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THE EFFECTS OF TEACHING THE CONCEPT LESSON, "THE
UNDERGROUND RAILROAD IN MICHIGAN" TO BLACK
AND WHITE FOURTH GRADE STUDENTS

by
Robert Glen Payne

A dissertation submitted in partial fulfillment
of the requirements for the degree
of Doctor of Philosophy in
The University of Michigan
1970

Doctoral Committee:

Professor Stanley E. Dimond, Chairman
Professor Alvin D. Loving
Professor Findlay C. Penix
Professor Edgar E. Willis

ABSTRACT

THE EFFECTS OF TEACHING THE CONCEPT LESSON, "THE UNDERGROUND RAILROAD IN MICHIGAN" TO BLACK AND WHITE FOURTH GRADE STUDENTS

by
Robert Glen Payne

Chairman: Stanley E. Dimond

The purpose of this study was to determine the effects of teaching the lesson, "The Underground Railroad in Michigan," to black and white fourth grade students. The lesson was identified as a concept lesson developed as an example of "integral history." Concept was defined as "an idea around which related information is gathered and organized." Integral history was defined as "history in which the role of the Black American is presented as an interwoven part of the historical incident under study."

Students from nine fourth grade classrooms composed the sample for the study. Three classes were chosen from each of the three student bodies--all white, all-black, and integrated. Each integrated class was divided into two groups--black students and white students. The resulting twelve groups were equated for intelligence, reading comprehension, and parent's occupational status. Within each student body, two classes were randomly selected as experimental groups, while the third became the control class.

All groups were pre-tested for:

1. Knowledge about the lesson to be taught.

2. Extent of agreement with the attitudes the lesson portrayed.

White students were administered a semantic differential with the stimulus concept "black people." Black students were administered a semantic differential with the stimulus concept "white people."

Two weeks following pre-testing, all experimental groups were taught the lesson, "The Underground Railroad in Michigan." Students within one experimental group were taught through an audio-slide approach. Students in the other experimental group were taught through an oral-reading approach. Both approaches combined facts and feelings in the presentation. Following instruction, experimental and control groups were tested on the same day. Selected students were then interviewed to determine more fully the lesson's impact.

The results from the study support the idea that increased facts are learned from teaching a concept lesson in integral history. In addition, the results emphasize that instruction in integral history can be important in building and maintaining positive attitudes for both black and white students. This importance of instruction was especially evident in segregated classes. No consistent correlation was found in this investigation between gains in knowledge about the lesson and gains in either positive attitudes or agreement with the attitudes portrayed in the lesson.

The conclusions are:

1. Teaching facts through an audio-slide approach tends to be of greater benefit to black students in learning information than teaching the same facts through an oral-reading approach.
2. When using the audio-slide approach, black students in a segregated classroom learn as much factually as black students in an integrated classroom.
3. Instruction in integral history, through an audio-slide approach, contributes to building and maintaining positive attitudes of black students toward "white people."
4. In a segregated classroom, instruction in integral history through an audio-slide approach, has a significant positive impact on the attitudes of black students toward "white people."
5. Being in an integrated classroom has no significant effect on the learning of factual information by white students.
6. Teaching facts through an oral-reading approach tends to be of greater benefit to white students in learning factual information than does the audio-slide approach.
7. Instruction in integral history, as defined and taught in this study, is important to building and maintaining positive attitudes of white students toward "black people," especially in a segregated classroom.
8. Being in an integrated classroom is important for white students in building and maintaining positive attitudes toward "black people."
9. Facts alone have little effect on positive attitude change.

Student interviews provided evidence that the feelings built into the lesson were important contributions to changes in attitude registered by

both black and white students.

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Many people have given generously of their time and special talents to make this study possible.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLES	vi
Chapter	
I. INTRODUCTION	1
Statement of the Problem	
The Need for the Study	
General Plan of the Investigation	
The Hypotheses	
Basic Assumptions	
Limitations	
Plan of Presentation	
II. REVIEW OF THE LITERATURE	13
Concepts in the Social Studies	
Development of Integrated Materials	
Attitude and Attitude Change	
III. RESEARCH DESIGN AND PROCEDURES	45
Locale of the Study	
The Sample	
Instruments Used	
Instructional Materials	
The Procedures	
Data Analysis	
IV. RESULTS	61
Hypothesis One	
Impact on Black Students	
Impact on White Students	
Hypothesis Two	
Hypothesis Three	
Hypothesis Four	
Impact on Black Students	
Impact on White Students	

IV.
(Con't.)

Analysis of the Results for Black Students in
the Integrated Control Group
Analysis of the Results from Underground Railroad
Form "A"
Impact on Black Students
Impact on White Students
Intercorrelations: Sex and Intelligence as Factors
Impact on Black Students
Segregated Experimental 1
Integrated Experimental 1
Segregated Experimental 2
Integrated Experimental 2
Impact on White Students
Segregated Experimental 1
Integrated Experimental 1
Segregated Experimental 2
Integrated Experimental 2
Student Interviews
Impact on Black Students
Impact on White Students

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS . . 173

Purpose
Procedures
The Hypotheses
Analysis of Data
Hypothesis One
Impact on Black Students
Impact on White Students
Hypothesis Two
Hypothesis Three
Hypothesis Four
Black Students: Experimental 1
Black Students: Experimental 2
White Students: Experimental 1
White Students: Experimental 2
Intercorrelations: Sex and Intelligence as Factors
Black Students
White Students
Summary from Underground Railroad Form "A"
Interview Summary
Conclusions
Recommendations

	Page
Appendix	
A INSTRUMENTS	197
Underground Railroad Form "A"	
Underground Railroad Form "F"	
Semantic Differential "White People"	
Semantic Differential "Black People"	
B INSTRUCTIONAL MATERIALS	217
<u>A Mystery Train Trip</u>	
C MEANS, STANDARD DEVIATIONS, AND INTER- CORRELATIONS AMONG THE STUDY'S FIFTEEN VARIABLES - BLACK STUDENTS	237
Segregated Black Students: Experimental 1	
Integrated Black Students: Experimental 1	
Segregated Black Students: Experimental 2	
Integrated Black Students: Experimental 2	
D MEANS, STANDARD DEVIATIONS, AND INTER- CORRELATIONS AMONG THE STUDY'S FIFTEEN VARIABLES - WHITE STUDENTS	246
Segregated White Students: Experimental 1	
Integrated White Students: Experimental 1	
Segregated White Students: Experimental 2	
Integrated White Students: Experimental 2	
BIBLIOGRAPHY	255

