal in native ability before and after the course. For the second group the number shifted from eleven per cent before to nineteen per cent after.

The investigator explained that the higher percentages and the evidence of attitude shift found in the second group was in part due to the fact that the second group had eight Negro students present while the first had only one, and that the Jewish element was higher in Group II. He concluded that the number of students who were unable to distinguish qualitatively between the abilities of racial groups was negligible before and after the course.

Schlorff¹ designed a study in 1930 to measure the attitude shift of high school students toward Negroes which might occur as a result of modified curriculum constructed to improve attitudes toward this racial group. He divided 425 students into two groups comparable in age, national background, mental ability, and emotional stability. One group served as a control group and the other as an experimental group.

The experimental class was exposed to the modified curriculum which consisted of 15 lessons of 45 minutes each taught

¹P. W. Schlorff, "An Experiment in the Measurement and Modification of Racial Attitudes in School Children," (unpublished doctoral dissertation, New York University, 1930), cited by F. Tredwell Smith, An Experiment in Modifying Attitudes Toward the Negro (New York: Bureau of Publications, Teachers College, Columbia University, 1943), pp. 14-16.

at weekly intervals. The pretest-posttest for both groups required the subjects to rate 20 nationality groups.

At the end of the study, the experimental group rated the Negro 1.23 units higher on the scale while the control group rated the Negro .08 units higher. The deviation from the mean for this relationship was 1.09, which Schlorff reported was statistically significant and which he accredited to the modified curriculum.

In 1932, Wanger¹ constructed a unit on the Negro to determine the possible influence it might have on the attitudes of students in a South Philadelphia high school for girls. The unit was supplemented with Negro speakers who attended teas held by the girls. While Wanger did not design his study to include statistical measurement, he found evidence of change in attitudes toward Negroes in written projects required of the students before and after the unit was taught.

The social stimulus used by Smith² to modify attitudes of college students toward Negroes consisted of two weekends spent in Harlem where the 46 subjects attended parties and teas, heard speeches by Negro leaders, and visited homes. A control group of equal size did not participate in the visits. At the end of the experiment, Smith found that the attitudes of the participating

R. Wanger, "High School Study of the Negro and His Problems," <u>High School Teacher</u>, Vol. 8 (1932), pp. 104-106.

²Smith, op. cit., 126 p.

group shifted "radically" in the direction of favorableness toward Negroes, a gain which he found still reliable 11 months later.

More specifically, Smith found that on the posttest the mean scores of the control group remained practically constant while statistically significant increases in the mean scores of the experimental group appeared on all parts of the test battery except one. In the total score, this increase over the control group, divided by its standard error, amounted to 7.36, a gain which Smith concluded was highly significant. Eleven months after the experiment, the difference between the original and the second posttest mean for the total, when divided by its standard error, amounted to 4.74, and was statistically significant on three of the five subtests. With respect to sex, the difference in favor of the men divided by its standard error was 2.66, which Smith reported to approach statistical reliability.

Probably the most significant contributions made in the field of research about attitudes and attitude modification came from H. H. Remmers and his students at Purdue University. Most of the studies were made from 1935 to 1940 and were devoted to attitudes toward various social objects and conditions, including race.

In 1936, Bateman and Remmers¹ conducted four experiments designed to determine whether attitudes of high school pupils could be shifted in various directions and to measure the amount

Richard M. Bateman and H. H. Remmers, "The Relationship of Pupil Attitudes Toward Social Topics Before and After Studying the Subjects," <u>Further Studies in Attitudes, Series II</u> (Lafayette, Ind.: Division of Educational Reference, Purdue University, 1936), pp. 27-42.

of shift, if any occurred. The study was made in four social studies classes at Peru, Indiana, High School. The population consisted of three classes of students with average intelligence and one class of students with higher than average intelligence. The investigation was concerned with attitudes toward divorce, social insurance, capital punishment, and labor unions. In all tests, except the one dealing with divorce, the students were taught study units using materials favorable to the social object. The material on divorce was pro and con and not designed to change attitudes. Scales by Thomas, Bues and Kelley were used as pretest and posttest instruments.

At the conclusion of the experiment the researchers found the following correlations of initial and final scores: Labor Unions (r,.50), Capital Punishment (r,.59), Social Insurance (r,.89), and Divorce (r,.84).

After considering the results of the experiment, the authors concluded that there was a statistically significant difference in the attitude shifts toward favorableness of the students in three of the four experiments—the tests on social insurance, capital punishment, and labor unions. In these experiments material designed to induce a favorable shift in attitude was used. There was no significant difference in the students' attitudes toward divorce because, according to Bateman and Remmers, the material used for this particular experiment was both favorable and unfavorable and not designed to cause a shift in attitudes. Another result of the experiments showed that there were no relationships between the I.Q.'s of the students and their shift in attitude toward the various social topics studied.

In another experiment directed by Remmers, Peregrine¹ designed a study to determine if the attitudes of rural and urban high school students toward Negroes could be favorably changed by requiring them to read three selections which were protagonistic toward the Negro race.

The population for this study consisted of 300 high school students (grades 9-12) from four different Indiana communities.

Grice's Scale for Measuring Attitudes Toward Races and Nationalities was used as a pretest-posttest instrument. Procedure for the experiment consisted of measuring the attitudes of the students before the study started, requiring the students to read one of the selections, and then retesting to determine attitude shift. This procedure was followed until all the articles had been read. In each of the four schools the social stimulus was presented in a different order.

The results of the experiment indicated that the attitudes of high school students can be changed by the use of a relatively small amount of social stimulus material. This conclusion was drawn since in each school there was a statistically significant difference between the initial and final mean scores of the attitude scales. Also, the researcher found that as the mean attitude score of a group becomes higher the effect of a given stimulus becomes less potent.

Donald Peregrine, "The Effect of Printed Social Stimulus Material Upon the Attitudes of High School Pupils Toward the Negro," <u>Further Studies in Attitudes, Series II</u> (Lafayette, Ind.: Division of Educational Reference, Purdue University, 1936), pp. 55-69.

Fifty-nine days after administering the final posttest, the scale was presented again to determine retention of attitude change. This test revealed that only 36.8 per cent of the attitude gain produced was lost. Thus, Peregrine concluded that a considerable amount of the change in attitudes produced by social stimulus material persists over a period of time.

In a study similar to the one conducted by Peregrine,
Remmers and Morgan¹ used 130 college sophomores to determine the
effect on measured attitudes of reading a short story which in
the authors' judgement might be expected to change attitudes
toward Jews, and possibly toward German Nazis. The story dealt
in an emotionally effective way with the impact of the official
Nazi attitude toward the Jews.

The variable which made this study different from

Peregrine's, other than the age and academic preparation difference between high school students and college sophomores,

was that the story was read under three different conditions.

One group of 27 students read the story in class and was retested

for attitude change without class discussion. Another group of

33 students read the story outside the class as an evening assignment and was measured for attitudinal change without class discussion. In two classes, 87 students read the story overnight and

participated in a lengthy class discussion before being retested.

¹H. H. Remmers and C. L. Morgan, "Changing Attitudes Toward A Racial Group," <u>Further Studies in Attitudes</u>, <u>Series</u> <u>II</u> (Lafayette, Ind.: Division of Educational Reference, Purdue <u>University</u>, 1936), pp. 109-114.

In the first instance, the attitudes of the students toward Nazis were more favorable and toward Jews less favorable. However, the difference was not beyond the experimental variable.

The results of the experiment with the 33 students who read the story outside of class but had no discussion showed that their attitudes toward Germans improved significantly and that there was no significant increase or decrease of the students' attitudes toward Jews. The authors contended that this was a result of wrong conclusions drawn by the students about the main character's nationality, assuming that he was German instead of Jewish.

Students in the third category, the ones who were permitted to discuss the story before the posttest was administered, showed a large and statistically reliable average increase in favor of the Jews. The average gain for this group was .88 as compared with a negative gain for the first group and an unreliable average of .67 for the second group.

Remmers and Morgan concluded that the reading of a story on prejudice does not have the same effect as reading the story and then subjecting it to critical group discussion.

Remmers¹ was concerned in a 1938 study with the stability of attitude changes. Using the results from earlier studies by Bateman, Peregrine and himself, Remmers designed another series of experiments to determine the stability of the attitudes changed by

¹H. H. Remmers, "Propaganda in the Schools - Do the Effects Last?," The Public Opinion Quarterly, Vol. 2 (April, 1938), pp. 197-210.

educative means. His subjects consisted of 300 high school students in two high schools, who were measured with respect to their attitudes toward capital punishment, labor unions, social security and Negroes. Social stimulus material used in the earlier studies was presented to the students. Two days after the pretest they were tested again to determine the amount of shift in attitudes. Two months later the attitudes were again measured, and six months after the initial measurement a third measurement was made.

The results of the experiment were as follows: (1) A change in attitude in accordance with the earlier experiments which had used the same materials; (2) A regression toward the original "pre-indoctrination" status of the attitudes sometime during the first two months; and (3) With the exception of attitudes toward labor unions, the attitudes persisted for a period of at least six months with very little change after a slight initial regression.

Using the results of this experiment and the earlier ones on the effectiveness of printed material in changing attitudes, Remmers made the following generalizations: (1) Attitudes can be measured; (2) Measurable and significant changes in socially important attitudes can be produced by as little as 15 minutes of instructional activity; and, (3) Once changed, attitudes tend to persist as changed. Remmers added that present evidence indicates that changed attitudes are at least no more quickly forgotten than is the conventional subject matter learned in the classroom.

Billings, 1 from 1939 to 1942, exposed an experimental group of students to seminars on Negro problems and to field trips in Negro areas. The students were divided into an experimental group and a control group with 46 subjects in each. All participants were females.

Using attitude scales at the end of the study, Billings found that more liberal attitudes toward Negroes existed in the experimental group than the control group. Three years later, using the same attitude scale, she discovered that the liberal attitudes of the experimental group had decreased, but were still more favorable than were the attitudes of the control group.

In 1943, Smith² conducted two studies on the effectiveness of certain college courses in changing attitudes of college students toward Negroes. The first involved 64 college students who were enrolled in a course on minority group problems. The attitude change for the subjects was statistically reliable as indicated by a critical ratio of 6.28. The critical ratio for each sex was also large enough for statistical reliability (4.33 for men and 4.85 for women). He therefore concluded that college student attitudes toward Negroes become more favorable while taking a course which includes a discussion of race differences, the effects of race



¹Elizabeth L. Billings, "Influences of A Social Studies Experiment on Student Attitudes," <u>School and Society</u>, Vol. 46 (1942), pp. 557-60.

²Mapheus Smith, "A Second Report on Changes in Attitudes Toward the Negro," <u>School and Society</u>, Vol. 47 (April 3, 1943), pp. 388-392.

mixture, race prejudice, and some lectures on the life and problems of the American Negro.

Smith¹ used 196 college students as subjects for a second study which was designed to determine the difference in change of attitude toward Negroes as a result of a course in Sociology which included a brief discussion of Negro racial and intellectual characteristics and social problems. Three to six per cent of the lecture time was devoted to comments on the Negro. He found no statistically significant difference in change of attitudes toward the Negro for either sex. After calculating the average scores for the pretest (6.7) and the posttest (6.7), Smith found an average change in attitude of 0.0. He concluded that while Sociology courses will change the attitudes of college students toward some social objects, they will not change attitudes toward Negroes which, he contends, are more firmly fixed and more difficult to change.

With the results of both experiments as a basis, Smith contends that the total evidence presented will not support a conclusion that college student attitudes toward the Negro are not subject to change as a result of detailed study of Negro problems. He points to his study of 64 subjects taking a course in minority group problems to support his thesis that attitudes toward Negroes can be changed by such courses.

Writing about the various types of attitude modification

¹ Ibid.

studies which had been completed by 1945, Rose and Rose¹ pointed out that a large number of such experiments had been conducted and that the results were contradictory. In general, the studies were of the following types: (1) Experimental studies where a high school or college course provided general information that should have dispelled racial stereotypes and broken prejudices; (2) Experimental studies where single, specific pieces of literature, radio programs, movies, or lectures provided a comparable stimulus; (3) Experimental studies where personal contact between the prejudiced persons and some members of the minority group was the stimulus; (4) Correlational studies where a test of knowledge or measure of acquaintance was correlated with attitudes of prejudice; and, (5) Correlation studies where general education was correlated with attitudes of prejudice.²

In a later analysis of these kinds of studies, Rose³ was concerned with the number of studies conducted prior to 1945 and which showed reduction of prejudice or lack of reduction as a result of specified influence. He summarized these studies as follows: (1) Thirteen studies utilized school or college courses. Eight studies indicated change while four indicated no change and one study was indefinite; (2) Fourteen studies included specific

Arnold Rose and Caroline Rose, America Divided:
Minority Group Relations in the United States (New York: Alfred A. Knopf, 1948), p. 282.

²Ibid.

³Arnold M. Rose, <u>Studies in Reduction of Prejudice</u> (Chicago: American Council on Race Relations, 1948), p. 18.

propaganda in attempts to reduce prejudice. Nine indicated change, four no change, and one was indefinite; (3) Personal contacts were used in nine studies. Three reported change, three no change, and three indefinite; (4) Out of twelve studies which included knowledge or acquaintance to reduce prejudice, nine resulted in change, two in no change and one was indefinite; and, (5) Eighteen studies utilizing time spent in general education to reduce prejudice resulted in eight showing change, six no change and one was indefinite.

It is pertinent to note that in 1939, Smith¹ reported that at that time only four studies of attitude modification using high school subjects had been reported. The evidence they reported, according to Smith, was somewhat contradictory and inconclusive. However, in three out of five comparisons (one study used two different attitude scales for one group of subjects) the changes were statistically reliable.

Williams, 2 in 1947, surveyed more than fifty studies dealing with reduction of negative attitudes. Thirteen of the studies dealt with reduction of prejudices as a result of courses on intergroup relations. Of this number, seven used high school students as populations. Only four of the thirteen reported reduction of prejudice while the remaining three reported no change.

As a result of his findings, Williams concluded with the following statement:

¹Smith, op. cit., pp. 388-389.

²Robin M. Williams, Jr., <u>The Reduction of Intergroup Tensions:</u>
A Survey of Research on Problems of Ethnic, Racial, and Religious
Group Relations (New York: Social Science Research Council, 1947),
pp. 28-30.

From these findings we surely know that some kinds of communication and contact are accompanied by changes in opinion which indicate lessened prejudice. This result should not be discounted, either as an 'elaboration of the obvious' or as unimportant; for it is important to know that such changes in opinion can be induced and, in the absence of such studies as these, it is by no means self-evident that attempts to change opinions have the intended outcomes. Nevertheless, existing research knowledge is unsatisfactory because it is fragmentary, and consequently cannot supply the dependable aids to action which are realizable.

One of the most extensive reported experiments in the reduction of negative attitudes is a four-year project directed by Cook.² In his effort to evaluate the effectiveness of various methods in changing the human relations attitudes of college students, Cook and his associates collected data on 379 projects. Of this number, 94 groups were unchanged, 142 measured some change and 143 showed major change.

The results of specific methods related to the present study are as follows: (1) Eighty-three projects used a course content method. Twenty-two showed no change, 37 some change, and 24 major change; and, (2) Specific teaching methods were used in 69 projects with nine measuring no change, 43 some change, and 16 major change.³

Cook⁴ pointed out that modern educational methods in intergroup relations are becoming more resourceful and imaginative. He

¹Ibid., p. 32.

²L. A. Cook, <u>Intergroup Relations in Teacher Education</u> (Washington: American Council on Education, 1951), 262 p.

³Ibid., p. 84.

⁴L. A. Cook, ed., <u>College Programs in Intergroup Relations</u> (Washington: American Council on Education, 1950), 265 p.

identified six widely different types of teaching devices for changing attitudes toward minority groups. The three approaches which have greatest implications for public secondary schools were (1) the informational approach (imparting knowledge by lectures and textbook teaching), (2) the vicarious experience approach which employs the use of movies, drama, fiction, and other devices that invite the student to identify with members of an "out-group," and, (3) the small group process which applies many principles of group dynamics, including discussion, sociodrama, and group retraining.

Experimenting with the first two of these approaches, Cook found that the attitude of eighth grade students toward minority groups was more significantly modified when the vicarious experience approach was used. 1

Allport² reported on thirty-seven evaluative studies using the six approaches suggested by Cook. Of the total, twenty-seven reported positive results and ten were equivocal. Scarcely any were negative. Only nine of the twenty-seven having positive results could be considered statistically significant. About one-fourth of the total number used control groups.

Allport concluded that while desirable effects appeared in approximately two-thirds of the experiments, and ill effects very rarely, we still do not know for sure what methods are most successful. The trend of evidence, he contended, favored the indirect approaches. By

¹Ibid., p. 34.

²Gordon W. Allport, <u>The Resolution of Intergroup Tensions</u> (New York: The National Conference of Christians and Jews, 1951), 49 pp.

indirect he is referring to programs that do not specialize in the study of minority groups as such, nor focus upon the phenomenon of prejudice as such. He argued that information seldom sticks unless mixed with "attitudinal glue."

Kagan² experimented with the effectiveness of three teaching methods which he called the direct, indirect, and focused interview methods. His 1952 study was concerned with the amount of change in attitudes toward Jews which these methods might induce in Christian students. The subjects for the experiment were high school students with an interest in religion.

On the first group he used the indirect method, teaching Old
Testament literature avoiding any mention of Christian-Jewish friction
or of present-day problems. With this method he merely stressed the
positive contribution of Jews to Biblical history. A second group, taught
by the direct method, was taught the same subject with with frequent reference to the problem of prejudice, allowing catharsis and a recounting
of personal experiences in the class. A third group was taught by the
indirect method but the instruction was supplemented by personal references covering the student's experiences and allowing catharsis. This
method he called the focused interview method. He reported that the
indirect method had a greater effect in changing Christian attitudes toward Jews.