LIST OF TABLES

Table		Page
1.	Intelligence, Reading Comprehension, and Parent's Employment Status for Experimental and Control Groups	
	A. Summary of Means and Standard Deviations	48
	B. Summary of the Analysis of Variance	49
2.	Summary of the Results from Underground Railroad Form "F" - Black Students	
	A. Summary of Means and Standard Deviations	64
	B. Summary of the Analysis of Variance	65
3.	Summary of the Results from Underground Railroad Form "F" - White Students	
	A. Summary of Means and Standard Deviations	70
	B. Summary of the Analysis of Variance	71
4.	Summary of the Results from Semantic Differential Stimulus Concept "White People" - Black Students	
	A. Summary of Means and Standard Deviations	75
	B. Summary of the Analysis of Variance	76
5.	Summary of the Results from Semantic Differential Stimulus Concept "Black People" - White Students	
	A. Summary of Means and Standard Deviations	81
	B. Summary of the Analysis of Variance	82
6.	Summary of the Means, Standard Deviations, and Inter-correlations Among Underground Railroad Form "F," "Underground Railroad Form "A," and the Semantic Differential, for the Experimental 1 Groups - Black Students.	

Table	Page
A. Summary of Means and Standard Deviations	92-93
B. Summary of the Intercorrelations of Variables for the Segregated Experimental 1 Group - Black Students	94
C. Summary of the Intercorrelation of Variables for the Integrated Experimental 1 Group - Black Students	95
7. Summary of Means, Standard Deviations, and Inter- correlations Among Underground Railroad Form "F," " Underground Railroad Form "A," and the Semantic Differential, for Experimental 2 Groups - Black Students	
A. Summary of Means and Standard Deviations	99-100
B. Summary of the Intercorrelation of Variables for the Segregated Experimental 2 Group - Black Students	101
C. Summary of the Intercorrelation of Variables for the Integrated Experimental 2 Group - Black Students	102
8. Summary of Means, Standard Deviations, and Inter- correlations Among Underground Railroad Form "F," " Underground Railroad Form "A," and the Semantic Differential, for Experimental 1 Groups - White Students	
A. Summary of Means and Standard Deviations	106-107
B. Summary of the Intercorrelation of Variables for the Segregated Experimental 1 Group - White Students	108
C. Summary of the Intercorrelation of Variables for the Integrated Experimental 1 Group - White Students	109
9. Summary of Means, Standard Deviations, and Inter- correlations Among Underground Railroad Form "F," " Underground Railroad Form "A," and the Semantic Differential, for Experimental 2 Groups - White Students	

Table	Page
A. Summary of Means and Standard Deviations	114-115
B. Summary of the Intercorrelation of Variables for the Segregated Experimental 2 Group - White Students	116
C. Summary of the Intercorrelation of Variables for the Integrated Experimental 2 Group - White Students	117
10. Summary of the Means, Standard Deviations, and Inter- correlations from Underground Railroad Form "F," Underground Railroad Form "A," and the Semantic Differential, Integrated Control Group	
A. Summary of Means and Standard Deviations	123
B. Summary of the Intercorrelation of Variables for the Integrated Control Group - Black Students. .	124
C. Summary of the Intercorrelation of Variables for the Integrated Control Group - White Students . .	125
11. Summary of the Results from Underground Railroad Form "A" - Black Students	
A. Summary of Means and Standard Deviations	128
B. Summary of the Analysis of Variance	129
12. Summary of the Results from Underground Railroad Form "A" - White Students	
A. Summary of Means and Standard Deviations	132
B. Summary of the Analysis of Variance	133
13. Summary of the Means, Standard Deviations, and Inter- correlations Among Fifteen Variables for the Segre- gated Experimental 1 Group - Black Students	
A. Summary of Means and Standard Deviations	238
B. Summary of the Intercorrelation of Variables for the Segregated Experimental 1 Group - Black Students	239

14. Summary of the Means, Standard Deviations, and Intercorrelations Among Fifteen Variables for the Integrated Experimental 1 Group - Black Students	
A. Summary of Means and Standard Deviations	240
B. Summary of the Intercorrelation of Variables for the Integrated Experimental 1 Group - Black Students	241
15. Summary of the Means, Standard Deviations, and Intercorrelations Among Fifteen Variables for the Segregated Experimental 2 Group - Black Students	
A. Summary of Means and Standard Deviations	242
B. Summary of the Intercorrelation of Variables for the Segregated Experimental 2 Group - Black Students	243
16. Summary of the Means, Standard Deviations, and Intercorrelations Among Fifteen Variables for the Integrated Experimental 2 Group - Black Students	
A. Summary of Means and Standard Deviations	244
B. Summary of the Intercorrelation of Variables for the Integrated Experimental 2 Group - Black Students	245
17. Summary of the Means, Standard Deviations, and Intercorrelations Among Fifteen Variables for the Segregated Experimental 1 Group - White Students	
A. Summary of Means and Standard Deviations	247
B. Summary of the Intercorrelation of Variables for the Segregated Experimental 1 Group - White Students	248
18. Summary of the Means, Standard Deviations, and Intercorrelations Among Fifteen Variables for the Integrated Experimental 1 Group - White Students	
A. Summary of Means and Standard Deviations	249

Table	Page
B. Summary of the Intercorrelation of Variables for the Integrated Experimental 1 Group - White Students	250
19. Summary of the Means, Standard Deviations, and Intercorrelations Among Fifteen Variables for the Segregated Experimental 2 Group - White Students A. Summary of Means and Standard Deviations B. Summary of the Intercorrelation of Variables for the Segregated Experimental 2 Group - White Students	251 252
20. Summary of the Means, Standard Deviations, and Intercorrelations Among Fifteen Variables for the Integrated Experimental 2 Group - White Students A. Summary of Means and Standard Deviations B. Summary of the Intercorrelation of Variables for the Integrated Experimental 2 Group - White Students	253 254

CHAPTER I

INTRODUCTION

Statement of the Problem

The purpose of this study is to determine the effects of teaching a lesson on "The Underground Railroad in Michigan" to fourth grade students. The study attempts to measure the knowledge gains and the attitude changes which result from teaching the lesson to students in three different environments: all-black, all-white, and integrated.

The lesson on "The Underground Railroad in Michigan" is a concept lesson developed as an example of "integral history." The term "concept" is defined as "an idea around which related information is gathered and organized." The term "integral history" is defined as "history in which the role of the Black American is presented as an interwoven part of the historical incident under study."

The Need for the Study

During the 1960's American society has witnessed increased pressure by its black citizens for equal rights, equal opportunity, and equal justice. The growing intensity of this pressure has brought with it demands that immediate changes be made within American society.

One specific demand made of schools, as agents of this society, is that social studies textbooks and other instructional materials portray the role played by Black Americans in the development of their country. A number of studies of textbooks and trade books in use in our schools have shown the justification for such a demand.

Larrick surveyed 5,206 trade books between 1962 and 1964 and concluded that only 6.7 per cent of these books included at least one black man.¹

Sloan in a review of twenty-five selected American history textbooks used in our secondary schools and colleges stated: "In most of the texts it can be said that the Negro is considered only as a slave before the Civil War and a problem since the Civil War."² Harris in his article "The Treatment of Negroes in Books and Media Designed for the Elementary School" comments:

"The elementary school textbooks used in our public schools are almost entirely free of information concerning Negro life and culture. Negro pictures are found very infrequently in our elementary school books. It is often said that integration may be the law of the land, but most of the books seen in our schools are white."³

¹Nancy Larrick, "The All-White World of Children's Books," Saturday Review, XLVIII (1965), 84.

²Irving Sloan, The Negro in Modern American History Textbooks (Washington, D. C.: American Federation of Teachers, AFL-CIO, 1967), p. 7.

³Nelson Harris, "The Treatment of Negroes in Books and Media Designed for the Elementary School," Social Education, XXXIII (1969), 436.

The problem of excluding Black Americans from their rightful place in American history is considered so basic and so important a contributor to the current ethnic strife that it has led one member of the United States Congress, Representative James J. Scheuer, (D., N. Y.), to state "If American history had been written as it happened in the first place, we probably wouldn't have today's black-white confrontation."⁴ Increased sensitivity and increased demands from Black Americans have forced both educators and publishers to search for ways to overcome textbook inadequacies.

Educators have begun reacting to the demands by establishing guidelines for developing new text materials. In January, 1968, the Michigan Department of Education published the booklet, Action in the Social Studies, which contained a series of recommendations for developing text materials portraying the Black American's role in American history. These recommendations, made by the Department of Education's Curriculum Committee on Education for Citizenship, called for instructional materials which present the role of the Black American as an interwoven part of American history. In addition, the committee recommended that educators not be satisfied with superficial attempts at inclusion such as coloring every tenth picture or including the role of the Black American as a special chapter.⁵

⁴Charles H. Harrison, "Black History and the Schools," Ebony, XXIV (1968), 111.

⁵See Study Group Recommendations, "Problems of Teaching About Ethnic Groups," Action in the Social Studies (Lansing: Michigan Department of Education, 1969), p. 50.

McMillan, whose working paper formed the cornerstone from which these recommendations sprang, stated:

"Historians and curriculum developers make a basic error when they assume that Negroes should receive a special place or annex in our history and social studies textbooks. Negroes should be presented as part of the whole rubric and not as a special group with its own aims, goals and accomplishments. The Negro is an integral part of America. Any attempt to give special treatment to the Negro or any other group results in a distorted picture."⁶

In July, 1969, the Michigan Department of Education followed these initial recommendations of the Curriculum Committee on Education for Citizenship with an investigation of the treatment given the Black American in American history textbooks in use in Michigan schools. The special committee of educators appointed by Dr. Ira Polley, Superintendent of Public Instruction, concurred with the findings of textbook deficiencies reported by other studies. In their recommendations to the State Superintendent of Public Instruction, this special committee emphasized the total effects of textbooks; calling for them to "...discuss minority problems as an integral part of the whole, rather than in appended sections, isolated entities, or parenthetical asides. Representative pictures should be included of minorities with recognizable ethnic features."⁷

⁶Quoted from the original working paper of Joseph McMillan, Principal of Sheldon School, Grand Rapids, Michigan. The paper was read at a program presented at Big Rapids, Michigan, on February 24, 25, 1966, by the Department of Education's Curriculum Committee on Education for Citizenship.

⁷A Report on the Treatment of Minorities in American History Textbooks (Lansing, Michigan: Michigan Department of Education, July, 1968), From the letter addressed to Dr. Ira Polley, Superintendent of Public Instruction, from the committee.

Clearly, these guidelines call for inclusion rather than separation when portraying the role of the Black American within the subject area being studied. Gibson condensed the guidelines recommending simply "Teach history. 'Negro history' is inseparable from American history."⁸

Publishers have reacted in at least two ways to meet the demands intensified by pressures from the black community:

1. By publishing social studies textbooks and trade books which use integrated pictures and stories to depict the community of today.⁹
2. By publishing textbooks and trade books which portray the Black American's role in history.¹⁰

The materials which portray the community of today are less problematic for publishers than are materials which call for establishing the Black American as a contributor to American history. Pictures can easily be retaken and drawings redone to portray integrated scenes of today. Short stories can be written in which families of many ethnic

⁸Emily Fuller Gibson, "The Three D's: Distortion, Deletion, Denial," Social Education, XXXIII (1969), 409.

⁹For examples of this type of material see Edna A. Anderson, Families and Their Needs (Morristown: Silver Burdett Company, 1966), or Peter Buckley and Hortense Jones, William, Andy and Ramon (New York: Holt, Rinehart and Winston, Inc., 1966).

¹⁰A number of materials of this type are currently appearing on the market. An early example of this type of material is Langston Hughes and Milton Meltzer, A Pictorial History of the Negro in America (New York: Crown Publishers, Incorporated, 1956) and Lerone Bennett, Jr., Before the Mayflower (Baltimore: Penguin Books, Inc., 1966). A more recent publication of this type is Phillip T. Drotning, Black Heroes in Our Nation's History (New York: Cowles Book Company, Inc., 1969).

and racial backgrounds are represented. Such materials are especially easy to develop at the lower elementary school level where emphasis is already placed on the family and the community of today.