^{1&}lt;u>Ibid.</u>, p. 14.

²H. E. Kagan, Changing the Attitudes of Christians Toward Jews (New York: Columbia University Press, 1952), 155 p.

Hayes and Conklin¹ conducted two experiments using tenthgrade students for one and eighth-grade students for the other.

The basic purposes of the studies were to determine (1) the quality
and extent of some desirable changes in intergroup attitudes that
could be brought about in students through directed teaching, (2)
the relative effectiveness of different types of teaching, and
(3) the relationship between changes for age groups, sex groups,
intellectual levels, religious affiliations and cultural backgrounds.
Attempts were made to change attitudes toward problems of Jews, Negroes, immigrants, and the slum problem. The three instructional
approaches used were the direct experience, the intellectual approach
and the vicarious experience.

The findings of the experiment were: (1) The experimental groups as a whole made more progress in the development of favorable attitudes on the problems tested than the control groups; (2) The one method that appeared to be most effective in changing attitudes in a favorable direction was that of the vicarious experiences provided through reading short stories and novels associated with prejudices; (3) Girls' attitudes toward Negro problems improved more than the boys' attitudes; (4) New-stock Americans made the greatest gains toward favorable attitudes; and, (5) There was no apparent differences in gains made by students of high intelligence as compared with those of average intelligence.

¹Margaret L. Hayes and May E. Conklin, "Intergroup Attitudes and Experimental Change," <u>Journal of Experimental Education</u>, Vol. 22 (1953), pp. 19-36.

The objective of an investigation by Williams¹ was to assess the relative influence of two different teaching methods on pupils' attitudes toward West African Negroes. Population for the study consisted of eighty-eight 13 and 14 year old students in England. The experimental group consisted of 47 students while the control group had 41.

The variable for the study was a modified geography - curriculum consisting of twenty 40-minute lessons emphasizing, not so much the physical and regional geography of West Africa as was done with the control group, but the actual details of everyday life, the nature of current problems facing the people, and the help which was being given West Africans by such international bodies as special agencies of the United Nations.

The pretest-posttest instrument was one revised by Williams. In responding to the questions the subjects could select answers along a five-point continuum from "strongly agree" to "strongly disagree." For statistical treatment, the author assigned the most favorable answer five points, decreasing the number of points by one for each successively less favorable answer. The gains for each group were compared.

At the end of the experiment, Williams was able to report the following findings: (1) The mean score of the experimental group increased much more than that of the control group, i.e.,

¹H. Murray Williams, "Changes In Pupils' Attitudes Towards West African Negroes Following the Use of Two Different Teaching Methods," <u>British Journal of Educational Psy-</u> chology, Vol. 31 (Nov., 1961), pp. 292-295.

7.6 points as compared to .2 points; (2) More pupils in the experimental group changed their attitudes in a favorable direction than did so in the control group, i.e., 72.3 per cent and 51.2 per cent, respectively; and, (3) The lower limit of the actual score range was raised 24 points in the case of the experimental group while the lower level of the control group was depressed by four points.

In a study by Protho, 1 the researcher was attempting to determine the general nature of prejudice by discovering the relationship between attitudes toward the Negro and other minority groups, primarily Jews. His subjects consisted of 383 Louisiana adults who were members of various civic and fraternal organizations. The instrument used consisted of a personal data sheet and Forms A and B of the Grice-Remmers generalized attitude scale with Jews and Negroes specified as the groups to be rated, and the Sartain-Bell revision of the Bogardus scale used to determine attitudes toward fifteen ethnic groups.

Prothro found that those persons who were favorable toward the Negro were generally favorable toward other groups, and those persons who had unfavorable attitudes toward Jews and other ethnic groups were generally anti-Negro. The correlation between attitudes toward the Negro and attitudes toward the Jew was .49, while the correlation between attitudes toward the Negro and number of nationalities rejected on a marriage question was .38. The correlation between attitudes toward the Negro and the number of nationalities

¹Prothro, loc. cit.

rejected on the "eliminate from neighborhood" question was .25.

These coefficients are considerably lower than the correlation of .74 which Adorno¹ and his associates found between their minorities subscale and their Negro subscale in a study done at the University of California.

One of the aspects of Rose's² rather extensive study which started in 1965 and ended in 1967 was to determine the relationship of knowledge about a minority group and the tolerance held toward this particular group. Subjects for the experiments were students who attended colleges where courses on race relations, minority group problems, etc., were offered. Accepting the assumption that people who are more knowledgeable about those who are "different" are also more understanding, Rose analyzed his data to confirm or reject this belief.

Using a scale for the degree of willingness to engage in various sorts of activities with Negroes, Rose found that, in relative terms, more than twice as many students who were placed in the highest category on the scale also scored high on the level of information test as compared with those who showed the least willingness to interact with members of a minority group.

In a similar study done twenty years before the Rose

Ardorno, loc. cit.

²Peter I. Rose, <u>The Subject Is Race</u> (New York: Oxford University Press, 1968), pp. 153-164.

experiment, Nettler¹ collected data which was less conclusive. His study was designed to determine the relationship between attitudes toward the Japanese and the knowledge about the same group. Like Rose, he used college students from various parts of the United States.

The correlations in Nettler's study ranged from insignificance to statistically significant departures. However, with the exception of a correlation of .62 scored by a group of Jewish participants, none of the coefficients was of sufficient magnitude to allow much prediction of attitude from information. Nettler concludes with, "The fact that all correlation are of low or moderate order precludes any contention that information causes attitude, but the consistency and significance of these coefficients allows one to say that knowledge is one of the many attitude determinants."²

Earnest³ used 215 ninth-grade students regularly enrolled in an American history class to serve as a population for an experiment to determine the effect that a special unit on human relations might have on the attitudes of White students toward Negroes. A control group consisted of 115 students and the experimental group of 100 students. From each group, Earnest selected 50 students to participate in the experiment.

¹Gwynne Nettler, "The Relationship Between Attitude and Information Concerning the Japanese in America," American Sociological Review, Vol. 11 (April, 1946), pp. 177-190.

²Ibid., p. 190.

³Earnest, op. cit., p. 109.

Results obtained from the study were as follows: (1) The difference between the change in the experimental group's attitudes toward minority groups and the change in the control group's attitudes was significant; (2) The attitude change of male and female subgroups in the experimental group was significantly different from those of the control group; (3) There was no positive relationship between attitude change and scholastic level of the students. Students in each of three scholastic level subgroups showed a change in attitude which was significantly different over their counterparts in the control group.

Earnest's conclusion was, "From the results of this experiment, the teaching of the special unit on human relations proved to be superior to that of regular instructional procedures in modifying pupils' attitudes favorably toward minority groups, regardless of the pupils' sex or scholastic aptitude."

Dressel² listed several factors involved in changing the values of college students. One of these factors is that of communication of knowledge and cultivation of intellectual abilities. As an example he pointed out that by knowing certain facts about comparative abilities of races, racial discrimination may be overcome. He stated that there is ample evidence which suggests that certain types of learning situations or instructional practices may bring about a situation in which a person's value system is

¹Ibid., p. 84.

²Paul Dressel, "Factors Involved in Changing the Values of College Students," <u>Educational Record</u>, Vol. 46 (Spring, 1965), pp. 104-113.

markedly changed by increased knowledge and intellectual abilities.

In 1965, Venditti¹ conducted a study on the effectiveness of a Civil Rights Institute in changing the attitudes of the White participants toward school integration. The institute consisted of a two-week period of consecutive daily sessions and a series of eight weekly follow-up meetings lasting for one day each. Various teaching methods were used during the institute. Findings were based on a questionnaire given at the end of the two-week session and on a before and after attitude test.

At the beginning of the institute 53 per cent of the White participants supported school integration only because it was required by law while at the end of the two-week session 23 per cent were in this category. When the institute started 33 per cent of the participants believed integration good for children and at the end 58 per cent expressed this opinion. Before and after tests given the participants showed major changes in attitudes. Two examples of these changes were (1) more positive attitudes toward Negroes and culturally disadvantaged children by White participants, and (2) greater acceptance of racial equality by White participants.

Dawson² conducted a three-year study to determine how effective a college course in economics was in changing the attitudes of college freshman and sophomores toward labor unions. Part of

¹Frederick P. Venditti, "Civil Rights Institutes Can Change Attitudes," <u>Nations Schools</u>, Vol. 78 (Sept. 1966), p. 23.

²George G. Dawson, "Changing Students' Attitudes," Improving College and University Teaching, Vol. 14 (Summer, 1966), pp. 200-203.

the course was devoted to labor unions. A pretest-posttest technique was used to determine the amount of attitude change of the 181 students who participated in the study. Before taking the course 56 per cent of the students indicated that they were sympathetic toward labor unions. After taking the course 66 per cent were sympathetic. Dawson concluded that it is possible to change a student's attitude by a college course.

Research in the field of attitudes and attitude modification is inconclusive and contradictory, but seems to indicate that negative attitudes can be favorably changed. However, research is even less definite about the most efficient way to change attitudes. Most of the studies reviewed were concerned with measuring change as a result of stimulus designed to induce change as opposed to change as a result of no special stimulus. Very little research has been done to measure the effectiveness of two or more different methods of modifying negative attitudes.

CHAPTER III

DESIGN AND PROCEDURE

Design of the Experiment

This study was designed to determine the comparative effectiveness of two study units constructed to favorably change the attitudes of White eleventh and twelfth grade students at Parsons Senior High School, Parsons, Kansas, toward Negroes. Two experimental groups and one control group were established and administered an attitude survey before and after the experimental study units were taught. One of the experimental groups, Experimental Group A, was taught a study unit, Study Unit A, concerned only with the American Negro. The second experimental group, Experimental Group B, was taught a study unit, Study Unit B, concerned with various American minority groups. The control group was not taught in any specific way designed to change attitudes toward Negroes or minority groups.

Each of the study units was taught to a group of 30 eleventh and twelfth grade students who had elected to take Sociology for the first semester of the 1968-69 school year at Parsons Senior High School. Sociology was a one-semester elective which carried one-half unit of credit for successful completion. Pre-enrollment for this and all other classes at the high school was taken during the second

semester of 1967-68. All eleventh and twelfth grade students in the school were given an opportunity to enroll in the course. Those students who elected to take Sociology were placed in the second or fourth period class.

The second period Sociology class, which met from 9:05 a.m. until 10 a.m. daily, was designated Experimental Group A and was taught Study Unit A. The fourth period Sociology class, which met from 11:05 a.m. until noon daily, was designated Experimental Group B and was taught Study Unit B.

The control group consisted of 30 students who were enrolled in either of two Psychology classes at Parsons Senior High School. Psychology was a one-semester elective which carried one-half unit of credit for successful completion. All eleventh and twelfth grade students in the school were given an opportunity to pre-enroll in the class during the second semester of the 1967-68 school year. Those students who elected to take Psychology during the first semester of the 1968-69 school year were placed in either of the two sections. The two Psychology classes met at times corresponding with the Sociology classes.

Since the problem was to determine if either Study Unit A or Study Unit B was more effective than the other in favorably modifying the attitudes of White students toward Negroes, it was decided to control the variables of group size, sex, race and intelligence. The success of the attempt to control size, sex and race is presented in Table I, and the success of controlling the variable of intelligence is presented in Table II.

TABLE I
SIZE, SEX AND RACE
COMPOSITION OF THE THREE GROUPS

Group	Size	Males	Females	Negroes
A	30 (White)	15	15	3
В	30 (White)	15	15	3
Control	30 (White)	15	15	*

^{*}Control group students were taken from two Psychology classes. Four Negroes were present in one class and three in the other.

As indicated by Table I, each of the groups consisted of 30 White students. Fifteen of these students were males and 15 were females. This control of the sex variable was necessary for two reasons: (1) to permit the testing of the hypotheses relating to the effect which Study Unit A and Study Unit B had on males as opposed to females, and vice versa, and (2) to prevent any influence which a sex imbalance might have had on the results of the experiment.

Practically all classes at Parsons Senior High School have Negro students present. To control for the possibility that the presence of Negro students might influence the attitudes of White students toward this minority group, it was decided that the number of Negroes present in each group should be approximately the same. Table I shows that there were three Negroes present in both Experimental Group A and Experimental Group B. Students used in the control group were taken from two Psychology classes. There were three Negroes present in one of these classes and four in the other.

As mentioned above, the groups were formed so that they would be compatible in regards to the intelligence variable. To determine the success of this control, Bartlett's Test for Homogeneity of Variance¹ was applied to the raw scores which students in the three groups made on the Lorge-Thorndike Intelligence Test (verbal form). The statistical procedure used for this test is presented in Appendix K of this study. Students at Parsons Senior High School were administered this test during the second semester of their sophomore year. New students were administered the test immediately following their enrollment. The raw scores which the students made on the Lorge-Thorndike may be found in Appendix D of this study. The results of applying Bartlett's test are shown in Table II.

TABLE II

APPLICATION OF BARTLETT'S TEST FOR HOMOGENEITY
OF VARIANCE FOR THE THREE GROUPS

Group	Sample Size	df	Sums of Squares	S ² (variance)	log s ²
Group A	30	29	3799.37	131.01	2.1173
Group B	30	29	3620.70	124.85	2.0969
Control	30	29	4020.00	138.62	2.1430
Totals				394.80	6.3572
Obtained	Chi Square:	.307	df: 2		

¹Allen L. Edwards, Experimental Design in Psychological Research (New York: Rinehart & Company, Inc., 1950), pp. 195-97.

Reference to Table IV of Edwards¹ reveals that the chi square required for significance at the .05 level of confidence at two degrees of freedom is 5.991. It is obvious that the obtained chi square of .307 is not significant. Therefore, homogeneity of variance was satisfied and the attempt to control the variable of intelligence was successful.

On the Lorge-Thorndike, raw scores are converted to percentile scores. These percentile scores were used to divide Experimental Group A and Experimental Group B into three intelligence levels. The top ten students in each of the two groups composed the upper intelligence levels, the second ten students in each group composed the middle intelligence levels, and the lowest ten students in each group composed the lower intelligence levels. This division was necessary to test the stated hypotheses relating to the effect which Study Unit A and Study Unit B had on students of varying intelligence. The control group was not divided into intelligence levels because this group was used only to determine if any attitude changes had occurred in the students of Experimental Group A and Experimental Group B as a result of Study Unit A and Study Unit B.

Each of the three intelligence levels contained five males and five females. Control of the sex variable was necessary to rule out any influence which a sex imbalance might have had on the results of that part of the experiment concerned with intelligence. The division of the two experimental groups into intelligence levels and the sex composition of each is presented in Appendix D of this study.

¹<u>Ibid</u>., p. 406.

To further determine the compatibility of the three groups it was necessary to consider the question of attitudes which the subjects of each group held toward Negroes at the beginning of the experiment. If there was a significant difference in this variable, questions of validity could be raised about the results of the study and the conclusions made on the basis of these results.

The degree of homogeneity which existed between the three groups in regard to the pre-experiment attitude variable was determined by using the scores obtained on the first administration of the attitude survey (pretest) and calculating "t" to determine the significance of the difference. Pretest scores are presented in Appendix E of this study. Critical ratio ("t") was determined for Experimental Group A and the control group, Experimental Group A and Experimental Group B, and Experimental Group B and the control group. Significance of difference was tested at the .05 level. Fisher's "t" for difference between uncorrelated means in two samples of equal size was used to calculate "t".¹ This formula and statistical procedure may be found in Appendix K of this study. The results of applying the "t" test to these groups are presented in Table III, Table IV, and Table V.

An examination of Table D from Guilford² revealed that the obtained "t" of .123 at 58 degrees of freedom was less than the 2.008 required for significance at the .05 level. Therefore, there was no significant difference between the pretest attitude scores of Experimental Group A and Experimental Group B. This being the case, the two

¹J. P. Guilford, <u>Fundamental Statistics in Psychology and Education</u> (New York: McGraw-Hill Book Company, 1955), p. 184.

²<u>Ibid.</u>, p. 581.

TABLE III

HOMOGENEITY OF PRE-EXPERIMENT ATTITUDES
BETWEEN EXPERIMENTAL GROUP A AND CONTROL GROUP

Sample Size		
Group A Control Group	- 30 - 30	
Pre-Test Mean	- ·	
Group A Control Group	162.1 161.4	
Mean Difference	0.7	
Standard Error	5.709	
Critical Ratio ("t")	0.123	

groups were considered homogeneous in attitudes toward Negroes before the experiment began.

TABLE IV

HOMOGENEITY OF FRE-EXPERIMENT ATTITUDES
BETWEEN EXPERIMENTAL GROUP A AND EXPERIMENTAL GROUP B

Sample Size		
Group A Group B	30 30	
Pre-Test Mean		
Group A Group B	162.10 159.23	
Mean Difference	2.87	
Standard Error	5.632	
Critical Ratio ("t")	0.510	

An examination of Table D from Guilford¹ revealed that the obtained "t" of .510 at 58 degrees of freedom was less than the 2.008 required for significance at the .05 level. Therefore, there was no significant difference between the pretest attitude scores of Experimental Group A and Experimental Group B. This being the case, the two groups were considered homogeneous in attitudes toward Negroes before the experiment began.

TABLE V

HOMOGENEITY OF PRE-EXPERIMENT ATTITUDES
BEIWEEN EXPERIMENTAL GROUP B AND CONTROL GROUP

Sample Size	
Group B Control Group	30 30
Pre-Test Mean	
Control Group Group B	161.40 159.23
Mean Difference	2.17
Standard Error	5.708
Critical Ratio ("t")	0.380

An examination of Table D from Guilford² revealed that the obtained "t" of .380 at 58 degrees of freedom was less than the 2.008 required for significance at the .05 level. Therefore, there was no significant difference between the pretest attitude scores of Experimental Group B and the control group. This being the case, the two

¹Ibid., p. 581.