However, the development of textbooks and trade books which depict the Black American as a contributor to American history present a more difficult problem. Such development requires serious research into a part of America's past which has long been overlooked. In addition, just planning to develop these materials forces publishers into a very important choice of direction:

1. Should the textbooks and trade books be developed to portray the story of the Black American as a separate entity as there is increasing pressure to do?
2. Should the textbooks and trade books be developed portraying the story of the Black American as an integral part of the social studies entity under study?

At the present time, some publishers have decided to portray the story of the Black American as a separate story. According to the Michigan Department of Education's Curriculum Committee on Education for Citizenship, "The present trend in constructing teaching materials is to isolate and teach the role of ethnic groups as a special entity."¹¹ This writer's review of recently published materials in social studies shows that emphasis has indeed been placed on making the Black American's story a separate entity. At this study's level of concern, the elementary school, this emphasis has often resulted in the publication of biographies of Black Americans. Elementary school students can

¹¹Study Group Recommendations, op. cit., p. 50.

now read about such outstanding Americans as Martin Luther King, Jr., Harriet Tubman, and Sojourner Truth. However, they must still read about these fellow Americans as separate entities, supplementary to the American history under study.

Such emphasis on the story of the Black American as a separate entity runs counter to the guidelines being called for by educators who are calling for the story of the Black American to be told and written as an interwoven part of American history. Many publishers, on the other hand, are placing their emphasis on materials which tell the story of the Black American as a separate story. Thus, textbooks and trade books which incorporate the Black American as an integral part of American history are still not readily available.

Even when such materials do become available educators must ask themselves the important question, "What are the effects of using text materials which incorporate the role of the Black American as an integral part of American history?" A review of recent literature shows that this question remains unanswered at this time. As Roth has stated:

"The research literature is almost devoid of studies which bear on the effects of including the Negro in the school curriculum. Part of the reason, however, is the lack of appropriate curriculum materials."¹²

This investigation was designed to meet some of these needs.

¹²Rodney W. Roth, "The Effects of Integral Curriculum on Negro And White Fifth Grade Students," Unpublished doctoral dissertation, University of Michigan, 1969.

General Plan of the Investigation

The plan of the investigation was: first, to select nine classes of fourth grade students from elementary schools in Pontiac, Michigan; second, to match these classes in terms of reading comprehension, intelligence, and parent employment status; third, to designate appropriate classes as "experimental" and "control"; fourth, to pre-test each of the nine classes on the knowledge and attitudes important to the study; fifth, to teach the lesson on "The Underground Railroad in Michigan" to the experimental classes; sixth, to post-test each of the nine classes to determine knowledge gains and attitude shifts; and seventh, to interview selected students to determine those parts of the lesson which had greatest impact and to assess what that impact was.

The steps involved in this study were:

1. Selection of Sample. From an examination of the records of six elementary schools in Pontiac, Michigan, nine classes of fourth graders were identified for use in the study. Three of the classes selected were composed of black students (all-black environment); three were composed of white students (all-white environment); and three of the classes were integrated (integrated environment). Each integrated class was divided into two groups: white students within an integrated classroom and black students within an integrated classroom. The resulting twelve groups were matched in terms of intelligence, reading comprehension, and parent's employment.

2. Experimental and control groups. Within each environment, one class was selected as a control group. The remaining two classes in the environment became experimental groups and were designated "Experimental Group 1" and "Experimental Group 2."

3. Administration of the pre-test. Students in all classes were administered pre-tests to determine what knowledge and attitudes about the experimental lesson they already possessed. In addition, a semantic differential test was given to black students to determine their attitudes toward the stimulus concept "white people." This same instrument was given to white students to determine their attitudes toward the stimulus concept "black people." All attitude instruments were based on a five-point scale for determining shifts in intensity of feelings.

4. The experimental lesson. All experimental classes were taught the lesson on "The Underground Railroad in Michigan" by this writer. The control classes were not exposed to any of the instructional materials, and the teachers of these classes were requested neither to discuss nor assign any information which may have a bearing on the lesson taught experimentally. Students in each class designated "Experimental Group 1" saw and heard the experimental lesson as it was presented by slide-tape sequence. Students in each class designated "Experimental Group 2" listened to an oral reading of the lesson. Both groups discussed the lesson following the presentation. All discussion was directed by the writer.

5. Administration of the post-test. Students in all nine classes were administered post-test instruments, designed to determine knowledge gains and attitude shifts resulting from the instruction. Pre- and post-test instruments were identical.

6. Student interviews. Following the instructional lesson, eighteen selected students were interviewed to determine those parts of the lesson which had greatest impact and to further assess what that impact was. From each experimental and control class the two pupils who had the most extreme change in attitude were selected for interview.

7. Data Analysis. Analysis of variance was employed in analyzing both the cognitive and affective areas of this study. The writer studied the factors of race, sex, intelligence, and parent's employment in his analysis of the data. In addition, a coefficient of correlation was established between the knowledge test and the two attitude instruments used. An added correlation was established between change in attitude expressed in the lesson "The Underground Railroad in Michigan" and the more generalized attitudes measured by the semantic differential.

The Hypotheses

1. Significant gains in information will result from teaching the lesson, "The Underground Railroad in Michigan."
2. Attitudes of black students will grow more positive toward the stimulus concept "white people" as a result of exposure to the lesson, "The Underground Railroad in Michigan."

3. Attitudes of white students will grow more positive toward the stimulus concept "black people" as a result of exposure to the lesson, "The Underground Railroad in Michigan."
4. A positive relationship exists between the amount of knowledge gained through exposure to the lesson and the degree of attitude change which develops as a result of this exposure.

Basic Assumptions of the Study

The basic assumptions underlying this study were:

1. The student responses to the statements contained in the attitude instruments were of adequate validity and reliability for the purposes of the study.
2. The student interviews yielded information of adequate reliability and validity for the purposes of this study.

Limitations of the Study

The writer recognizes limitations in the study. First, all experimental classes were taught by the writer which may have tended to limit the objectivity of the study. Second, the study was conducted in a school district whose official position requires the addition of information about the Black American to its curricula. The district has been under considerable pressure from its black citizens. The extent to which this pressure and the resulting feelings have influenced the attitudes of students involved in the study is not known. Third, only a single lesson and its resulting impact were explored by the study.

The extent to which the findings from the study can be generalized to include longer periods of time using similar materials is subject to investigation. Fourth, since only students expressing extreme changes in attitude were interviewed by the writer, there is a question of whether those sections of the lesson having greatest impact on these students were representative of the sections of the lesson having greatest impact on participating students in general.

Plan of Presentation

Chapter I presents a general description of this investigation. A review of the literature important to this investigation is presented in Chapter II. Chapter III includes a detailed description of the methods employed, the description of the instruments used in gathering data, a description of the instructional materials used in the study, the statistical techniques employed, and a description of the population used and how they were matched. Chapter IV presents the analysis of data and the results of the study. Chapter V provides a summary of the findings, conclusions, and recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter are presented a review of the literature concerned with: (1) concepts in the social studies, (2) the development of integrated materials, (3) attitudes and attitude change.

The first part of the review emphasizes the importance of concepts in current curriculum development in the social studies. "Concept" is defined and the advantages sought through the use of concepts are presented. Emphasis is placed on the relationship of concepts to structure.

The second part of the review traces the interest in and development of materials and courses which were designed to improve inter-group relations. The review covers the time period 1927-1969. In this review emphasis is placed on both interest in the development of integrated materials, and suggestions from past studies which may prove useful in designing current multiethnic materials.

The third part reviews the literature and studies which show how attitudes are formed and changed. In this review emphasis is placed on studies which attempt to change attitudes both outside and inside the classroom environment.

Concepts in the Social Studies

The term "concept" has become a much used and often defined part of a growing body of literature in social studies education. The term has become especially important since the publication of Bruner's Process of Education.¹ In his book Bruner attacks the idea of teaching facts as isolated pieces of information and instead proposes that:

"...the curriculum of a subject should be determined by the most fundamental understandings that can be achieved of the underlying principles that give structure to that subject."²

In social studies this search for a subject's structure has led educators to identify concepts and generalizations felt important enough to be taught. There is no consensus of what concepts and/or generalizations constitute a subject's structure. As yet, there is no consensus on what a concept is and how it differs from a generalization. Quillen and Hanna describe a concept as:

"A concept is a general idea, usually expressed by a word, which represents a class or group of things or actions having certain characteristics in common. Concepts give order and meaning to experience."³

To Quillen and Hanna, "dog" is a concept.

¹Jerome S. Bruner, The Process of Education (Cambridge: Harvard University Press, 1960).

²Ibid., p. 31.

³L. James Quillen and Lavone A. Hanna, Education For Social Competence (Chicago: Scott, Foresman and Co., 1961), p. 187.

To Platt, a concept becomes a moving idea. According to Platt:

"...the mind observes reality; abstracts from this reality an idea. Now a moving idea creates a concept, and a moving concept creates a generalization."⁴

To Platt, "dog" is not a concept; it is an idea. "A dog is man's best friend" is a concept according to the Platt definition. He calls a concept "...something about an idea expressed in the words of our language."⁵ To Platt, a generalization is a moving concept. "Dog is man's best friend because only the dog, among the domesticated animals, really prefers the company of people to his own kind."⁶

Others have proposed examples of concepts without clearly defining them. Thus, Rusnak writes of "historical sequence" and "cause and effect" as concepts.⁷

Fancett and others working at the Syracuse University Social Studies Curriculum Center agree with the definition of "concept" proposed by Quillen and Hanna. They identify a generalization as a statement of relationship between or among concepts. The generalization

⁴Myles M. Platt, "Concepts and the Curriculum," Social Education, XXVII (1963), 23.

⁵Ibid.

⁶Ibid.

⁷Mary Rusnak, "Introducing Social Studies in the First Grade," Social Education, XXV (1961), 291.

so stated can have no known exceptions.⁸ Thus, Platt's statement of a generalization is not acceptable to those involved in the Syracuse Project, for it does have exceptions. Wild dogs traveling in packs do seem to prefer the company of other dogs to that of man.

These definitions are not meant to be inclusive, but they do exemplify a major difference in views among those involved in developing concept materials for instruction in the social studies.

A number of advantages are cited for the use of concepts in social studies. According to Fancett:

- "1. Concept development is essential to comprehension in the social studies.
2. Concepts are short-cuts to communication in the social studies.
3. An understanding of concepts promotes recall and use of knowledge.
4. Concepts aid in the transfer of learning.
5. Value concepts help to determine attitudes, opinions, and behavior.
6. Major concepts in the social sciences indicate the framework or structure of knowledge, values, and methods.
7. Sound concepts are essential for rational decision-making and action by citizens in a democratic society."⁹

A review of other writings on concepts and their current use shows little disagreement with the claims of advantages listed by Fancett.

⁸Verna S. Fancett, et al., Social Science Concepts And The Classroom (Syracuse: The Social Studies Curriculum Center, 1968), p. 8.

⁹Ibid., pp. 14-19.

However, there is wide disagreement of whether to emphasize the importance of concepts for the structure of knowledge, for the exploration of methods, or for the teaching of values.

The Social Studies Curriculum Center at Syracuse University has identified "concepts" in all three of these important areas. In total, the curriculum workers at Syracuse have identified thirty-four concepts--eighteen of which they have labeled "Substantive Concepts," five labeled "Value Concepts," and eleven labeled as "Concepts Of Method."¹⁰ Though members of the Syracuse Project are wary of claiming to have discovered a structure of knowledge for social studies, their substantive concepts are efforts in that direction. Until now, most of their efforts have been directed to the area of "Substantive Concepts," outlining and preparing the substantive concept, "Conflict-Its Origin, Expression and Resolution" for classroom instruction.