²Ibid., p. 581.

groups were considered homogeneous in attitudes toward Negroes before the experiment began. As pointed out in Tables III, IV and V, the three groups were compatible in pre-experiment attitudes toward Negroes, eliminating any effect which might have occurred in the experiment as a result of this variable.

The Pretest-Posttest Instrument

The instrument used for pretesting and posttesting of the students' attitudes was a modification of Carmichael's attitude scale¹ and Earnest's attitude survey instrument.² When modifying Carmichael's instrument for use in his study Earnest rejected the Q-methodology used by Carmichael since this administrative procedure is not considered suitable for testing the attitudes of large groups of subjects. Earnest elected to limit the choice of answers to each item on the survey to yes and no.

Carmichael's scale consisted of 80 items designed to solicit the attitudes of an individual toward various minority groups. Since this instrument had been administered to adults only, Earnest felt it necessary to subject the scale to trial tests using secondary school students. This was done to make certain that the questions were understandable to adolescents and that the words used were not too difficult. He gave the instrument three trial administrations. The last two were to separate groups of 40 ninth-grade students. The instrument which he finally produced consisted of the 80 original items with modifications made. These items were still designed to elicit the attitudes of an individual toward various minority groups.

¹Carmichael, <u>loc. cit</u>.

²Earnest, <u>loc. cit.</u>

Since this study was also concerned with large groups, the Q-method was rejected. However, the choice of answers for each item was expanded from yes and no to strongly agree, agree, disagree, strongly disagree. A neutral position was not included, thus forcing the participants to make a commitment on each item. A numerical value ranging from one to four was assigned to each possible answer with one representing the most unfavorable position and four the most favorable position.

Unlike the Carmichael and Earnest studies, the present study was concerned only with the attitudes of Whites toward Negroes. Therefore, those items directed toward minority groups other than Negroes were not usable in the study. By changing a word or two in a few of the items it was decided that 60 of the original 80 items were usable to elicit attitudes toward Negroes. Data collected from these 60 items were used in the study. Even though the 20 items designed to elicit attitudes about groups other than Negroes were not used in the study it was decided to include them in the instrument to prevent possible participant reaction to answering questions about Negroes only.

Before administering the pretest to the three groups, the instrument was given to a group of 60 eleventh and twelfth grade students in a nearby community. These students were asked to circle any word or question which they did not understand and to offer any suggestions concerning the answering system. The only serious objection raised was that an "I don't know" selection in the answering system should be included. Since it had been decided not to include this possibility, the instrument was considered usable for the study.

Instrument Validity and Reliability

The instrument used in this study was developed by Carmichael. The method used by Carmichael to validate the instrument was that of using a jury of qualified judges to evaluate each item. Carmichael pointed out that statements selected by recognized leaders in the field of human relations from a large population of pertinent items would assure validity for the eighty-item instrument.

Carmichael's jury consisted of eleven recognized leaders in the field of human relations. Each juror was sent an original list of statements divided into eight broad human relations areas. These areas were racial (subdivided into Negro, Indian, and other minority groups), religious, socio-economic, education, judicial, and governmental. Thirty statements were included in each area and jurors were instructed to select only the fifteen statements in each area which they believed most relevant for identifying both positive and negative attitudes in that particular area. The ten items most frequently suggested were used to form the instrument. Each of the items included in the instrument received a minimum of seven affirmative votes. 1

Earnest used the Carmichael instrument in his study which was designed to determine the effects of two teaching methods in modifying ninth-grade pupils' attitudes toward minority groups. To establish instrument reliability, he used the test-retest method. Using the pretest-posttest scores of his control group, Earnest calculated the Pearson-Product Moment coefficient of correlation. He obtained a co-

¹Carmichael, op. cit., pp. 47-52.

efficient of .82 with a probable error of .032. Since the coefficient was at least four times its probable error, Earnest concluded that the obtained coefficient could be regarded as worthy of confidence and that instrument reliability was established.

Administering the Pretest

As a pretest to the experiment the teacher of the Sociology classes administered the attitude survey to Experimental Group A and Experimental Group B on October 29, 1968. On the same date the researcher administered the same instrument to both of the Psychology classes from which the control group was drawn. All students in the Psychology classes were given the pretest. The students were told that the survey was part of a project being conducted by a nearby college. They were not informed of the experiment. The students were told to read the instructions carefully, not to ask questions, to answer every question and not to sign their papers. All classes took approximately 30 to 35 minutes to complete the pretest. Absentees were tested the following day and were given the same instructions.

Even though students did not sign their papers, identification of the individuals was made possible by keying each examination with a number, passing out the tests by rows and writing down the students' names in the proper order. After the pretest, the number on each test was matched with the proper student's name and that name written on the test paper. Each test was properly marked to identify it as a pretest and to show if it had been completed by a student in Experimental Group

¹Earnest, <u>op. cit.</u>, pp. 82-83.

A, Experimental Group B or the control group.

The Study Units

Both of the special human relations study units were taught in the same classroom by the same teacher. The study units were developed by the teacher and the researcher. Study Unit A was designed to change the attitudes of White students toward Negroes by a direct study of Negro problems. In this unit, only material dealing with American Negroes was used and all class discussion and lectures were directed toward the Negro. Study Unit B was designed to change attitudes toward all minority groups including the Negro. In this unit, material dealing with various American minority groups was used and all class discussion and lectures were directed toward major minority groups.

Since the problem was essentially to determine if favorable attitudes toward Negroes can best be brought about by the isolated study of the Negro or by a broader study of all minority groups, it was necessary to use similar teaching methods and materials in both study units. As previously stated, the topics for study in the two units were practically the same with the exception being that one study unit was devoted to the Negro and the other to various minority groups.

The two study units were designed to go beyond the mere presentation of factual material by the teacher. Various teaching methods were used in teaching the units with emphasis placed on techniques to insure individual student effort and student participation in classroom activities. Some of the teaching methods used in both units are listed below:

Teacher Lecture. During the teaching of the two study units the teacher was more of a director of learning than a presentor of information.

However, it was necessary for the teacher to introduce each of the lessons with some background information and to present an occasional lecture in areas where suitable teaching materials were difficult to obtain.

Audio-visual Materials. Extensive use of audio-visual materials was made in most of the lessons. Several film and filmstrips (sound and silent) were obtained from the high school library and from rental agencies such as the Anti-Defamation League, the National Conference of Christians and Jews, Inc., the University of Kansas Film Library, etc. After the showing of each film or filmstrip the teacher involved the students in some type of followup activity such as group discussion, small group work, written assignments, panel discussions, etc. An overhead projector was placed in the classroom so that the teacher could use transparent projectuals. Also, on opaque projector was placed in the classroom to facilitate the use of flat pictures and single copies of text material.

<u>Small Group Discussions</u>. At appropriate times students were divided into small groups for discussion work. Reports to the class grew out of these discussions.

Individual Assignments and Reports. Students were required to do written assignments and reports at various points in the study units.

Most of these were short and formed the basis for reports and class discussion.

Resource Materials. Since there was not a basic textbook used in the study of these units, an extensive amount of pamphlets, paperbacks and duplicated materials was assembled for use by students and teachers.

The teacher was not required to do any clerical work in utilizing this material.

<u>Problem Situations</u>. Students were required to participate in various problem situations which required them to become more deeply involved in some of the incidents faced by members of minority groups.

Study Unit A

The teaching of Study Unit A to Experimental Group A began on November 4, 1968, and continued until December 18, 1968. During this time there were no major interruptions of school and the class failed to meet only once and this because of an assembly.

Study Unit A was a human relations unit entitled "Negroes in America." It was concerned only with the study of human relations problems faced by the American Negro. The Study Unit consisted of six separate lessons. An outline of Study Unit A, including lesson objectives, materials, and instructional procedures, may be found in Appendix B of this study. Below is a description of the Study Unit.

<u>Discrimination Against Negroes</u>. The major objectives of this lesson were to help the students better understand the terms prejudice and discrimination. After a brief introduction to the lesson, each student was required to write a description of what the "American Dream" meant to him and whether or not a Negro could realize such a dream in America. The basic purpose of the exercise was to make students more specifically aware of their individual ambitions and how certain doors might be closed to them if their skin happened to be black.

The film, "Boy: An Experience in the Search for Identity," was

shown followed by a class discussion emphasizing the meaning of bigotry, prejudice and discrimination. In this film a Negro boy reveals his sensitivity to name-calling and stereotyped attitudes toward racial minorities. It exposes the degradation to which a prejudiced person subjects his fellow human beings.

Students were required to read the pamphlet, Roots of Prejudice, and write a half-page summary of one major topic in the booklet. Class discussion followed with an emphasis on soliciting student reaction to the material on Negroes. After a thorough discussion of the pamphlet, students were given a copy of the following quote by John Stuart Mill and told to write a reaction paper centered on the diversities of conduct and character which Caucasians attribute to Negroes for racial reasons:

Of all the vulgar modes of escaping from the consideration of the effects of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences.

The contagious aspects of prejudice were brought out by the film, "High Wall," which is a case study of a young bigot describing how he became "infected" and how his home life fostered the development of prejudice. During the class discussion which followed students were encouraged to give specific examples of prejudice and discrimination against Negroes which they had personally viewed and to give their reaction to the situation.

By using the opaque projector to cast on the screen pictures and written material from the book, <u>A Pictorial History of the American Negro</u>, the teacher guided the students through a brief history of the American Negro pointing out how the prejudiced attitudes of Whites toward Negroes

developed. The teacher reported that this exercise was much better than he had expected and that student involvement was good. He attributed this partly to the fact that students were becoming more at ease and seemed more willing to talk about Negroes.

The closing exercise for this lesson was a class discussion over the two papers, "Psychological Effects of Segregation" and "Segregation -Two-Edged Sword." This was followed by a teacher summary of the lesson.

Lesson Plan II: Prevalent Misconceptions About the Negro Race.

This lesson was concerned primarily with destroying some of the misconceptions which Whites normally have toward Negroes. The lesson was opened with an introduction by the teacher followed by a class discussion over the pamphlet, The Myths of Racial Integration. The teacher was concerned with soliciting the students' acceptance of the arguments presented against the myths of racial integration and why the students accepted or rejected them.

Using an article entitled "Pupils Learn Well in a Mixed-Race School" as basic reading the students were divided into discussion groups to consider the question, "Are a school's academic standards lowered when Negro students attend?" Group consensus was reported to the class giving specific arguments for and against racially mixed schools. After viewing Negro-centered frames from the filmstrip, "Exploding the Myths of Prejudice," these same discussion groups had to answer the question, "Are prejudiced attitudes founded on facts or myths?" Again each group reported its conclusions to the class.

Class discussion was held on White attitudes toward Negroes moving into an all-White neighborhood. Basic reading for this discus-

sion was the article, "Inconsistencies in Attitudes Toward Negro Housing," supplemented with information gained from magazines and newspapers in the library. The <u>Time</u> magazine article, "Race and Ability," was used for teacher lecture and class discussion on the relationship between race and ability. Each student was provided with a copy of this article.

The lesson was concluded with a showing and discussion of the film, "The Victims." In this film Dr. Benjamin Spock diagnoses the causes of prejudice in children and points out that prejudice is a crippling disease, harmful to those who are the recipients and to those who inflict it.

Lesson Plan III: The Status of the American Negro in Selected Areas of Our Society. The two-fold purpose of this lesson was (1) to give students some knowledge of the Negro's status in the areas of religion, education, economics, government and law, and (2) to help them understand that this status is the result of prejudice and discrimination and that the situation is undemocratic and inhumane.

Following an introduction by the teacher, the opaque projector was used to show the cartooned-pamphlet, <u>Wee Pals</u>. Students were asked to interpret the various situations presented in the pamphlet which features a Negro and White child involved in various socially unaccepted human relationships. The teacher attempted to guide the class into a discussion of each concept and its implications for American society.

Once again students were divided into small groups to discuss the film, "Do They Really Want Us." This film features a cast of successful Negroes who discuss the problems they have had in fighting prejudice in the areas of economics, housing, education and government. The film was excellent and created a great deal of student discussion.

The students viewed a second film entitled, "All the Way Home," and were required to write a brief report on what they felt was the major objective of the film. This was followed by a panel discussion of the primary objective of the film and whether the film was realistic or prejudiced in favor of Negroes. The film depicts the fear and anxiety which mounts in an all-White neighborhood when a Negro family stops to inquire about a house for sale. The film tries to show that integrated communities and neighborhoods can work.

The articles, "The American Negro and His Government," and "The Church - Refuge in a Hostile World," were basic reading for class discussion of the Negro in the areas of government, law and religion. Students were required to isolate three major points made in the newspaper article which traced the development of the Negro church in America and the Negro's relationship to the church at the time of emancipation and at present.

A timely television special, "Saturday Adoption," attempted to point out the hopelessness which a young Negro boy had because so many doors were closed to him for racial reasons. This resulted in reading difficulties which a White student was crying to rectify by tutoring the boy on Saturday mornings. In addition to viewing the special, the students were given copies of "Equality of Opportunity: Is it Possible in Education?" and were told to write a definition of equal educational opportunity and to explain whether or not American Negroes have this opportunity. This was followed by a discussion of the Negro's status in education.

Students were then given copies of "Patterns of Job Discrimination Against Negroes" for overnight reading. This was followed by

class discussion over the article. The closing activities consisted of group discussions on the Negroes' status in the various areas studied, why this situation exists and how they as students felt about these conditions.

Lesson Plan IV: Contributions of the American Negro. There were three major objectives in teaching this lesson: (1) to show that Negroes have made significant contributions to our society; (2) to acquaint students with Negroes of historical importance; and, (3) to provide evidence that many popular notions about Negro contributions are myths and the result of racial prejudice.

This was followed with a showing of the film, "14th Generation Americans," which emphasizes the history of the Negro American and his contributions to all aspects of American life. Class discussion was based on what the film meant by 14th generation Americans and whether or not students were aware of the many Negro contributions and why this knowledge is not generally known by most White Americans.

From the filmstrip series, "Minorities Have Made America Great," the two dealing exclusively with the American Negro were shown to the class. Small group discussions on the accuracy of the filmstrip and the relationship of the filmstrips to the preceding film were conducted. Students were told to make a list of the contributions which Negroes have made to our society.

The film, "Felicia," was shown followed by class discussion and the playing of a record entitled, "Famous Negroes and their Contributions." The film is about a young Negro girl living in the Watts section of Los Angeles and her desire to overcome the deprivation and pre-

judice to which she has been subjected. Her ambition is to obtain an education and make Watts a decent place to live. The record is a narrative about the lives of 11 successful Negroes who have made significant contributions in various areas of American society.

Following a teacher lecture on the article, "Black Athlete," the lesson was concluded with a panel discussion on whether or not Negroes have significantly contributed to the advancement of American society.

Lesson Plan V: Human Rights and the American Negro. The primary objective of this lesson was to show students how Negroes have been denied basic human rights simply because they are members of a minority race.

Duplicated sections of the pamphlet, <u>For Fundamental Human Rights</u>, including the United Nations' Universal Declaration of Human Rights were distributed. This provided a foundation for class discussion with an emphasis on why an international body such as the United Nations should be concerned with human rights. After this the students were divided into study groups to consider the question: "Are American Negroes denied human rights as defined by this document?" Chairmen of the groups made up a panel for reporting to the class.

Again small groups were used to discuss the material contained in "A Tentative Statement on Education and Human Rights." An emphasis was placed on defining human rights and the relationship between attitudes about human rights and overt behavior toward Negroes. This was followed up by having the students write a short statement on the rights which Negroes have struggled for with the paperback, The Negro in 20th Century

America, and other library materials being used for reference purposes. The culminating activity was the showing of the film, "Which Way for Human Rights," followed by class discussion of the film. This film deals with the Universal Declaration of Human Rights and employs the open-end technique, whereby the projector is stopped and student discussion takes place.

Lesson Plan VI: The Civil Rights Movement. The objectives of this lesson were to provide a historical background of the Civil Rights movement, develop an understanding of Civil Rights legislation and help students understand why a Civil Rights movement was inevitable and necessary. After the teacher introduced the lesson and handed out reading materials, he lectured on the history of the Civil Rights movement. This was followed with a review of those frames from "Minorities Have Made America Great" which deals with the Negro's struggle for civil rights.

The filmstrip, "Integration's 10-Year March," was shown and discussed in class. During this discussion, the efforts of local Negro groups to gain integration were highlighted. This included the integration of the local schools which most students could remember.

A teacher lecture and class discussion were held on <u>Civil Rights</u> and <u>Minorities</u> and the <u>Civil Rights Digest</u> with an emphasis placed on the kinds of rights insured Negroes in the 1964 Civil Rights legislation and why many groups and individuals feel that this legislation is inadequate. During this session a newspaper article from the local newspaper was used to stimulate discussion of an open housing ordinance passed by the Parsons City Commission. The students were required to write a short paper on what they had gained from the Study Unit and were asked to make suggestions for improvements.

One day after the Study Unit had been completed the students were administered the attitude survey as a posttest.

Study Unit B

The teaching of Study Unit B to Experimental Group B began on November 4, 1968, and continued until December 8, 1968. During this time there were no major interruptions of school and the class failed to meet only once and this because of an assembly.

Study Unit B was a human relations unit entitled "Minority Groups in America." It was concerned with the study of human relations problems faced by various minority groups in America. The Study Unit consisted of five separate lessons. An outline of Study Unit B, including lesson objectives, materials, and instructional procedures, may be found in Appendix C of this study.

<u>Discrimination Against Minority Groups</u>. The major objectives of this lesson were to help the students better understand the terms prejudice and discrimination, to understand why prejudices against minority groups developed in America, and to be aware of the effects of prejudice and discrimination. After a brief introduction to the lesson, each student was required to write a description of what the "American Dream" means to him and whether or not a member of certain minority groups could realize such a dream in America. The basic purpose of the exercise was to make students more specifically aware of their individual ambitions and how certain doors might be closed to them if they happened to be a member of certain minority groups.