Senesch, the director of the Elkhart Program in Economic Education, has stressed the search for the structure of economics through the identification of concepts basic to an understanding of that subject. Rader, then a member of the project, stated of this search:

"...we are immodest enough to think that we have discovered the structure of economics. We think that what we have found is scholarly sound and that

¹⁰Roy A. Price, et al., Major Concepts For The Social Studies (Syracuse: The Social Studies Curriculum Center, 1965), p. 4.

it can be taught at any grade level including the first grade."¹¹

Senesch has identified this basic structure in economics as consisting of five core ideas:

1. The most basic idea to this structure is the scarcity concept, "...that every society faces a conflict between unlimited wants and limited resources."¹²
2. Man tries to produce in less time or more with less materials as a means of overcoming the scarcity concept. In order to do this, specialization becomes important.
3. Specialization makes man interdependent. This interdependence creates the need for both a money system and a transportation system.
4. The market is discovered as a means of allocation. Through the interaction of buyers and sellers which results from the market system, price changes occur. These prices in turn determine such things as method of production, distribution of income, the amount spending and saving. These in turn determine the level of economic activity.
5. To insure public welfare, the government modifies market decisions.¹³

Through a similar process of identifying basic ideas, David Easton, Robert Perrucci, Paul Bohannon, and Peter Greco have sought

¹¹William Rader, "An Organic Curriculum in Economic Education," In: Myles M. Platt (ed.), The Proceedings of The "Crisis Curriculum: The First General Conference On The Implementation Of A Concept-Based Curriculum in the Social Studies, (Pontiac: Oakland Schools Intermediate School District, 1963), p. 190.

¹²Lawrence Senesch, "Organizing a Curriculum Around Social Science Concepts," In: Irving Morressitt (ed.), Concepts And Structure In The New Social Science Curricula, (West Lafayette: Social Science Education Consortium, Inc., 1966), p. 24.

¹³Ibid., pp. 24-25.

structure within the fields of political science, sociology, anthropology, and geography respectively.¹⁴

Some social studies educators¹⁵ emphasize methodology as the means of providing structure. Fenton, in commenting on a structure for history, gives credit to concepts and generalizations as providing a structure of history, but comments:

"Like generalizations, concepts make up a structure of history. Like generalizations, they are not the most useful structure."¹⁶

Fenton places his emphasis on structure within history on the use of analytical questions. Such questions he feels:

"...guide the search for data, tell historians what notes to take. They help provide an organizational scheme for the presentation of evidence. They even determine the subjects of books and articles, each of which starts with a question growing out of a scholar's frame of reference."¹⁷

In short, Fenton sees analytical questions forming the basic core of history.

Many social studies educators point out the importance of "values" to the social studies curriculum. Oliver and Shaver and their Harvard Curriculum Project have emphasized social studies education as

¹⁴Ibid., pp. 28-38.

¹⁵Edwin Fenton, Teaching The New Social Studies in Secondary Schools: An Inductive Approach (Chicago: Holt, Rinehart and Winston, Inc., 1966); Byron M. Massialas and Benjamin Cox, Inquiry in Social Studies (New York: McGraw-Hill Book Company, 1966).

¹⁶Edwin Fenton, "A Structure of History," Ibid., p. 53.

¹⁷Ibid., pp. 53-54.

citizenship education. At the heart of their book, Teaching Public Issues In High School, is the position that the values held by society and subgroups within society can be identified. In addition, these educators assign to social studies the role of clarifying value conflicts and providing ways of resolving them.¹⁸ The basic theme around which Oliver and Shaver work is what Syracuse Social Studies Curriculum Center personnel have identified as the value concept--"Dignity of Man."¹⁹

Jarolimek also emphasizes the importance of values within the social studies. While he does not advocate that social studies should be structured around value concepts, he does see them as important to social studies education. According to Jarolimek:

"Value concepts are fundamental and basic in social studies education because they provide the learner with guidelines in his thinking and choice-making."²⁰

A number of educators stress the importance of concepts to social studies without advocating that concepts provide the structure for social studies. Jarolimek states:

¹⁸Donald W. Oliver and James P. Shaver, Teaching Public Issues In High School (Boston: Houghton Mifflin Company, 1966).

¹⁹Ibid., p. 9.

²⁰John Jarolimek, "A Rationale for Conceptual Approaches to Social Studies Education," In: Myles M. Platt (ed.), The Proceedings, (Pontiac: Oakland Schools Intermediate School District, 1963), p. 23. See also John Jarolimek (ed.), Social Studies Education: The Elementary School (Washington, D. C.: National Council for the Social Studies, 1967).

"If we wait until the 'essence' of each of the disciplines is discovered, we are never going to get down to the business of selecting key ideas and concepts and teaching them."²¹

Platt, though structure oriented, denies any natural structure to social studies. According to Platt:

"Unlike the sciences and mathematics, there is no intrinsic natural structure to the social studies which we can discover and transfer to the minds of students. Since the core of our discipline is the study of man we, early, find that our 'man' escapes definitive cataloguing. Therefore, the concepts with which we deal will sometimes be 'big ideas,' 'hypotheses,' 'definitions,' 'conclusions,' and sometimes even 'questions.' The concept approach will not give you complete knowledge, but it will give you a more meaningful way of thinking about things."²²

In summary, this review points to the importance of "concepts" in current curriculum development in the social studies. Though educators lack a common definition of terms and an agreement on which concepts should receive priority, the number of projects involved in developing curriculum materials around concepts and the amount of literature now available on the subject establishes the importance of concepts in current curriculum development of the social studies. It is especially important to this study that current literature clearly establishes the importance of concepts for providing a framework for learning, remembering, and communicating information.

²¹John Jarolimek, "A Rationale for Conceptual Approaches to Social Studies Education," Ibid., p. 22.

²²Myles M. Platt (ed.), The Proceedings (Pontiac: Oakland Intermediate School District, 1963), pp. 92-93.

Development of Integrated Materials

Interest in materials and courses that include minority groups is not a new phenomena. As early as 1927, Young²³ was studying the impact of the course, "American Race Relations," on the attitudes of undergraduate students at the University of Pennsylvania. In his Studies In Reduction Of Prejudice, Rose²⁴ reports a number of studies done in the 1930's and 1940's on the impact of special courses and/or specific types of communications on ethnic attitudes.