The film, "Cast the First Stone," was shown, followed by a class

discussion emphasizing the meaning of bigotry, prejudice and discrimination. This documentary features interviews with Americans whose lives have been affected by prejudice and discrimination. Minority groups represented are Negroes, Jews, Puerto Ricans, Mexicans, Japanese and Chinese. It exposes the degradation to which a prejudiced person subjects his fellow human beings.

Students were required to read the pamphlet, Roots of Prejudice, and write a half-page summary of one major topic in the booklet. Class discussion followed with an emphasis on soliciting student reaction to the material on minority groups. After a thorough discussion of the pamphlet, students were given a copy of the following quote by John Stuart Mill and told to write a reaction paper centered on the diversities of conduct and character we attribute to certain people simply because they are a member of a minority group:

Of all the vulgar modes of escaping from the consideration of the effects of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences.

The contagious aspects of prejudice were brought out by the film, "High Wall," which is a case study of a young bigot describing how he became "infected" and how his home life fostered the development of prejudice. During the class discussion which followed students were encouraged to give specific examples of prejudice and discrimination against minority groups which they had personally viewed and to give their reactions to the situation.

Small groups were used to discuss the pamphlet, <u>Prejudice and</u>
Society, which describes how individual behavior toward minority groups is influenced by prevailing social practices to which we conform. The

authors describe how these attitudes are shaped as well as how they can be changed. Small groups were used to study the concepts covered in the reprint, "Gentle People of Prejudice," which points out that "rice, gentle" people are also infected by prejudiced attitudes. The closing exercise was a class discussion of the material covered and the ideas introduced with the teacher summarizing the entire lesson.

Lesson Plan II: Prevalent Misconceptions About Minority Groups. This lesson was concerned primarily with destroying some of the misconceptions which people have toward minority groups. The lesson was opened with an introduction by the teacher followed by a class discussion over the article, "Don't Let Stereotypes Warp Your Judgement," with an emphasis on eliciting from the students the stereotyped opinions which they have and how such opinions impair our vision of the world.

The class was divided into discussion groups to consider the question, "Am I guilty of scapegoating?" Basic reading for this discussion was the pamphlet, ABC's of Scapegoating. Group consensus was reported to the class with each group giving its definition of scapegoating and some examples of how a person can employ this discriminatory technique. After viewing selected frames from the filmstrip, "Exploding the Myths of Prejudice," these same discussion groups had to answer the question, "Are prejudiced attitudes founded on facts or myths?" Again each group reported its conclusions to the class.

Each class member was given a copy of the article, "Why Did They Do It?," which traces the backgrounds of a group of young people who terrorized a Jewish family in San Francisco for 16 months. A class discussion emphasizing how prejudiced attitudes can result in acts of violence against innocent people followed. The article, "Not Like Other

Children," was used for teacher lecture and class discussion on the relationship between race and ability. Each student was provided with a copy of this article which deals with how some teachers often judge the potential of slum children by middle class standards and IQ's, thus relegating the "culturally deprived" child to the status of an unteachable.

The lesson was concluded with a showing and discussion of the film, "Boundary Lines," which explores various imaginary boundary lines that divide people from each other and shows that such lines have no true basis in reality. The film makes an appeal for greater understanding of all people and the destruction of stereotyping minority groups.

Lesson Plan III: The Status of Minority Groups in Selected Areas of Our Society. The two-fold purpose of this lesson was (1) to give students some knowledge of the status of minority groups in the areas of religion, education, economics, government and law, and (2) to help them understand that this status is the result of prejudice and discrimination and that the situation is undemocratic and inhumane.

Following an introduction to the lesson by the teacher, a series of articles dealing with minority groups in the areas of job discrimination, discrimination in government, discrimination in politics, and the culturally deprived, was given to each student. Students were required to read the articles and write a brief synopsis of each. The class was then divided into discussion groups and each group was assigned two of the articles which would be the basis for a panel discussion.

A series of filmstrips entitled, "Mexican Town," were shown to the students and followed by class discussion. These filmstrips deal with the problems of Mexicans in the southeastern states. The culminating activity was the showing of the film, "The Chosen People," about which the students had to write a brief report on what they considered was the primary objective of the film. This film was originally presented by NBC-TV as part of the "Prejudice, U.S.A." series and deals with the problems of a group of high school seniors who select as a site for their prom a community club which does not admit Jewish people, making it impossible for some of their classmates to attend. In seeking an explanation for this the teenagers discover irrational prejudice in their own community.

Lesson Plan IV: Contributions of America's Minority Groups.

There were three major objectives in teaching this lesson: (1) to show that minority groups have made significant contributions to our society; (2) to acquaint students with historically important members of minority groups, and (3) to provide evidence that many popular notions about minority group contributions are myths and the result of prejudice.

The lesson was introduced with a lecture on minority group contributions. Students were then given a library reading assignment on contributions made by members of a minority group. This was followed with a showing of the film, "One People," which depicts the contributions of nationality groups to American culture. During class discussion of the film, students were told to cite examples of contributions which they had read about and which were mentioned in the film.

From the filmstrip series, "Minorities Have Made America Great," the four dealing with Jews, Italians, Germans, and Irish, were presented. Small group discussions on the accuracy of the filmstrips and the relationship of the filmstrips to the preceding film were conducted. Students

were told to make a list of the contributions which minority group members have made to our society. A short paper summarizing the lesson was required of all students.

Lesson Plan V: Human Rights and American Minority Groups. The primary objective of this lesson was to show students how minority groups have been denied basic human rights simply because they are members of a minority group.

The lesson was introduced with a lecture on the definition of human rights. Students were then given duplicated sections of the pamphlets, For All Humanity and A Living Bill of Rights. With the first pamphlet used for basic reading a class discussion was conducted on those rights which are reserved for all people by the United Nations' Universal Declaration of Human Rights. After this the students were divided into study groups to consider the question: "Are American minority groups denied human rights as defined by the U. N. document?" Chairmen of the groups made up a panel for reporting to the class.

A teacher lecture and class discussion was based on A Living Bill of Rights with an emphasis on how minority groups have been denied these rights. The film, "Which Way for Human Rights," was shown followed by class discussion. This film deals with the Universal Declaration of Human Rights and employs the open-end technique, whereby the projector is stopped and student discussion takes place. Drawing from material covered in this Study Unit the students were required to write a paper on a specific example of how a member or members of a minority group has been denied a human right. The closing activity was a teacher summary of the Study Unit. Students had to write a short paper on what they gained from the Study Unit and were asked to make suggestions for

improvements.

One day after the Study Unit had been completed the students were administered the attitude survey as a posttest.

Administering the Posttest

Both Study Unit A and Study Unit B were completed on Wednesday,
December 18, and the instrument, A Survey of Attitudes Toward Minority
Groups, which may be found in Appendix A of this study, was administered
as a posttest. Those students who were absent were administered the
same instrument on the following day during class time. The instrument
was also administered by the researcher to both Psychology classes on
the same dates. Posttesting data were obtained from every student who
took the pretest.

Statistical Procedure

To conduct the study it was necessary to establish three groups of students comparable in size, sex, intelligence and ethnic makeup. One group served as Experimental Group A, a second as Experimental Group B, and the third as the control group. Experimental Group A consisted of those White students enrolled in the second period Sociology class, Experimental Group B consisted of those White students who enrolled in the fourth period Sociology class, and the control group consisted of students selected from the second and fourth period Psychology classes. All subjects were full-time junior or senior students at Parsons Senior High School.

Each group contained 30 White students - 15 males and 15 females. There were three Negro students in both of the experimental groups, three in the second period Psychology class and four in the fourth period Psy-

chology class. Percentile scores from the Lorge-Thorndike Intelligence
Test (verbal form) were used to divide each group into three intelligence
levels. Each level contained five males and five females. The LorgeThorndike is administered to all sophomore students at Parsons Senior
High School. New students to the school are given the test shortly after
their enrollment.

All three groups were pretested with the revised <u>Survey of Attitudes Toward Minority Groups</u> shown in Appendix A of this study. The day after the experimental study units were taught the three groups were post-tested with the same instrument. The data obtained from the pretest and posttest were statistically treated in order that the stated hypotheses could either be rejected or accepted.

The subjects could indicate their attitude about each of the 60 questions by checking one of four possible answers - strongly agree, agree, disagree, or strongly disagree. Each answer was assigned a numerical value ranging from one to four with four representing the most favorable position and one the least favorable. The most favorable score a student could make was 240 and the least favorable was 60.

As previously stated, the data for statistical treatment consisted of individual students' net gain or loss scores which were determined by subtracting the pretest results from the posttest results. To test all stated hypotheses it was necessary to determine the net difference in attitude shift between each of the paired subjects in each group (Experimental Group A, Experimental Group B, control group) and subgroup of the two experimental groups (males, females, intelligence levels). Since control group data was only used to determine if there

had been any attitude shift in Experimental Group A and Experimental Group B as a result of the experimental study units, it was not necessary to determine the attitude shift for the various subgroups of these subjects.

Using the net difference in attitude shift between each of the paired subjects in each group and subgroup, Fisher's "t" was calculated to test the significance of difference, at the .05 level, between (1) Experimental Group A and the control group; (2) Experimental Group B and the control group; (3) Experimental Group A and Experimental Group B; (4) the males of Experimental Group A and Experimental Group B; (5) the females of Experimental Group A and Experimental Group B; (6) the two corresponding groups of students in the upper intelligence levels of Experimental Group A and Experimental Group B; (7) the two corresponding groups of students in the middle intelligence levels of Experimental Group A and Experimental Group B; and, (8) the two corresponding groups of students in the lower intelligence levels of Experimental Group A and Experimental Group B.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This study was designed to determine the comparative effectiveness of two study units constructed to favorably change the attitudes of White eleventh and twelfth grade students toward Negroes. Data for analysis were obtained by determining the difference between pretest and posttest scores for each of the subjects.

The significance of difference between the gains in attitude change was determined for the following groups and subgroups: (1) Experimental Group A and the control group; (2) Experimental Group B and the control group; (3) Experimental Group A and Experimental Group B; (4) the males of the two experimental groups; (5) the females of the two experimental groups; (6) corresponding groups of students in the upper intelligence level of the two experimental groups; (7) corresponding groups of students in the middle intelligence level of the two experimental groups; and, (8) corresponding groups of students in the lower intelligence level of the two experimental groups.

To statistically test the hypotheses, it was necessary to determine the difference in attitude shift between each of the paired subjects in each group and subgroup and to conclude if this difference was significant at the .05 level by calculating "t." Since subjects were matched by intelligence, the basic formula used for determining "t" was Fisher's

formula for testing the difference between correlated pairs of means.

An explanation of this formula is presented in Appendix K of this study.

Kerlinger² pointed out that the requisite assumptions underlying the use of "t" are that the samples with which one works have been drawn from populations that are normally distributed (assumption of normality) and that the variances within the groups are statistically the same homogeneity of variance).

Using the raw scores which the subjects made on the Lorge-Thorn-dike Intelligence Test (see Appendix D), the Chi Square Goodness of Fit Test³ was employed to check the assumption of normality. The statistical procedure of this test is presented in Appendix K of this study. The results of this application are presented in Table VI.

The obtained chi square for Group A was 2.516. Table E from Guilford⁴ showed that this chi square at four degrees of freedom was greater than the value with .70 of the chi square's above it (2.195), but not sufficiently large to equal the value with .50 of the chi square's above it (3.357). Therefore, the hypothesis that the frequently distribution of scores for Group A came from a normally distributed population was accepted.

For Group B the obtained chi square was 2.150. Table E of Guilford⁵ shows that this chi square at four degrees of freedom was

¹Guilford, <u>loc. cit</u>.

²Kerlinger, op. cit., p. 258.

³Guilford, op. cit., pp. 243-247.

⁴Ibid., p. 582.

⁵Ibid., p. 582.

TABLE VI
CHI SQUARE GOODNESS OF FIT TEST
FOR ASSUMPTION OF NORMALITY

	Group A	Group B	Control Group
Sample Size	30	30	30
Sample Mean	48.5	49.2	49.0
S. D.	11.23	10.56	11.57
df	4	ц	2
Chi Square	2.516	2.150	1.238

greater than the value with .80 of the chi square's above it (1.649), but not sufficiently large to equal the value of .70 of the chi square's above it (2.195). Therefore, the hypothesis that the frequency distribution of scores for Group B came from a normally distributed population was accepted.

The obtained chi square for the control group was 1.238. Table E of Guilford shows that this chi square at two degrees of freedom was larger than the value with .70 of the chi square's above it (.713), but not sufficiently large to equal the value with .50 of the chi square's above it (1.386). Therefore, the hypothesis that the frequency distribution of scores for the control group came from a normally distributed population was accepted.

The homogeneity of the variances within the sample groups was

¹<u>Ibid.</u>, p. 582.

checked by applying Bartlett's Test for Homogeneity of Variance to the raw scores which the subjects of the three groups of students used in this study made on the Lorge-Thorndike Intelligence Test (see Appendix D). The results of this application are shown in Table II of this study. The statistical procedure for this test is presented in Appendix K of this study. As pointed out in Table II, the obtained chi square was .307. Reference to Table IV of Edwards² revealed that the chi square required for significance at the .05 level at two degrees of freedom was 5.991. It was obvious that the obtained chi square of .307 was not significant. Therefore, homogeneity of variance was assumed satisfied.

Results of Testing the Hypotheses

After the assumptions of normality and homogeneity of variances had been satisfied, it was necessary to statistically test the stated hypotheses. This was accomplished by determining the difference in attitude shift between each of the paired subjects in each group and subgroup and performing the necessary calculations to arrive at critical "t." Significance of difference was tested at the .05 level.

Hypothesis 1 was: There is no statistically significant difference in the attitudes toward Negroes of Experimental Group A after being taught Study Unit A. The hypothesis was tested by comparing the shift in attitude change of subjects in Experimental Group A and the control group. Since the subjects in the control group were not taught in any way to specifically change their attitudes toward Negroes or minority groups, any change in attitudes toward Negroes by the subjects in Experimental Group

¹See page 53.

²Edwards, op. cit., p. 406.

A was attributed to the fact that they were taught Study Unit A which was a study of American Negroes.

Appendix F of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for Experimental Group A and the control group. Table VII contains the results of applying the "t" test for significance of the difference to the data of Experimental Group A and the control group.

TABLE VII

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE BETWEEN
THE RAW SCORE GAINS OF GROUP A AND CONTROL GROUP

Sample Size	30	
Gain Difference	283	
Mean Difference	9.433	
Standard Error	2.600	
Critical Ratio ("t")	3.626	

A gain difference of 283 raw score points was made by the subjects in Experimental Group A over those in the control group. An examination of Table D from Guilford revealed that the obtained "t" of 3.626 at 29 degrees of freedom was in excess of the necessary 2.045 for significance at the .05 level. It should be noted that the obtained "t" was also larger than the necessary 2.756 for significance at the .01 level. Therefore, the difference between the gains of Experimental Group A and the control group was highly significant at both the .05 and .01 levels.

¹Guilford, op. cit., p. 580.

This being the case, it was concluded that the attitudes of the subjects in Experimental Group A toward Negroes were favorably modified to a significant degree. The hypothesis of no difference in attitude change of Experimental Group A was rejected.

Hypothesis 2 was: There is no statistically significant difference in the attitudes toward Negroes of Experimental Group B after being taught Study Unit B. The hypothesis was tested by comparing the shift in attitude change of subjects in Experimental Group B and the control group. Since the subjects in the control group were not taught in any way to specifically change their attitudes toward Negroes or minority groups, any change in attitudes toward Negroes by the subjects in Experimental Group B was attributed to the fact that they were taught Study Unit B which was a study of American minority groups.

Appendix G of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for Experimental Group B and the control group. Table VIII contains the results of applying the "t" test for significance of the difference to the data of Experimental Group B and the control group.

A gain difference of 395 raw score points was made by the subjects in Experimental Group B over those in the control group. An examination of Table D of Guilford¹ revealed that the obtained "t" of 5.139 at 29 degrees of freedom was in excess of the necessary 2.045 for significance at the .05 level, and was also larger than the necessary 2.756 for significance at the .01 level. Therefore, it was concluded that the attitudes of the subjects in Experimental Group B toward Negroes were

¹Ibid., p. 580.

TABLE VIII

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE BETWEEN
THE RAW SCORE GAINS OF GROUP B AND CONTROL GROUP

30
395
13.167
2.562
5.139

favorably modified to a significant degree. The hypothesis of no significant difference in attitude change by Experimental Group B was rejected.

Hypothesis 3 was: There is no statistically significant difference in attitudes toward Negroes between the two experimental groups whether taught Study Unit A or Study Unit B. Subjects in Experimental Group A were taught Study Unit A which dealt with the problems of American Negroes while the subjects in Experimental Group B were taught Study Unit B which dealt with problems of various American minority groups. The problem was to determine which, if either, of these two study units more favorably changed the attitudes of the students toward Negroes.

Appendix H of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for Experimental Group A and Experimental Group B. Table IX contains the results of applying "t" test for significance of difference to the data of Experimental Group A and Experimental Group B.

A gain difference of 112 raw score points was made by the subjects in Experimental Group B over Experimental Group A. An examination of

TABLE IX

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE BETWEEN
THE RAW SCORE GAINS OF GROUP A AND GROUP B

Sample Size	30
Total Difference	112
Mean Difference	3.733
Standard Error	3.148
Critical Ratio ("t")	1.186

Table D of Guilford¹ revealed that the obtained "t" of 1.186 at 29 degrees of freedom was less than the necessary 2.045 for significance at the .05 level. Therefore, the difference between the gains of the two experimental groups was not significant and it was reasonable to conclude that neither of the two study units was more effective than the other in changing the attitudes of White students toward Negroes. The hypothesis of no significant difference in attitude change between the two experimental groups was accepted.

Hypothesis 4 was: There is no statistically significant difference in attitudes toward Negroes between the two corresponding male groups of Experimental Group A and Experimental Group B whether taught Study Unit A or Study Unit B. Appendix I of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for the two groups. Table X contains the results of applying the "t" test for significance of difference to the data of these two groups.

¹<u>Ibid.</u>, p. 580.

TABLE X

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE
BETWEEN THE RAW SCORE GAINS OF MALES
IN GROUP A AND GROUP B

Sample Size	15	
Gain Difference	43	
Mean Difference	2.866	
Standard Error	4.243	
Critical Ratio ("t")	.675	

A gain difference of 43 raw score points was made by the male students in Experimental Group B, which was taught the study unit on the problems of various American minority groups, over the male students in Experimental Group A. Reference to Table D of Guilford showed that the obtained "t" of .675 at 14 degrees of freedom was less than the necessary 2.145 for significance at the .05 level. Therefore, the difference between the gains of the two male groups was not significant and it was concluded that neither of the two study units was more effective than the other in changing the attitudes of the White male students toward Negroes. The hypothesis of no significant difference in attitude change between the two corresponding male groups was accepted.

Hypothesis 5 was: There is no statistically significant difference in attitudes toward Negroes between the two corresponding female groups of Experimental Group A and Experimental Group B whether taught Study Unit A or Study Unit B. Appendix J of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for

¹Ibid., p. 580.

the two groups. Table XI contains the results of applying the "t" test for significance of the difference to the data of these two groups.

TABLE XI

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE
BETWEEN THE RAW SCORE GAINS OF FEMALES
IN GROUP A AND GROUP B

Sample	e Size	15	
Gain 1	Difference	69	
Mean 1	Difference	4.600	
Standa	ard Error	4.836	
Critic	cal Ratio ("t")	.951	

A gain difference of 69 raw score points was made by the females in Experimental Group B over the females in Experimental Group A. Group B was taught the study unit on American minority groups. An examination of Table D of Guilford revealed that the obtained "t" of .951 at 14 degrees of freedom was less than the necessary 2.145 for significance at the .05 level. Therefore, the difference between the gains of the two female groups was not significant and it was concluded that neither of the two study units was more effective than the other in changing the attitudes of the White female students toward Negroes. The hypothesis of no significant difference in attitude change between the two corresponding female groups was accepted.

Hypothesis 6 was: There is no statistically significant difference in attitudes toward Negroes between the two corresponding groups of

¹Ibid., p. 580.

students in the upper intelligence levels of Experimental Group A and Experimental Group B whether taught Study Unit A or Study Unit B. Appendix H of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for the two groups. Table XII contains the results of applying the "t" test for the significance of difference to the data of these two groups.

A gain difference of 46 raw score points was made by the students in the upper intelligence level of Experimental Group B over the students in the upper intelligence level of Experimental Group A. The subjects in Group B were taught the study unit on American minority group problems.

TABLE XII

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE BETWEEN
THE RAW SCORE GAINS OF THE UPPER INTELLIGENCE
LEVELS OF GROUP A AND GROUP B

Sample Size	10
Gain Difference	46
Mean Difference	4.600
Standard Error	5.504
Critical Ratio ("t")	.834

Reference to Table D of Guilford¹ showed that the obtained "t" of .834 at 9 degrees of freedom was less than the necessary 2.262 for significance at the .05 level. Therefore, the difference between the gains of the subjects in the two upper intelligence levels was not significant and it was concluded that neither of the two study units was more effective than the

¹<u>Ibid.</u>, p. 580.

other in changing the attitudes of the upper intelligence level students toward Negroes. The hypothesis of no significant difference in attitude change between the two groups was accepted.

Hypothesis 7 was: There is no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the middle intelligence levels of Experimental Group A and Experimental Group B whether taught Study Unit A or Study Unit B. Appendix H of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for the two groups. Table XIII contains the results of applying the "t" test for the significance of difference to the data of these two groups.

TABLE XIII

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE BETWEEN
THE RAW SCORE GAINS OF THE MIDDLE INTELLIGENCE
LEVELS OF GROUP A AND GROUP B

Sample Size	10	
Gain Difference	78	
Mean Difference	7.800	
Standard Error	6.730	
Critical Ratio ("t")	1.158	

A gain difference of 78 raw score points was made by the subjects in the middle intelligence level of Experimental Group B, which was taught the study unit on various American minority groups, over the subjects in the middle intelligence level of Experimental Group A. An examination of Table D of Guilford showed that the obtained "t" of 1.158 at 9 degrees

¹Ibid., p. 580.

of freedom was less than the necessary 2.262 for significance at the .05 level. Therefore, the difference between the gains of students in the two middle intelligence levels was not significant and it was therefore concluded that neither of the two study units was more effective than the other in changing the attitudes of these two groups toward Negroes. The hypothesis of no significant difference in attitude change between the two groups was accepted.

Hypothesis 8 was: There is no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the lower intelligence levels of Experimental Group A and Experimental Group B whether taught Study Unit A or Study Unit B. Appendix H of this study presents the attitude pretest-posttest raw scores, the gain and the gain difference for the two groups. Table XIV contains the results of applying "t" test for significance of difference to the data of these two groups.

TABLE XIV

TEST OF SIGNIFICANCE APPLIED TO THE DIFFERENCE BETWEEN
THE RAW SCORE GAINS OF THE LOWER INTELLIGENCE
LEVELS OF GROUP A AND GROUP B

Sample Size	10	
Gain Difference	12	
Mean Difference	1.200	
Standard Error	4.162	
Critical Ratio ("t")	.288	

In the three instances where corresponding intelligence levels

were compared the students in Group B showed a gain difference of raw score points over the students in Group A except for the lower intelligence level. As shown in Table XIV above the lower intelligence level students in Group A, which were taught the study unit on the American Negro, had a gain difference of 12 raw score points over the corresponding level in Group B. However, this gain was not significant since the obtained "t" of .288 at 9 degrees of freedom was less than the required 2.262 for significance at the .05 level.

Since the difference between the gains of students in the two lower intelligence levels was not statistically significant, it was concluded that neither of the two study units was more effective than the other in changing the attitudes of the lower intelligence level students toward Negroes. The hypothesis of no significant difference in attitude change between the two groups was accepted.

Summary

On the basis of the data analysis presented in this chapter, it was evident that neither of the two special study units was more effective than the other in producing a statistically significant difference in attitudes of White eleventh and twelfth grade students toward Negroes. This was true for the two experimental groups as a whole and for the various subgroups.

In every instance except one, the subjects who were taught Study Unit B, which dealt with the problems of American minority groups, showed a gain difference in raw score points over the subjects who were taught Study Unit A, which dealt with the problems of American Negroes. The one exception was between the subjects in the lower intelligence level when

the students in Experimental Group A showed a gain difference over the students in Experimental Group B. However, none of the gain differences proved to be statistically significant at the .05 level.

Both of the special study units did, however, produce highly significant differences in attitude change when the score differences of the two experimental groups were compared with the score differences of the control group. In this situation, both Experimental Group A and Experimental Group B showed attitude changes which were significant at both the .05 and .01 levels.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The problem of this investigation was to determine if either of two special study units was more effective than the other in changing the attitudes of White eleventh and twelfth grade students toward Negroes. The first of the two study units was designed to favorably change attitudes toward Negroes specifically. In this unit, Study Unit A, the class-room teacher used materials concerned with the problems faced by American Negroes. All class discussion was directed toward these problems. The second unit, Study Unit B, was designed to change attitudes toward various American minority groups. Materials dealing with minority groups were used and the classroom teacher directed all class discussion to include these groups.

To determine the effectiveness of these two units, three groups of 30 subjects each were established. One was designated Experimental Group A and was taught Study Unit A, another was designated Experimental Group B and was taught Study Unit B, and the third became the control group and was not taught in any way to change the attitudes of the subjects toward Negroes or minority groups.

Each of the three groups contained 15 males and 15 females. The subjects were paired by intellectual ability. This was accomplished by

Thorndike Intelligence Test (verbal form). In addition, the students were divided into three intelligence levels - upper, middle and lower. Each level contained 10 students - five males and five females. There were approximately the same number of Negro students present in each of the three groups. These individuals were not included in the statistical phase of the study.

To determine the degree of attitude change by the two experimental groups, an attitude survey was used as a pretest and posttest instrument. After the test was administered to all three groups, the students in Group A and Group B were taught Study Unit A and Study Unit B respectively as part of a Sociology course in which they had enrolled. At the conclusion of the two units, which took seven weeks to teach, all subjects were again administered the attitude survey. The amount of attitude shift for each subject was determined by subtracting the pretest scores from the posttest scores. This data became the basis for statistical analysis.

The statistical phase of the study consisted of testing eight null hypotheses to the effect that neither of the study units caused any significant attitude change toward Negroes of the subjects in Experimental Group A and Experimental Group B and between the following groups: (1) the two experimental groups; (2) the females of the two experimental groups; (3) the males of the two experimental groups; (4) the upper intelligence levels of the two experimental groups; (5) the middle intelligence levels of the two experimental groups; (6) the lower intelligence levels of the two experimental groups;

The "t" test for significance of difference was used in testing

each of the hypotheses. Significance was tested at the .05 level. Before calculating "t," the underlying assumptions of normality and homogeneity of variance were satisfied.

Specific findings of the study were:

There was a statistically significant difference in the attitudes of Experimental Group A toward Negroes after being taught Study Unit A. The difference was significant at both the .05 and .01 levels.

There was a statistically significant difference in the attitudes of Experimental Group B toward Negroes after being taught Study Unit B. The difference was significant at both the .05 and .01 levels.

There was no statistically significant difference in attitudes to-ward Negroes between the two experimental groups whether taught Study Unit A or Study Unit B. Experimental Group B did show a gain difference of 112 raw score points over Experimental Group A.

There was no statistically significant difference in attitudes toward Negroes between the two corresponding male groups of the two experimental groups whether taught Study Unit A or Study Unit B. The males in Experimental Group B did show a gain difference of 43 raw score points over the males in Experimental Group A.

There was no statistically significant difference in attitudes toward Negroes between the two corresponding female groups of the two experimental groups whether taught Study Unit A or Study Unit B. The females in Experimental Group B did show a gain difference of 69 raw score points over the females in Experimental Group A.

There was no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the upper intelligence level of the two experimental groups whether taught Study Unit A or Study Unit B. The subjects in the upper intelligence level of Experimental Group B did show a gain difference of 46 raw score points over the corresponding group in Experimental Group A.

There was no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the middle intelligence level of the two experimental groups whether taught Study Unit A or Study Unit B. The subjects in the middle intelligence level of Experimental Group B did show a gain difference of 78 raw score points over the corresponding group in Experimental Group A.

There was no statistically significant difference in attitudes toward Negroes between the two corresponding groups of students in the lower intelligence level of the two experimental groups whether taught Study Unit A or Study Unit B. The students in the lower intelligence level of Experimental Group A did show a gain difference of 12 raw score points over the corresponding group in Experimental Group B.

Conclusions

From the findings of this study the following conclusions were made:

- 1. The study unit which dealt only with the American Negro (Study Unit A) and the one which dealt with various minority groups (Study Unit B) were effective in favorably changing the attitudes of the subjects toward Negroes.
- There was no statistically significant difference between the amount of attitude change toward Negroes produced by Study Unit A and Study Unit B.
 - 3. A study of American Negroes was effective in favorably chang-

ing the attitudes of the subjects in Experimental Group A toward Negroes.

- 4. A study of various minority groups was effective in changing the attitudes of the subjects in Experimental Group B toward Negroes.
- 5. Since there was no significant difference between the amount of change in attitudes produced by the two study units it was concluded that it would be more educationally defensible to use the unit dealing with the minority groups rather than the one dealing only with Negroes since a greater possibility would exist of developing favorable attitudes toward other minority groups.

Recommendations

- It is recommended that research using a design similar to the one used in the present study be conducted to determine the most effective way to favorably change attitudes toward all minority groups.
- 2. It is recommended that research using a design similar to the one used in the present study be conducted to determine which of the two teaching methods produces greater retention of modified attitudes toward Negroes.
- 3. It is recommended that research using a design similar to the one used in the present study but extending over a longer period of time be conducted to determine the effectiveness of the two study methods and retention of attitude change.
- 4. It is recommended that instructional procedures designed to favorably change attitudes toward Negroes be developed and tested for curricular areas other than the social studies, particularly in the language arts.
 - 5. It is recommended that public schools include in the curric-

ulum regular instructional programs similar to either of the two special curricular units used in this study. It is further recommended that each senior high school student come in contact with such instructional programs at least once in his high school career, preferably in a general education course taken by all students prior to high school graduation. This could very well be done in a required course such as American history.

- 6. It is recommended that public schools include instructional programs dealing with minority groups at the elementary and junior high school levels.
- 7. It is recommended that the curriculum division of the Kansas State Department of Public Instruction take the leadership in developing appropriate study units covering Negro history, contributions of other minority groups, and basic values and human rights important in this society. The State Department should then encourage the inclusion of these instructional programs in Kansas schools.

BIBLIOGRAPHY

Books

- Allport, Gordon W. The Resolution of Intergroup Tensions. New York: The National Conference of Christians and Jews, 1952.
- . The Nature of Prejudice. Reading, Mass.: Addison-Wesley Publishing Company, 1954.
- Ardorno, T. W., et. al. The Authoritarian Personality. New York: Harper and Brothers, Publishers, 1949.
- Cook, L. A. <u>Intergroup Relations in Teacher Education</u>. Washington: American Council on Education, 1951.
- , ed. College Programs in Intergroup Relations. Washington:
 American Council on Education, 1950.
- Edwards, Allen L. Experimental Design in Psychological Research. New York: Rinehart & Company, Inc., 1950.
- . Statistical Analysis. New York: Rinehart & Company, Inc., 1946.
- . Statistical Methods for the Behavioral Sciences. New York: Rinehart & Company, Inc., 1954.
- . Techniques of Attitude Scale Construction. New York: Appleton-Century-Crofts, Inc., 1957.
- Garrett, Henry E. Statistics in Psychology and Education. New York: Longmans, Green and Company, 1949.
- Giles, Harry H. The Integrated Classroom. New York: Basic Books, Inc., 1959.
- Good, Carter V., ed. <u>Dictionary of Education</u>. New York: McGraw-Hill Book Company, Inc., 1959.
- Guilford, J. P. <u>Fundamental Statistics in Psychology and Education</u>. New York: McGraw-Hill Book Company, 1965.

- Jones, Arthur J.; Grizzell, E. D.; and Grinstead, Wren Jones. Principles of Unit Construction. New York: McGraw-Hill Book Company, Inc., 1939.
- Kagan, H. E. Changing the Attitudes of Christians Toward Jews. New York: Columbia University Press, 1952.
- Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart and Winston, Inc., 1965.
- McNemar, Quinn. Psychological Statistics. New York: John Wiley & Sons, Inc., 1955.
- Remmers, H. H. <u>Introduction to Opinion and Attitude Measurement</u>. New York: Harper & Brothers, 1954.
- Rose, Arnold M. Studies in Reduction of Prejudice. Chicago: American Council on Race Relations, 1948.
- , ed. Race Prejudice and Discrimination: Readings in Intergroup
 Relations in the United States. New York: Alfred A. Knopf, Inc.,
 1951.
- , and Rose, Caroline B. America Divided: Minority Group Relations in the United States. New York: Alfred A. Knopf, Inc., 1948.
- , eds. Minority Problems, A Textbook of Readings in Intergroup Relations. New York: Harper & Row, Publishers, 1965.
- Rose, Peter I. The Subject Is Race. New York: Oxford University Press, 1968.
- Smith, F. Tredwell. An Experiment in Modifying Attitudes Toward the Negro. New York: Bureau of Publications, Teachers College, Columbia University, 1943.
- Weinberg, George H., and Schumaker, John A. Statistics, An Intuitive

 Approach. Belmont, Calif.: Wadsworth Publishing Company, Inc.,
 1962.
- Williams, Robin M., Jr. The Reduction of Intergroup Tensions: A Survey of Research on Problems of Ethnic, Racial, and Religious Group Relations. New York: Social Science Research Council, 1947.

Articles and Periodicals

Bateman, Richard M. and Remmers, H. H. "The Relationship of Pupil Attitudes Toward Social Topics Before and After Studying the Subjects."

Further Studies in Attitudes, Series II. Layfayette, Ind.: Division of Educational Reference, Purdue University (1936), 27-42.

- Billings, Elizabeth L. "Influences of a Social Studies Experiment on Student Attitudes." School and Society, Vol. 46 (1942), 557-60.
- Daedalus, Vol. 4 (Fall, 1965), with a forward by Lyndon B. Johnson, 743.
- Dawson, George G. "Changing Students' Attitudes." <u>Improving College and University Teaching</u>, Vol. 14 (Summer, 1966), 200-03.
- Dressel, Paul. "Factors Involved in Changing the Values of College Students." Educational Record. Vol. 46 (Spring, 1965), 104-13.
- Edwards, Ralph. "The Development and Modification of the Elusive Attitude." Educational Forum, Vol. 28 (March, 1964), 355.
- Green, Robert L. "After School Integration What? Problems in Social Learning." The Personnel and Guidance Journal, Vol. 44 (March, 1966), 704.
- Hayes, Margaret L. and Conklin, May E. "Intergroup Attitudes and Experimental Change." Journal of Experimental Education, Vol. 22 (1953), 19-36.
- Himelhoch, Jerome. "A Personality Type Associated With Prejudice."

 Minority Problems. Rose, Arnold M. and Rose Caroline B., eds.