By 1945, fifty national groups were working on intergroup problems in education. Of the fifty groups, thirteen were directly concerned with intergroup education in the schools. The remaining thirty-seven were engaged in various adult education programs.²⁵

Van Til and Denmark categorize the interest and work on intergroup relations during the 1920's through 1940's in three stages:

1. Missionary Stage--1920's and 1930's.
2. Simple Answers Stage--prevalent just before World War II.

²³Donald Young, "Some Effects of a Course in American Race Problems on the Race Prejudice of 450 Undergraduates at the University of Pennsylvania," Journal of Abnormal and Social Psychology, XXVI (1927), 235-242.

²⁴Arnold M. Rose, Studies In Reduction Of Prejudice (2d ed.; Chicago: American Council on Race Relations, 1948).

²⁵Charles S. Johnson, "National Organizations in the Field of Race Relations," The Annals, CCXLIV (1946), 118.

3. Development of Promising Approaches Stage-- World War II and post-war years.²⁶

During the "Missionary Stage" educators and clergymen are reported to have traveled country-wide calling for the schools to promote human understanding. Their efforts seemed to have helped bring on a whole series of studies on such topics²⁷ as "The Effectiveness of School Courses Dealing With Race Relations" and "The Effectiveness of Specific Propaganda on Changing Attitudes Toward Minority Groups."

During the "Simple Answers Stage" faith was placed in the effects of inspirational lectures and the study of outstanding minority group members as a means of changing prejudiced attitudes. Partly as a result of World War II and the race riots in Detroit and Beaumont, Texas, interest in intergroup relations increased during the "Development of Promising Approaches" stage.²⁸ During this stage less faith was placed in simple answers and a wide variety of approaches were explored as means of bettering intergroup relations.

²⁶William Van Til and George W. Denemark, "The Good Citizen as an Expert in Human Relations," In: Ryland W. Crary (ed.), Education For Democratic Citizenship, Twenty-Second Yearbook (Washington, D. C.: National Council for the Social Studies, 1951), pp. 17-18.

²⁷These are two topics of research reported by Rose, op. cit.

²⁸Hilda Taba, Elizabeth Hall Brady, and John T. Robinson, Intergroup Education in Public Schools (Washington, D. C.: American Council on Education, 1952), pp. 14-15.

1. The whole area of citizenship education became a focal point for study, with major studies²⁹ being carried out in Detroit; Syracuse University; Harvard and Tufts Universities; at Kansas State College; and at Teacher's College, Columbia University.
2. Pamphlets³⁰ were prepared for use by teachers and interested citizens. These pamphlets were not designed as teaching units, but were useable for studying specific topics and techniques for teaching about intergroup relations.
3. Topics and techniques for teaching about intergroup relations were identified and resource units were prepared.³¹
4. Yearbooks³² of professional societies drew attention to problems of intergroup relations.

²⁹For further information on each of these studies see respectively, Stanley E. Dimond, Schools and the Development of Good Citizens (Detroit: Wayne University Press, 1953); Roy A Price, "Citizenship Studies at Syracuse," Phi Delta Kappan, XXXIII (1951), 179-181, 192; The Civic Education Project (Cambridge: The Civic Education Project, 1949); Earl E. Edgar, "Kansas Study in Education for Citizenship," Phi Delta Kappan, XXXIII (1951), 175-178, 192; William S. Vincent, et al, Building Better Programs In Citizenship (New York: Teacher's College, Columbia University, Citizenship Education Project, 1958).

³⁰This reference is to the series "Freedom Pamphlets" published by the Anti-Defamation League of B'nai B'rith. For examples see Gordon W. Allport, ABC's of Scapegoating (New York: Anti-Defamation League of B'nai B'rith, 1948), William H. Kilpatrick, Modern Education and Better Human Relations (New York: Anti-Defamation League of B'nai B'rith, 1949), Kenneth D. Benne, Leland P. Bradford, Ronald Lippitt, Group Dynamics and Social Action (New York: Anti-Defamation League of B'nai B'rith, 1950).

³¹For examples of these units see William E. Vickery, Stewart G. Cole, Intercultural Education in American Schools (New York: Harper & Brothers, 1943); William Van Til, et al, Democracy Demands It (New York: Harper & Brothers, 1950); I. James Quillen, Lavone A. Hanna, op. cit., pp. 476-523.

³²Hilda Taba and William Van Til (eds.), Democratic Human Relations. Sixteenth Yearbook (Washington, D. C.: National Council for the Social Studies, 1945); C. O. Arndt (ed.), Americans All: Studies in Intercultural Education (Washington, D. C.: Department of Supervisors and Directors of Instruction, National Education Association, 1942).

In addition to these efforts, two in-depth projects took place during this time period which have important implications for this study. Trager and Radke-Yarrow³³ conducted a study on attitude change in the schools of Philadelphia. They studied the impact of teacher philosophy, technique, and materials on the ethnic attitudes of kindergarten, first, and second grade students. Two experimental conditions were created for the study. Condition "X" consisted of philosophy, methods, and materials designed to support democratic intergroup values. Condition "Y" consisted of philosophy, methods, and materials designed to support existing stereotypes and negative intergroup values. The results of the study showed each experimental group aligning its attitude with the experimental conditions established, and led the authors to conclude:

"The changes achieved in the experiment demonstrate that democratic attitudes and prejudiced attitudes can be taught to young children. The experiment contributes to an understanding of some of the important conditions which are conducive to learning attitudes. Furthermore, it is apparent that children learn prejudices not only from the larger environment but from the content of the curriculum and its values. If democratic attitudes are to be learned, they must be specifically taught and experienced."³⁴

Though Trager and Radke-Yarrow conclude that the content of the curriculum is an important contributor to the attitudes learned by young children, they are also forced to realize that:

"...there are few ready-made materials suitable for young children that exemplify the diversity of our American culture, that deny the undesirable stereotypes associated with racial and religious groups, that emphasize how human beings are

³³Helen G. Trager and Marian Radke-Yarrow, They Learn What They Live (New York: Harper & Brothers, Publishers, 1952).