 New York: Harper & Row, Publishers, 1965.
- Morland, Kenneth. "Token Desegregation and Beyond." Minority Problems. Rose and Rose, eds.
- Nettler, Gwyne. "The Relationship Between Attitude and Information Concerning the Japanese in America." American Sociological Review, Vol. 11 (April, 1946), 177-190.
- Peregrine, Donald. "The Effect of Printed Social Stimulus Material Upon the Attitudes of High School Pupils Toward the Negro." Further Studies in Attitudes, Series II. Layfayette, Ind.: Division of Educational Reference, Purdue University (1936), 55-69.
- Petergorsky, David W. "On Combating Racism." Race Prejudice and Discrimination. Rose, Arnold M., ed. New York: Alfred A. Knopf, Inc., 1951.
- Prothro, Terry E. "Ethnocentrism and Anti-Negro Attitudes in the Deep South." The Journal of Abnormal and Social Psychology, Vol. 47 (January, 1952), 105-08.
- Remmers, H. H. "Propaganda in the Schools Do the Effects Last?" The Public Opinion Quarterly, Vol. 2 (April, 1938), 197-10.
- Remmers, H. H. and Morgan, C. L. "Changing Attitudes Toward A Racial Group." Further Studies in Attitudes, Series II. Layfayette, Ind.: Division of Educational Reference, Purdue University (1936), 109-14.

- Smith, Mapheus. "A Second Report on Changes in Attitudes Toward the Negro." School and Society, Vol. 57 (April 3, 1943), 388-92.
- Snider, Glenn R. "Educational Leadership, An Analysis." <u>The Bulletin</u> of the National Association of Secondary-School Principals, Vol. 38 (April, 1965), 80-94.
- Stagner, Ross. "Attitudes." <u>Encyclopedia of Educational Research</u>. Edited by Walter S. Monroe. New York: The Macmillan Company, 1950.
- Venditti, Frederick P. "Civil Rights Institutes Can Change Attitudes."
 Nations Schools, Vol. 78 (September, 1966), 23.
- Wanger, R. "High School Study of the Negro and His Problems." High School Teacher, Vol. 8 (1932), 104-06.
- Williams, Murray H. "Changes in Pupils' Attitudes Toward West African Negroes Following the Use of Two Different Teaching Methods." British Journal of Educational Psychology, Vol. 31 (November, 1961), 292-95.
- Young, Donald. "Some Effects of a Course in American Race Problems on the Race Prejudice of 450 Undergraduates at the University of Pennsylvania." The Journal of Abnormal and Social Psychology, Vol. 22 (1927-28), 235-42.

Pamphlets

- Noar, Gertrude. Prejudice and Discrimination. New York: Anti-Defamation League of B'nai B'rith, 1964.
- The Teacher and Improved Human Relations Education in the School. Prepared by the Human Relations Committee of the Oklahoma Curriculum Improvement Commission and the Southwest Center for Human Relations Studies. Oklahoma City: The Oklahoma State Department of Education, 1966.

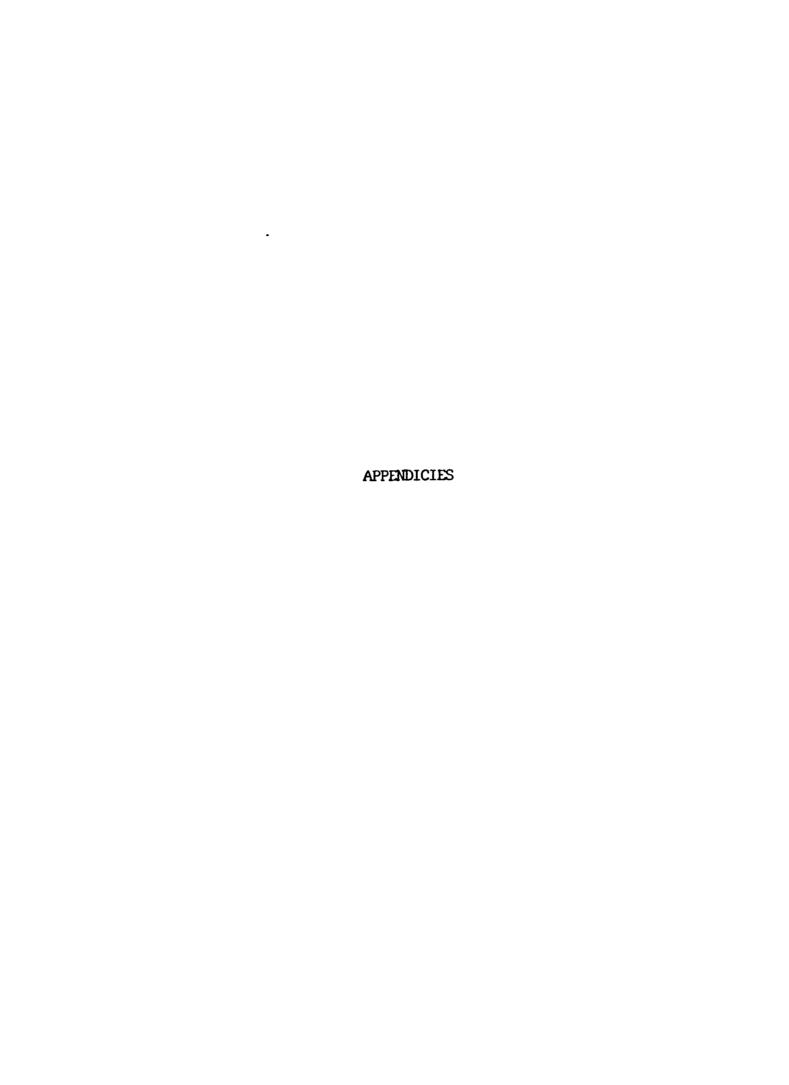
Dissertations

- Carmichael, Warren. "An Instrument to Measure Attitudes and Opinoins Toward Human Relation Issues." Unpublished doctoral dissertation, University of Oklahoma, 1968.
- Coppedge, Floyd Levon. "The Relationship of Selected Factors to Occupational and College Success." Unpublished doctoral dissertation, University of Oklahoma, 1965.
- Earnest, Carol Wayne. "The Effects of Two Teaching Methods in Modifying Ninth-Grade Pupils' Attitudes Toward Minority Groups." Unpublished doctoral dissertation, University of Oklahoma, 1968.

Hubbard, George Wendell. "The Effect of Three Teaching Methods on Achievement of Aural Recognition in Spanish by Third-Year Primary Pupils When Either Radio or Television is Utilized as the Instructional Medium." Unpublished doctoral dissertation, University of Oklahoma, 1964.

Other Unpublished Material

Consultative Center for School Desegregation, Southwest Center for Human Relations Studies, Norman, Oklahoma, "A Theoretical Continuum for Stages of School Desegregation." (Mimeographed.)



APPENDIX A

A SURVEY OF ATTITUDES TOWARD MINORITY GROUPS

PLEASE READ CAREFULLY: In this survey we are seeking to find out how you feel about certain minority groups which live in our city, state, and nation. The answers you check will in no way affect your grade in this class.

INSTRUCTIONS: Read each statement carefully. Indicate your feeling about each statement by putting a check (x) in the appropriate column. Be sure to put a check after each statement. Do not ask questions of anyone, just do the best you can.

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
*1.	All Americans have responsibility for helping Negro people better themselves.	************	-		
* 2.	Negroes are generally in- ferior to Whites.	-			
*3.	The dignity of the Negro is injured by segregation.			********************************	
*4.	Negroes moving into a pre- dominately White residental area lower its moral tone and standard of living.				
* 5.	Negroes tend to achieve about the same as Whites when they have equal opportunities.				
* 6.	It would be a mistake to employ Negroes as supervisors over Whites.				
* 7.	It should be permissible for Negro and White youth to date each other.				

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
*8.	The Negro has gained enough equal rights through recent civil rights legislation.	-			
* 9.	Poverty for many Negroes has been caused by past injus- tices and discriminations.			-	**************
*10.	I'm for equality, but I think the civil rights movement is allowing Negroes opportunities before they are ready to assume the necessary responsibilities.				
11.	The conditions of poverty found among many American Indians are the result of White man's injustices.		فموسوالمون		
12.	American Indians do not constitute a racial problem in our society.		angles (managene)	-	
13.	American Indians would improve themselves if they were given additional opportunities.	and the contract of the contra		-	to wearing the same of the sam
14.	American Indians, in general, lack ambition.				
15.	Tribal customs and culture inhibit advancement of American Indian youth.				
16.	Many American Indians do not desire modern standards of living.				
17.	The normal ability of the American Indian is inferior to that of other races.				-
18.	We should be just as con- cerned about the equal rights of the American Indian as we are with the Negro even though	ı			

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
	the Indian race represents a much smaller percentage of our population.	-			
19.	You cannot trust an American Indian's word.			-	
20.	The American Indian has not been accepted with full citi- zenship privileges and oppor- tunities.				
*21.	White people have every right to set themselves above and apart from Negroes.				
*22.	It is quite alright for young people of the White and Negro races to go to the same parties and dances.				<u></u>
*23.	Negroes should be satisfied with their present position in our society since their standard of living in the U.S. is higher than in other parts of the world.				
*24.	Laws forbidding marriage between the races are discriminatory.		·		
*25.	Negro groups are happier and have more freedom and initia- tive in their own separate communities.			-	
26.	Uneducated White people are superior to the uneducated people of the minority races.	***********			
*27.	Negro groups are pushing too fast for equal status with Whites.		*		
*28.	If a Negro moved next door to me, I would continue to live where I am living.				444

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
29.	It is time to rigidly restrict or completely stop immigration of all foreigners.				
*30.	Most members of the Negro race are patriotic and willing to make sacrifices for our country.	.		***********	
*31.	Negroes will be happier in a church whose congregation is composed of their own kind.		-		
*32.	All churches should permit Negroes to join their congre- gations.				
33.	The thousands of Jews who were killed by the Nazi during Hitler's reign was necessary to break the financial strangle hold the Jews had over Germany.				
* 34.	If a Negro were to join my church, I would continue to attend my church.				
*35.	Religious practices of Ne- groes refelct more emotion- alism than devotion to God.	Algorithm (Control of Control of			
36.	The recent opinion handed down by the Supreme Court banning prayers and Bible reading in public schools supports this nation's belief in God.	-			
37.	Religions such as Hinduism, Islam, etc., are not of Western culture and should not be practiced in our country.	-			
38.	A person's religion is his own personal business and should not affect his accep- tance in the community.				

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
*39.	Although I try, I just can't accept members of the Negro race as my social equal.				
*4O.	If Negroes are persecuted or discriminated against, it is basically their own fault.				
*41.	Poverty among Negroes is usually due to lack of self-control, will-power, or the desire to get ahead.		Name of the State		
*42.	Negroes have lower stan- dards of living mainly due to their lack of initiative.	****			
*43.	The greatest percentage of criminals comes from the Negro race because Negroes are criminally inclined.	-			
*44.	Negroes should be allowed to live where they please if they can afford the price of the purchase.				
*45.	All persons, regardless of race, religion, or sex have equal opportunities in our nation.				
* 46.	A man should be able to sell or trade to whom he pleases.	-			
*47.	Adequate opportunity has al- ways been available to Ne- groes if they are willing to work hard.				
*48.	Current television programming tends to "over play" the depressed, poverty stricken conditions of the Negro race in contrast to other minority groups.				
				—- -	

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
*49 .	Government low rent housing, which is mostly for Negroes, places an unfair tax burden on the American people.			Name of the latest of the late	
*50.	White people should be held responsible for the plight of Negroes, because Negroes do not control their own destiny.		-	***************************************	
*51.	Desegregation of schools tends to lower the academic standards of schools and cause White children to learn below their potential.	es			
* 52.	All children should be taught the basic principles of human relations so that they can develop appropriate attitudes toward Negroes.				
* 53.	The Supreme Court was wrong in the 1954 ruling that Negro schools, separate but equal to White schools, were in violation of the U. S. Constitution				
* 54.	If given the same opportuni- ties, Negroes can learn as easily as Whites.				
*55.	Negro teachers will find it difficult to discipline White students because of their apprehension over contact with White parents, thus they will tend to avoid such behavior.	l .			
* 56.	Group intelligence tests tend to be more difficult for Negro pupils from a poor and cultur- ally deprived home.		-		
* 57.	Developing knowledge and under standing of human rights is taught by most public schools.		***************************************		

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
* 58.	One of the major obstacles to improved human relations in education is teacher attitudes toward Negro students.	·			
* 59.	Segregated schools exist only in the South.			-	
*60 .	Negro teachers should be integrated into formerly all White faculties as schools are desegregated.				
*61.	White people founded, develope and advanced civilization and culture in America. Therefore they should determine how we live and conduct our affairs.		***************************************	-	
*62.	Equality of opportunity is impossible when there is racial segregation.				
* 63.	Miscegenation (interracial marriage) laws are necessary to prevent massive intermarriage between Whites and Negroes.				
*6 4 .	There is a great difference in Martin Luther King's approa- to solving civil rights issues and Stokely Carmichael's mili- tancy.	1			·
* 65.	The courts have become too lenient with Negro law violators.		-		
*66.	I believe laws forcing "open housing" are constitutional.				
67.	Justice for the individual appears to be proportional to ones financial resources.				
* 68.	The courts are fair today and all can expect to receive justice.		**		

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
*69.	Public laws supporting restricted housing should be permitted.			***********	•
* 70.	Negroes get preferential treatment in the courts today.				***************************************
*71.	The federal government should let every state determine its own laws regarding minority group peoples.				
*72.	Most of the advances made during recent years in de- segregation are the direct result of the federal gov- ernment, and would not have been accomplished by individ- ual states.			<u> </u>	
* 73.	It is time for the government to increase its pace in the area of civil rights legisla- tion because public opinion polls show a rise in the per- centage of people who believe that the pace toward equal rights is going too slow.				
* 74.	Government should assert its power and authority and put an end to civil rights demonstrations.				
* 75.	The federal government is wrong in forcing the owner and/or the operator of a business to open his establishment to use by Negroes.				
76.	You can legislate laws, but you can't legislate morals.				
*77.	States rights are of a higher order than civil rights.				

	STATEMENTS	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
* 78.	The defeat of some civil rights legislation during the 1966 session of Congress was bad because the Civil Rights movement needed more support.	-			
79.	Our society needs fewer welfare programs today and more emphasis put on free enterprise system.				
80.	Enough has been said about minority group rights. Its time to recognize the majority group rights.	/			

^{*} These items were selected for use in this study.

APPENDIX B

STUDY UNIT A

"Negroes In America"

Lesson Plan I

The Reasons for and Effects of Prejudice and Discrimination Against Negroes.

A. Objectives

- 1. To help students develop a workable definition of prejudice and discrimination and to help them understand the difference between the two terms.
- To help students understand why the White race in America developed prejudices against Negroes and how these prejudiced feelings have been made manifest with acts of discrimination.
- 3. To show the effects of prejudice and discrimination on Negroes and Whites.

B. Materials

- 1. Roots of Prejudice, by Arnold M. Rose
- 2. Film: "The High Wall"
- 3. A Pictorial History of the American Negro, by Langston Hughes and Milton Meltzer.
- 4. Children and Discrimination (pamphlet), by Dr. Benjamin Spock
- 5. Film: "Boy: An Experience in the Search for Identity"
- "Psychological Effects of Segregation" (one-page paper), by Kenneth B. Clark.
- 7. "Segregation Two-Edged Sword" (reprint), by Milton M. Gordon and John P. Roche

C. Instructional Procedure

- 1. Introductory lecture on the unit.
- Require each student to write a description of what the "American Dream" means to him. Have a few students read their papers in class and discuss whether or not these "dreams" are realizable by Negroes in present-day America.
- 3. Teacher lecture on the nature of prejudice and discrimination.
 - a. Show film: "Boy: An Experience in the Search for Identity."
 - b. Discussion of film with emphasis on the meaning of bigotry, prejudice and discrimination.
- 4. Provide each student with a copy of Roots of Prejudice, and assign for overnight reading.
 - a. Require each student to write a half-page summary of one major topic in the booklet.
 - b. Class discussion with emphasis on soliciting students reaction to the booklet material on Negroes.
- 5. Have each student write a reaction paper to the following quote by John Stuart Mill (must be concerned with Negro conduct and character):

"Of all the vulgar modes of escaping from the consideration of the effects of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences."

- a. Class discussion on these papers.
- 6. Show film, "The High Wall," and follow with class discussion re-emphasizing that prejudice is contagious. Have students give examples of discriminatory acts against Negroes which they have personally viewed.
- 7. Use opaque projector to show class selected pages from the book, A Pictorial History of the American Negro.
 - a. With the use of this book, which contains both pictures and written material, the teacher will guide the students through a brief history of the American Negro pointing out how the prejudiced attitudes of Whites toward Negroes developed,

were reinforced and continue to the present time.

- Provide each student with copies of "Psychological Effects of Segregation" and "Segregation Two-Edged Sword." Assign for overnight reading.
 - a. Class discussion over the two papers.
- 9. Teacher summary of lesson, recapping major points covered.

Lesson Plan II

Prevalent Misconceptions About the Negro Race.

A. Objectives

- 1. To review some of the misconceptions about Negroes commonly held by Whites.
 - To help students develop an understanding that these misconceptions are supported and continued by feelings of racial prejudice and acts of discrimination.
 - 3. To show that achievement is the result of individual abilities, talents and efforts and not a matter of race.

B. Materials

- 1. Filmstrip: "Exploding the Myths of Prejudice"
- 2. The Myths of Racial Integration (a pamphlet), by Naomi Levine.
- 3. "Inconsistencies in Attitudes Toward Negro Housing" (reprint), by Arnold M. Rose.
- 4. "Race and Ability," <u>Time</u> magazine essay, September 29, 1967.
- 5. Film: "The Victims"
- 6. "Pupils Learn Well in a Mixed-Race School" (reprint), by James C. Tanner.

- 1. Teacher introduction of Lesson Plan II and lecture on relationship of Lesson Plan I and Lesson Plan II.
- 2. Distribute reading material for this lesson.

- 3. Class discussion on <u>Myths of Racial Integration</u> with emphasis on soliciting the students degree of acceptance of the ideas presented.
- 4. Discussion groups on the question: "Are a school's academic standard lowered when Negro students attend?"
 - a. Basic reading "Pupils Learn Well in a Mixed-Race School."
- 5. Show filmstrip, "Exploding the Myths of Prejudice" (selected frames).
 - a. Discussion groups on the question: "Are prejudiced attitudes founded on facts or myths?"
 - b. Class discussion with group leaders reporting consensus of groups on problem question.
- 6. Class discussion on White attitudes about Negroes moving into White neighborhood.
 - a. Basic reading "Inconsistencies in Attitudes Toward Negro Housing."
- 7. Class discussion on the relationship between race and ability.
 - a. Basic reading "Race and Ability."
- 8. Show film, "The Victims," and follow with class discussion.
- 9. Evaluate students over first two lessons.

Lesson Plan III

The Status of the American Negro in Selected Areas of Our Society.

A. Objectives

- 1. To help students become knowledgeable of the Negro's status in the areas of religion, education, economics, government and law.
- 2. To help students understand that the Negro's low status in these areas is the result of prejudice and discrimination and that this condition is undemocratic and inhumane.

B. Materials

1. Wee Pals (cartooned pamphlet), by Morrie Turner.

- 2. Film: "Do They Really Want Us"
- 3. Film: "All the Way Home"
- 4. "American Negro and His Government" (article), by Emmet E. Dorsey.
- 5. "The Church Refuge in a Hostile World" (article), Kansas City Star, September 29, 1968.
- 6. Television special: "Saturday Adoption"
- 7. "Patterns of Job Discrimination Against Negroes" (article), by Herbert Hill.
- 8. Equality of Opportunity: Is it Possible in Education? (pamphlet), by Laverne L. Cunningham.

- 1. Teacher introduction of Lesson Plan III and lecture on the relationship of Lesson Plan III and Lesson Plan III.
- 2. Use opaque projector to show pamphlet, Wee Pals. Have students interpret concepts of the various cartooned human relations situations. Guide class into a discussion of each concept and its implications for American society.
- 3. Show film, "Do They Really Want Us"
 - a. Small group discussion of film followed by class discussion of film.
- 4. Show film, "All the Way Home"
 - a. Have students write a brief report on what they feel is the primary objective of the film.
 - b. Panel discussion on the primary objective of the film and whether it was realistic or prejudiced in favor of Negroes.
- 5. Distribute article, "The American Negro and His Government," and assign for overnight reading.
 - a. Class discussion on the article.
- 6. Distribute article, "The Church Refuge in a Hostile World," and assign for overnight reading.
 - a. Have students list three major points made in the article. Develop class discussion based on these points.

- 7. Have students view television special, "Saturday Adoption."
 - a. Solicit student reaction to the show.
- 8. Distribute article, "Patterns of Job Discrimination Against Negroes," and assign for overnight reading.
 - a. Class discussion on the article.
- 9. Distribute pamphlet, Equality of Opportunity: Is it Possible in Education?"
 - a. Assign for overnight reading and have students write a definition of equal educational opportunity and whether or not they feel that American Negroes are provided this opportunity and why.
- 10. Group discussions on the Negro's status in the various areas studied, why this situation exists and how the members of the class feel about these conditions.

Lesson Plan IV

Contributions of the American Negro.

A. Objectives

- 1. To show that Negroes have made numerous significant contributions in many areas of our culture.
- 2. To acquaint students with Negroes of historical importance.
- 3. To give evidence that many popular notions about Negro contributions are myths and the result of racial prejudice.

B. Materials

- 1. Film: "14th Generation Americans"
- 2. Sound Filmstrip: "Minorities Have Made America Great" (Use only those two filmstrips dealing exclusively with the American Negro.)
- 3. Film: "Felicia"
- 4. Record: "Famous Negroes and Their Contributions"
- 5. "The Black Athlete" (article), Sports Illustrated, a series appearing July 1, 8, 15, 22, and 19, 1968.

- 1. Teacher introduction of Lesson Plan IV and lecture on the relationship of Lesson Plan III and Lesson Plan IV.
- 2. Teacher lecture on the contributions which have been made by American Negroes.
- 3. Show film, "14th Generation Americans."
 - a. Class discussion on what the film means by 14th generation Americans.
- 4. Show sound filmstrip, "Minorities Have Made America Great" (Only those filmstrip dealing exclusively with Negro accomplishments).
 - a. Group discussion on the accuracy of the filmstrip.
- 5. Show film, "Felicia."
 - a. Class discussion over the film.
- 6. Play record, "Famous Negroes and Their Contributions."
- 7. Teacher lecture on the article, "The Black Athlete."
- 8. Panel discussion on whether or not Negroes have significantly contributed to the advancement of American society.
- 9. Evaluation of students on Lesson Plans III and IV.

Lesson Plan V

Human Rights and the American Negro.

A. Objectives

- 1. To help students better understand the meaning of human rights.
- To help students understand that human rights should not be restricted to certain segments of society on the basis of race.
- 3. To help students understand how Negroes have been denied human rights since they were first brought to this country as slaves.
- 4. To help students understand the dangers which lie ahead for our society if Negroes are not given the opportunity to enjoy human rights.

B. Materials

- 1. Film: "Which Way for Human Rights"
- 2. For Fundamental Human Rights, published by the Department of Public Information, United Nations.
- 3. "A Tentative Statement on Education and Human Rights," Human Rights Commission of Phi Delta Kappa.
- 4. The Negro in 20th Century America, by J. Hore Franklin and Isidore Starr.

C. Instructional Procedure

- 1. Teacher introduction of Lesson Plan V and lecture on relationship of Lesson Plan IV and Lesson Plan V.
- 2. Distribute reading materials.
- 3. Class discussion of For Fundamental Human Rights. Emphasize why an international body such as the United Nations should be concerned with human rights, and consider the question: "Are American Negroes denied human rights as defined by this document?"
- 4. Small group discussions on "A Tentative Statement on Education and Human Rights" with an emphasis on defining human rights and the relationship between attitudes about human rights and overt behavior toward Negroes.
- 5. Have students write a short statement on the rights which Negroes have struggled for as pointed out in <u>The Negro in</u> 20th Century America.
- 6. Show film, "Which Way for Human Rights."
 - a. Class discussion of film.

Lesson Plan VI

The Civil Rights Movement.

A. Objectives

- 1. To provide a historical background of the Civil Rights movement.
- 2. To develop an understanding of Civil Rights legislation.
- 3. To help students understand why a Civil Rights movement was inevitable and necessary.

B. Materials

- 1. Filmstrip: "Minorities Have Made America Great"
- 2. Civil Rights and Minorities, by Paul Hartman.
- 3. Filmstrip: "Integration's 10-Year March"
- 4. <u>Civil Rights Digest</u>, A United States government publication.

- 1. Teacher introduction of Lesson Plan VI and lecture on the relationship of Lesson Plan V to Lesson Plan VI.
- 2. Distribute reading material.
- 3. Lecture on the history of the Civil Rights movement.
- 4. Review those frames in "Minorities Have Made America Great" which deal with the Negro's struggle for Civil Rights.
- 5. Show filmstrip: "Integration's 10-Year March."
 - a. Class discussion.
- 6. Lecture and discussion on <u>Civil Rights and Minorities</u> and <u>Civil Rights Digest</u>.
- 7. Teacher summary of study unit and require students to write a short paper on what they gained from the unit and suggestions for improvements.
- 8. Evaluate students on Lesson Plans V and VI.
- 9. Posttest.

APPENDIX C

STUDY UNIT B

"Minority Groups in America"

Lesson Plan I

The Reasons for and Effects of Prejudice and Discrimination Against Minority Groups.

A. Objectives

- 1. To help students develop a workable definition of prejudice and discrimination and to help them understand the difference between the two terms.
- 2. To help students understand why prejudices against minority groups have developed in America and how these prejudiced feelings have been made manifest with acts of discrimination.
- 3. To show the effects of prejudice and discrimination on members of minority and majority groups.

B. Materials

- 1. Roots of Prejudice, by Arnold M. Rose
- 2. Film: "The High Wall"
- 3. <u>Prejudice and Society</u> (pamphlet), by Earl Raab and Seymour Lipset.
- "Gentle People of Prejudice" (reprint), by H. A. Overstreet.
- 5. Film: "Cast the First Stone"

- 1. Introductory lecture on the unit.
- 2. Require each student to write a description of what the

"American Dream" means to him. Have a few students read their papers in class and discuss whether or not these dreams are realizable by all people in present-day America.

- 3. Teacher lecture on the nature of prejudice and discrimination.
 - a. Show film, "Cast the First Stone."
 - b. Class discussion of film with emphasis on the meaning of bigotry, prejudice and discrimination.
- 4. Provide each student with a copy of Roots of Prejudice and assign for overnight reading.
 - a. Require each student to write a half-page summary of one major topic in the booklet.
 - b. Class discussion with emphasis on soliciting students' reaction to the booklet material on minority groups.
- 5. Have each student write a reaction paper to the following quote by John Stuart Mill (can be concerned with the conduct and character of any minority group):

"Of all the vulgar modes of escaping from the consideration of the effects of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences."

- a. Class discussion on these papers.
- 6. Show film, "The High Wall," and follow with class discussion re-emphasizing that prejudice is contagious. Have students give examples of discriminatory acts against minority groups which they have personally viewed.
- 7. Provide each student with a copy of <u>Prejudice and Society</u> and assign for overnight reading.
- 8. Provide each student with a copy of "Gentle People of Prejudice" and assign for overnight reading.
 - a. Group discussions of this paper.
- 9. Teacher summary of lesson, recapping major points covered.

Lesson Plan II

Prevalent Misconceptions About Minority Groups.

A. Objectives

- To review some of the misconceptions about minority groups in America.
- 2. To help students develop an understanding that these misconceptions are supported and continued by feelings of prejudice and acts of discrimination.
- 3. To show that achievement is the result of individual abilities, talents and efforts and is not a matter of group membership.

B. Materials

- 1. Filmstrip: "Exploding the Myths of Prejudice" (selected frames).
- 2. Film: "Boundary Lines"
- 3. "Don't Let Stereotypes Warp Your Judgement" (reprint), by Robert L. Heilbroner.
- 4. "Why Did They Do It?" (reprint), by William Peters.
- 5. ABC's of Scapegoating (pamphlet), by Gordon W. Allport.
- 6. "Not Like Other Children" (reprint), by Bernard Asbell.

- 1. Teacher introduction of Lesson Plan II and lecture on relationship of Lesson Plan I and Lesson Plan II.
- 2. Distribute reading material for this lesson.
- 3. Class discussion on "Don't Let Stereotypes Warp Your Judgement" with emphasis on stereotyped opinions which the students themselves hold.
- 4. Discussion groups on the question: "Am I Guilty of Scape-goating?"
 - a. Basic reading ABC's of Scapegoating.
- 5. Show filmstrip, "Exploding the Myths of Prejudice" (selected frames).
 - a. Discussion groups on the question: "Are prejudiced attitudes founded on facts or myths?"

- b. Class discussion with group leaders reporting consensus of groups on problem question.
- 6. Class discussion on how prejudiced attitudes can result in acts of violence against innocent people.
 - a. Basic reading "Why Did They Do It?"
- 7. Class discussion on the relationship between ability and group membership.
 - a. Basic reading "Not Like Other Children."
- 8. Show film, "Boundary Lines," and follow with class discussion.
- 9. Evaluate students over Lesson Plan I and Lesson Plan II.

Lesson Plan III

The Status of Minority Groups in Selected Areas of Our Society.

A. Objectives

- 1. To help students become knowledgeable of the status of minority groups in the areas of religion, education, economics, government and law.
- 2. To help students understand that the low status held by minority group members in these areas is the result of prejudice and discrimination and that this condition is undemocratic and inhumane.

B. Materials

- 1. "The Pattern of Job Discrimination Against Negroes" (article), by Herbert Hill.
- 2. "Discrimination In American Justice" (article), U. S. Commission on Civil Rights.
- 3. "Law and the American Indian" (article), U. S. Commission on Civil Rights.
- 4. "The American Negro and His Government" (article), by Emmet E. Dorsey.
- 5. "The Political Role of Mexican-Americans" (article), by Gladwin Hill.
- "The Culturally Deprived Child: A New View" (article), by Frank Riessman.

- 7. Film: "The Chosen People"
- 8. Filmstrip: "Mexican Town"

C. Instructional Procedure

- 1. Teacher introduction of Lesson Plan III and lecture on the relationship of Lesson Plan II and Lesson Plan III.
- 2. Distribute reading material.
- 3. Have students write a brief synopsis of each article.
- 4. Divide students into groups and assign each group two of the articles.
 - a. Have each group present a panel discussion on assigned articles.
- 5. Show filmstrip, "Mexican Town."
 - a. Class discussion ever filmstrip.
- 6. Show film, "The Chosen People."
 - a. Have students write a brief report on what they feel is the primary objective of the film.

Lesson Plan IV

Contributions of America's Minority Proups.

A. Objectives

- 1. To show that minority groups have made numerous significant contributions in many areas of our culture.
- 2. To acquaint students with historically important members of minority groups.
- 3. To give evidence that many popular notions about minority group contributions are myths and the result of prejudice.

B. Materials

- 1. A Nation of Immigrants, by John F. Kennedy.
- 2. Film: "One People"
- 3. Filmstrips: "Minority Groups Have Made America Great"

- a. Jews
- b. Italians
- c. Germans
- d. Irish

C. Instructional Procedure

- 1. Teacher introduction of Lesson Plan IV and lecture on relationship of Lesson Plan III and Lesson Plan IV.
- 2. Teacher lecture on contributions made by members of minority groups.
- 3. Library reading assignment on contributions by minority group members.
- 4. Show film, "One People."
 - a. Class discussion of film.
- 5. Show each of the four filmstrips from "Minority Groups Have Made America Great."
 - a. Have group discussion after each filmstrip is shown.
 - b. Require students to write a short paper on the contributions made by members of a minority group.
- 6. Teacher summary of lesson.
- 7. Evaluate students over Lesson Plan III and IV.

Lesson Plan V

Human Rights and American Minority Groups.

A. Objectives

- 1. To help students better understand the meaning of human rights.
- 2. To help students understand that human rights should not be restricted to individuals because they are members of minority groups.
- 3. To help students understand how minority group members have been denied human rights in this country.
- 4. To help students understand the dangers which lie ahead for our society if minority groups are not given the opportunity to enjoy human rights.

B. Materials

- 1. Film: "Which Way for Human Rights"
- 2. For All Humanity, Report of the Committee on Human Rights of the National Citizens' Commission on International Cooperation.
- 3. A Living Bill of Rights (pamphlet), by William O. Douglas.

- 1. Teacher introduction of Lesson Plan V and lecture on the relationship of Lesson Plan IV and Lesson Plan V.
- 2. Distribute selected sections from For All Humanity and A Living Bill of Rights.
- 3. Teacher lecture on definition of human rights.
- 4. Class discussion on <u>For All Humanity</u> with emphasis on those rights reserved for all people by the United Nations' Universal Declaration of Human Rights.
- 5. Teacher lecture and class discussion on the freedoms guaranteed Americans by the Bill of Rights as presented in \underline{A} Living Bill of Rights.
- 6. Show film, "Which Way for Human Rights."
 - a. Class discussion of film.
- 7. Drawing from material covered in this study unit, have students submit on paper one specific example of how a member, or members, of a minority group has been denied a human right in America.
- 8. Teacher summarize study unit and have students write a short paper on what they gained from the unit and suggestions for improvements.
- 9. Evaluate students over Lesson Plan V.
- 10. Posttest.

APPENDIX D

LORGE-THORNDIKE INTELLIGENCE TEST (VERBAL FORM) SCORES
AND PERCENTILES FOR THE THREE GROUPS

		Experimental Group A			E	perimenta Group B	1	Control Group			
Levels	Subjects	Sex	Raw Score	Percen- tile	Sex	Raw Score	Percen- tile	Sex	Raw Score	Percentile	
	1	F	76	99	F	66	98	M	78	99	
	2	М	66	98	F	65	98	F	74	99	
	3	F	64	97	M	64	96	M	63	97	
	4	M	61	96	F	67	96	M	63	97	
Jpper	5	M	63	94	М	58	93	F	59	95	
Level	6	F	56	91	M	64	91	M	60	95	
	7	F	54	88	F	56	91	F	57	92	
	8	M	52	85	F	62	88	M	57	92	
	9	M	52	85	M	53	87	\mathbf{F}	54	88	
	10	F	52	85	M	52	85	F	52	85	
	11	F	51	83	М	60	85	F	51	83	
	12	M	51	83	F	59	83	F	51	83	
	13	M	51	82	F	51	83	M	51	83	
	14	M	51	82	F	49	80	M	50	82	
Middle	15	F	49	80	M	49	80	F	53	82	
Level	16	F	57	80	М	49	80	F	48	78	
	17	M	48	78	F	47	75	F	47	75	
	18	M F	48	78	М	47	75	M	46	73	
	19	F	48	73	F	46	73	M	45	70	
	20	M	48	73	М	42	60	M	45	70	

APPENDIX D (continued)

		Experimental Group A			E	operimenta Group B	1	Control Group		
Levels	Subjects	Sex	Raw Score	Percen- tile	Sex	Raw Score	Percen- tile	Sex	Raw Score	Percen- tile
	21	М	45	65	F	40	55	F	42	60
	22	F	40	55	F	39	53	M	40	55
	23	F	38	50	M	цц	45	M	40	55
	24	M	37	45	M	37	45	F	1†O	55
Lower	25	F	36	40	M	39	40	F	37	45
Level	26	F	35	38	F	35	38	F	37	45
	27	M	34	35	F	39	30	M	36	40
	28	M	31	25	M	33	38	F	34	35
	29	F	31	25	F	31	25	M	32	28
	30	M	28	25	M	30	25	M	28	18

131-

APPENDIX E

ATTITUDE PRETEST AND POSTTEST RAW SCORES AND DIFFERENCES
BETWEEN THEM FOR THE THREE GROUPS

	Sub- jects				Experim Group				Experim Group				Conta	rol Group	p
Levels		*S	Pre- test	Post- test	Gain	* S	Pre- test	Post- test	Gain	*S	Pre- test	Post- test	Gain		
	1	F	191	200	9	F	192	188	- 4	М	133	132	- 1		
	2	M	124	141	17	F	167	181	14	F	158	169	11		
	3	F	1.92	196	4	M	144	153	9	М	159	158	- 1		
	4	M	2:00	196	- 4	F	184	186	2	M	103	110	7		
Upper	5	M	1.61	140	-21	M	158	172	14	F	173	168	- 5		
Level	6 7	F	1.73	211	38	M	143	152	9	M	176	177	+ 1		
	7	F F	J.86	189	3	F	178	192	14	F	157	157	0		
	8	M	178	201	23	F	183	209	26	M	161	160	- 1		
	9	M	143	163	20	M	130	164	34	F	180	178	- 2		
	10	F	187	187	0	М	154	171	17	F	172	167	- 5		
	11	F	132	123	- 9	М	203	189	-14	F	188	186	- 2		
	12	M	154	178	24	F	176	182	6	F	190	204	14		
	13	M	155	171	16	F	161	190	29	M	178	166	-12		
	14	M	136	143	7	F	157	193	36	M	135	137	2		
Middle	15	F	189	196	7	M	140	153	13	F	179	174	- 5		
-	16	F	195	200	5	M	195	208	13	F	166	175	9		
	17	M	.148	136	-12	F	149	186	37	F	169	170	1		
	18	F	155	173	18	M	187	190	3	M	198	193	- 5		
	19	F	182	.182	0	F	175	197	22	M	183	190	7		
	20	M	174	209	35	M	143	167	24	M	197	201	4		

APPENDIX E (continued)

Levels		Experimental Group A				Experimental Group B				Control Group			
	Sub- jects	#S	Pre- test	Post- test	Gain	*S	Pre- test	Post- test	Gain	* S	Pre- test	Post- test	Gain
	21	М	180	175	- 5	F	152	173	21	F	168	170	2
	22	F	152	181	29	F	115	145	30	M	166	162	_ 4
	23	F	159	193	34	M	122	137	15	M	124	128	4
	24	M	137	148	11	M	153	165	12	F	143	148	5
Lower	25	F	154	170	16	M	152	164	. 12	F	146	150	4
Level	26	F	140	151	11	F	152	165	13	F	139	137	- 2
	27	M	154	165	11	F	151	150	- 1	M	140	137	- 3
	28	M	139	145	6	M	175	172	- 3	F	168	158	-10
	29	F	135	149	14	F	151	154	3	M	149	160	11
	30	М	158	164	6	M	135	154	19	M	143	149	6
Totals				 	313				425		7	· · · · · · · · · · · · · · · · · · ·	30

*****Sex

Net Gain Difference Between Groups and Sub-Groups:

- 1. Group A (313) Control Group (30) = 283
- 2. Group B (425) Control Group (30) = 395
- 3. Group B (425) Group A (313) = 112
- 4. Males, Group B (177) Males, Group A (134) = 43
- 5. Females, Group B (248) Females, Group A (179) = 69
- 6. Upper Level, Group B (135) Upper Level, Group A (89) = 46
- 7. Middle Level, Group B (169) Middle Level, Group A (91) = 78
- 8. Lower Level, Group A (133) Lower Level, Group B (121) = 12

APPENDIX F

ATTITUDE PRETEST-POSTTEST RAW SCORES
THE GAINS AND DIFFERENCES BETWEEN THE GAINS
FOR EXPERIMENTAL GROUP A AND THE CONTROL GROUP

			Experiment Group A	al			Control			
Levels	Sub- jects	*S	Pre- test	Post- test	Gain	* S	Pre- test	Post- test	Gain	Difference (Gain A - Gain C)
	1 2	F	191	200	9	М	133	132	- 1	10
	2	M	124	141	17	F	158	169	11	6
	3	F	192	196	4	M	159	158	- 1	5
	4	М	200	196	- 4	M	103	110	7	-11
Upper	5	M	161	140	-21	F	173	168	- 5	-1 6
Level	6	F	173	211	38	M	176	177	1	37
	7	F	186	189	3	F	157	157	0	3
	8	M	178	201	23	M	161	160	- 1	24
	9	M	143	163	20	F	180	178	- 2	22
	10	F	187	187	0	F	172	167	- 5	<u>.</u>
	11	F	132	123	- 9	F	188	186	- 2	- 7
	12	M	154	178	24	F	190	204	14	10
	13	M	155	171	16	M	178	166	-12	28
	14	М	136	143	7	M F	135	137	2	5
Middle	15	F	189	196	7	F	179	174	- 5	12
Level	16	F	195	200	5	F F	166	175	9	_ 4
	17	M	148	136	-12	F	169	170	1	-13
	18	F	155	173	18	M	198	193	- 5	23
	19	F	182	182	0	М	183	190	7	- 7
	20	М	174	209	35	М	197	201	4	31

APPENDIX F (continued)

			Experime Group				Control (Group		
Levels	Sub- jects	* S	Pre- test	Post- test	Gain	* S	Pre- test	Post- test	Gain	Difference (Gain B - Gain C)
	21	М	180	175	- 5	F	168	170	2	- 7
	22	F	152	181	29	М	166	162	- 4	33
	23	F	159	193	34	M	124	128	4	30
T me sous	24 25	M F	137 154	148 170	11	F F	143 146	148 150	5 4	6 12
Lower Level	25 26	F	140	151	16 13	F	139	137	- 2	13
DEAGT	27	M	154	165	11 11	M	140	137	- 3	14
	28	M	139	145	6	F	168	158	-10	16
	29	F	135	149	14	M	149	160	11	3
	30	M	158	164	6	M	143	149	6	Ŏ
Totals					313				30	283

^{*}Sex

APPENDIX G

ATTITUDE PRETEST-POSTTEST RAW SCORES
THE GAINS AND DIFFERENCES BETWEEN THE GAINS
FOR EXPERIMENTAL GROUP B AND THE CONTROL GROUP

			Experimen Group E		·	Co				
Levels	Sub- jest	*S	Pre- test	Post- test	Gain	*S	Pre- test	Post- test	Gain	Difference (Gain B - Gain C)
	1	F	192	188	- 4	М	133	132	- 1	~ 3
	2	F F	167	181	14	F	158	169	11	3
	3	M	144	1.53	9	M	159	158	- 1	10
	4	F	184	186	2	M F	103	110	7	- 5
Upper	5	M	158	172	14	F	173	168	- 5	19
Level	6	M	143	152	9	M	176	177	1	8
	7	M F F	178	192	14	F	157	157	0	14
	8	F	183	209	26	M	161	160	- 1	27
	9	M	130	164	34	F F	180	178	- 2	36
	10	M	154	171	17	F	172	167	- 5	22
	11	М	203	189	-14	F	188	186	- 2	-12
	12	F F F	176	182	6	F	190	204	14	- 8
	13	F	1.61	190	29	M	178	166	-12	41
	14	F	157	193	36	M	135	137	2	34
Middle	15	M	140	153	13	F	179	174	- 5	18
Level	16	M F	195	208	13	F	166	175	9	4
	17	F	149	186	37	F	169	170	1.	
	18	M	187	190	3	M	198	193	- 5 7	8
	19	F	175	197	22	M	183	190		15 20
	20	M	143	167	24	M	197	201	4	20

APPENDIX G (continued)

Levels			Experimental Group B					Group		
	Sub- jects	#S	Pre- test	Post- test	Gain	#S	Pre- test	Post- test	Gain	Difference (Gain B - Gain C)
	21	F	152	173	21	F	168	170	2	19
	22	F	115	145	30	M	166	162	- 4	34
	23	М	122	137	15	M	124	128	4	nī
	24	M	153	165	12	F	143	148	5	7
Lower	25	M	152	164	12	F	146	150	4	8
Level	26	F	152	165	13	F	139	137	- 2	15
	27	F	151	150	- 1	M	140	137	- 3	2
	28	M	175	172	- 3	F	168	158	-10	7
	29	F	151	154	3	M	149	160	11	- 8
	30	M	135	154	19	M	143	149	6	13
Totals					425				30	395

^{*}Sex

APPENDIX H

ATTITUDE PRETEST-POSTTEST RAW SCORES
GAINS AND DIFFERENCES BETWEEN THE GAINS
FOR EXPERIMENTAL GROUP B AND EXPERIMENTAL GROUP A

			Experimen Group B				Experiment Group A			
Levels	Sub- jects	* S	Pre- test	Post- test	Gain	* S	Pre- test	Post- test	Gain	Difference (Gain B - Gain A
	1	F	192	188	_ 4	F	191	200	9	-13
	2	F	167	181	14	M	124	141	17	- 3
	3	М	144	153	9	F	192	196	4	5
	4	F	184	186	2	M	200	196	- 4	6 35
Upper	5 6	M	158	172	14	M F F	161	140	-21	35
Level	6	M F F M	143	152	9	<u>F</u>	173	211	38	-29
	7	F	178	192	14	F	186	189	3	11
	8	F	183	20 9	26	M	178	201	23	3
	9	М	130	164	34	M	143	163	20	14
	10	M	154	171	17	F	187	187	0	17
	11	М	203	189	-14	F	132	123	- 9	- 5
	12	M F F	176	182	6	M	154	178	24	-18
	13	F	161	190	29	M	155	171	16	13
	14	F	157	193	36	M	136	143	7	29
Middle	15	M	140	153	13	F	189	196	7	6
Level	16	M M	195	208	13	F F	195	200	5	8
	17	F	149	186	37	M	148	136	-12	49
	18	M	187	190	3	M F	155	173	18	-1 5
	19	F	175	197	22	F	182	182	0	22
	20	M	143	167	24	M	174	209	35	-11

APPENDIX H (continued)

			Experimen Group B				Experiment Group A				
Levels	Sub- jects	*S	Pre- test	Post- test	Gain	* S	Pre- test	Post- test	Gain	Difference (Gain B - Gain A)	
	21	F	152	173	21	M	180	175	- 5	26	
	22	F	115	145	30	Ę	152	181	29	1	
	23	M	122	137	15	F	159	193	34	-19	
T	24	M	153	165	12	M	137	148	11 16	<u>.</u>	
Lower	2 5	M F	152	164	12	F F	154	170	11	- 4 2	
Level	26		152	165	13		140	151	11		
	27	F	151	150	- 1	M	154	165		-12	
	28	M F	175	172	- 3	M	139	145	6	- 9	
	29		151	154	3	F	135	149	14	-11	
	30	M	135	154	19	M	158	164	6	13	
Totals					425				313	112	

^{*}Sex

APPENDIX I ATTITUDE PRETEST-POSTTEST RAW SCORES THE GAINS AND DIFFERENCES BETWEEN THE GAINS OF THE MALES OF EXPERIMENTAL GROUP A AND EXPERIMENTAL GROUP B

	Experi Grou							
Subjects	Pre- test	Post- test	Gain	Subjects	Pre- test	Post test	Gain	Difference (Gain B - Gain A
3	144	153	9	2	124	141	17	- 8
5	158	172	14	4	200	196	- 4	18
6	143	152	9	5	161	140	-21	30
8	130	164	34	8	178	201	23 .	11
10	154	171	17	9	143	163	20	- 3
11	203	189	-14	12	154	178	24	- 38
15	140	153	13	13	155	171	16	- 3
16	195	208	13	14	136	143	7	6
18	187	190	3	17	148	136	-12	15
20	143	167	24	20	174	209	35	-11
23	122	137	15	21	180	175	- 5	20
24	153	165	12	24	137	148	11	1
25	152	164	12	27	154	165	11	1
28	175	172	- 3	28	139	145	6	- 9
30	135	154	19	30	158	164	6	13
Totals			177		· · · · · · · · · · · · · · · · · · ·		134	43

APPENDIX J

ATTITUDE PRETEST-POSITEST RAW SCORES
THE GAINS AND DIFFERENCES BETWEEN THE GAINS FOR
THE FEMALES OF EXPERIMENTAL GROUP B AND EXPERIMENTAL GROUP A

		imental up B						
Subjects	Pre- test	Post- test	Gain	Subjects	Pre- test	Post- test	Gain	Difference (Gain B - Gain A)
1	192	188	- 4		191	200	9	-13
1 2	167	181	14	1 3	192	196	4	10
4	184	186	2	6	173	211	38	-36
7	178	192	14	7	186	189	3	11
. 8	183	209	26	10	187	187	Ō	26
12	176	182	6	11	132	123	- 9	15
12 13	161	190	29	15	189	196	7	22
14	157	193	36	16	195	200	5	31
17	149	186	37	18	155	173	18	19
19	175	197	22	19	182	182	0	22
21	152	173	21	22	152	181	29	- 8
22	115	145	30	23	159	193	34	- 4
26	152	165	13	25	154	170	16	- 3
27	151	150	- 1	26	140	151	11	-1 2
29	151	154	3	29	135	149	14	-11
Totals		 	248		 -		179	69

THT

APPENDIX K

PRESENTATION AND EXPLANATION OF STATISTICAL FORMULAS AND PROCEDURES USED IN THIS STUDY

I. Bartlett's Test for Homogeneity of Variance

			· · · · · · · · · · · · · · · · · · ·		
Group	n	đf	$\sum x^2$	s ²	log s ²

- 1. Group = Identification of each group of subjects
- 2. n = Number of subjects in each group
- 3. df = Degrees of freedom = (n-1)

4.
$$\sum x^2$$
 = Sum of squares within each group = $(\sum X^2 - \frac{(\sum X)^2}{n})$

5.
$$s^2$$
 = Estimates of the same paramater = $(\sum x^2)$

6.
$$\log s^2 = \text{Common logarithms of } s^2$$

Computations:

1.
$$\frac{s^2}{r}$$
 (number of groups) ; $\log \frac{\sum s^2}{r}$

2. (r)
$$\left[\log \frac{\sum_{s^2}}{r}\right]$$

3. diff. = (r)
$$\left[\log \frac{\sum_{s^2}}{r}\right] - \sum_{s^2} \log s^2$$

¹Edwards, <u>op. cit.</u>, pp. 195-197.

APPENDIX K (continued)

II. Chi Square Goodness of Fit Test for Assumption of Normality1

Determination of Expected Frequencies in the Score Intervals for a Set of Data on the Assumption That the True Distribution is Normal

Scores	x_u	$\mathbf{x}_{\mathbf{u}}$	z_{u}	сp	cf	$\mathtt{f_e}$	f_o

- 1. Scores = Raw score intervals (In this study the raw scores consisted of the scores which the subjects made on the Lorge-Thorndike Test (see Appendix D). Intervals of three were used in this study.
- 2. $\chi_{\rm u}$ = Upper Limit = A single score value is needed to assign to each interval which in this case is the exact upper limit (ex: for an interval of 69-71 the upper limit is 71.5). The reason is that the frequency to be given corresponding to it includes all the cases within the class and below it.
- 3. $x_1 = Deviation the mean of <math>X_1 X_1$
- 4. $z_u = \text{Standard Score} = \frac{x_u}{\sigma_x}$; $\sigma_x = \sqrt{\sum_{x}^2/N}$
- 5. cp = Cumulative Proportion = Standard Scores converted to cumulative proportion by using Table B of Guilford.²
- 6. cf = Cumulative Frequency = cp x N
- 7. f_e = Expected Frequency = Successive subtractions of cp.
- 8. f_0 = Observed Frequency = Actual frequency.

APPENDIX K (continued)

II. Goodness of Fit Test (continued)

Computation of Chi Square From Requency Distribution Table 1

Scores ·	Original	Regrouped	Cell	Squared Cell	Cell
	Grouping	Frequencies	Discrepancies	Discrepancies	Ratio
	f _o f _e	f _o f _e	(f _o - f _e)	$(f_0 - f_e)^2$	$\frac{(f_0 - f_e)^2}{f_\epsilon}$

- 1. f_0 and f_e are regrouped until all f_e 's exceed 5.0.
- 2. Chi Square = the sum of Cell Ratios.
- 3. Degrees of freedom (df) the number of categories remaining after regrouping frequencies minus three.
- 4. Normality of distribution was determined by reference to the Chi Square table (Table E) of Guilford.²

^{1&}lt;u>Tbid.</u>, pp. 246.

APPENDIX K (continued)

III. Fisher's "t" for Difference Between Uncorrelated Means in Two Samples of Equal Size.¹

$$t = \frac{M_1 - M_2}{\sqrt{\sum_{x_1^2 + \sum_{x_2^2}}^{X_1^2 + \sum_{x_2^2}}}}$$

- 1. M_1 and M_2 = Means of the two sample groups.
- 2. $\sum x_1^2$ and $\sum x_2^2$ = Sums of squares in the two samples where $(x = X \overline{X})$
- 3. N_i = Size of either sample (30).
- 4. The denominator as a whole is the SE of the difference between means, as the "t" ratio requires.
- IV. Fisher's "t" for Differences Between Correlated Pairs of Means.2

$$t = \frac{M_d}{\sqrt{\frac{\sum x^2_d}{N (N-1)}}}$$

- 1. M_d = Means of the N differences of paired observations or $(\overline{X} \text{ of } Gain_1 \text{ minus } Gain_2)$.
- 2. $\sum x^2_d$ = Sum of the deviations of the differences from the mean of the differences.
- 3. N = Number of cases in the sample.

¹<u>Ibid.</u>, p. 184.