³⁴Ibid., p. 341.

essentially very much alike, that portray good human relations where these do obtain, or acknowledge that this is not the best of all possible worlds."³⁵

Between 1945 and 1948, the "Project in Intergroup Education," financed by the National Conference of Christians and Jews, examined both the community and the school as agents for intergroup education. The project emphasized the importance of developing local community leadership as a means of advancing intergroup relations. In the school, the existing curriculum was to be used as a base on which to build intergroup relations. To do this, four areas were identified within which to work:

- | | |
|--------------|--|
| 1. Family | 3. American Culture |
| 2. Community | 4. Interpersonal Relations ³⁶ |

"Core ideas"³⁷ were the focal point for units developed within each of these four areas. When possible, units began with children's experiences and used these experiences as stepping stones to the study of cultural diversity. Field trips and interschool visitations were stressed as means of reinforcing the "core ideas" explored.

In developing the "core ideas," consideration was given to the effects of information on the attitudes of students involved. Taba,

³⁵Ibid., p. 358.

³⁶Hilda Taba, Elizabeth Hall Brady, and John T. Robinson, op. cit., pp. 69-123.

³⁷An example of a "core idea" provided by Taba is "All families have problems and conflicts." For other examples see Ibid., p. 80, 85-86, 93.

the director of the project, rejected the idea that information alone was enough to change attitudes. Instead, Taba stated:

"...by using interpretative concepts to examine and relate facts, teachers can add to information and knowledge and, at the same time, modify existing feelings and provoke new feelings and attitudes. Feelings and facts together create a new orientation.³⁸

Four techniques were found by this project to be effective in strengthening the impact of instruction on feelings and attitudes.

1. Selection of information and ideas with close attention to their effect on attitudes and feelings, as well as their role in developing attitudes and feelings.
2. Comparison of the familiar with the unfamiliar, the accepted with the less accepted.
3. Use of student experiences to introduce intergroup study.
4. Use of stories and novels as a source for developing insights which required emotional identification.³⁹

In addition, Taba cautioned against the direct teaching of units, i.e., the nature of prejudice, or social problems involving intergroup conflict. According to her:

"Attitudes are most effectively modified and redirected under indirect, persuasive, and consistent measures, and when the person concerned feels no threat to himself or to his cherished values.⁴⁰

³⁸Ibid., p. 111.

³⁹Ibid., p. 110-113.

⁴⁰Ibid., p. 19.

The research on intergroup relations in the 1950's tended to shift away from the classroom environment. According to at least one study:

"More research has been devoted during the decade 1948-1958 to the study of the origin of prejudice than to any other topic in the field of race relations."⁴¹

During this period, Adorno, Frenkel-Brunswik, Levinson, and Sanford⁴² attempted to link personality type with prejudice. Allport⁴³ explored the whole nature of prejudice; what it is, how it is formed, and how prejudiced attitudes can be changed. Festinger⁴⁴ advanced his theory of dissonance as a means of explaining attitude change and resistance to such change.

Another important trend was noted by one investigator during this same general time period. This was the seeming lack of interest in attitudes and attitude change exhibited by educational psychologists. Nunney⁴⁵ examined educational psychology textbooks published between 1948 and 1963. Nunney concluded that since teachers in training from

⁴¹UNESCO, Research on Racial Relations (Amsterdam: United Nations Educational, Scientific, and Cultural Organization, 1966), p. 109.

⁴²T. W. Adorno, E. Frenkel-Brunswik, D. Levinson, and R. N. Sanford, The Authoritarian Personality (New York: Harper & Brothers, 1950).

⁴³Gordon W. Allport, The Nature of Prejudice (Garden City, New York: Doubleday & Company, Inc., 1958).

⁴⁴Leon Festinger, A Theory of Cognitive Dissonance (Evanston: Row Peterson Co., 1957).

⁴⁵Derek N. Nunney, "Trends in the Content of Educational Psychology, 1948-1963," Journal of Teacher Education, XV (1964), 372-77.

1948-1963 would be working from these books, they were more likely to learn about learning theory than about the problems of adjustment, attitudes, and personality.

Thus, following a period of research on attitude change, much of which had direct application to the classroom, the research shifted to other interests. In addition, most teachers who were going into the classrooms of the late 1950's and 1960's received little or no training in such areas as attitude development and attitude change.

Interest in integrated materials and faith in what instruction can do for intergroup relations was rekindled in the 1960's. The National Council for the Social Studies helped draw attention back to these areas of thought with its 30th Yearbook entitled Citizenship and a Free Society: Education for the Future, edited by Franklin Patterson. The Yearbook attempted to examine the future of citizenship as it would evolve in the decades of the 1960's and 1970's.

Vickery, in one Yearbook chapter, tried to analyze what education for intergroup relations would be like during that time period.

In his article Vickery predicted and called for:

1. Intergroup education to develop a broad cultural sensitivity, nonstereotyped way of thinking and to provide sound information and concepts about intergroup relations.
2. Concepts to be used instead of subject matter outlines as the focal point for instruction for intergroup relations.

3. Teachers to use methods of instruction which are effective in changing attitudes, feelings, and social behavior.
4. Programs of school organizations to be planned to help achieve better intergroup relationships.⁴⁶

A review of recent literature reveals that many of the developments that Vickery predicted are now being emphasized. Concepts have been the focal point of a wealth of literature and a number of social studies projects in the 1960's.⁴⁷ However, the development of materials incorporating sound information about ethnic groups has tended to lag.

Larrick reviewed 5,206 trade books between 1962 and 1964. She found that the black man had virtually been eliminated from these books. Only 6.7 per cent of the books reviewed had at least one black man in them.⁴⁸ A number of text reviews at both the elementary and secondary level have reached similar conclusions, finding that text materials are basically "Negro free."⁴⁹

⁴⁶William E. Vickery, "Educating Citizens for Democratic Intergroup Relations, 1960-80," In: Franklin Patterson (ed.), Citizenship and a Free Society: Education for the Future, 30th Yearbook (Washington, D. C.: National Council for the Social Studies, 1960), pp. 163-183.

⁴⁷John I. Goodlad, Reneta Von Stoephasius and M. Frances Klein, The Changing School Curriculum (New York: The Fund for the Advancement of Education, 1966), pp. 56-72.

⁴⁸Nancy Larrick, "The All-White World of Children's Books," Saturday Review, XLVII (1965), p. 84.

⁴⁹Sample reviews are Irving Sloan, The Negro in Modern American History Textbooks (Washington, D. C.: American Federation of AFL-CIO, 1967); A Report on the Treatment of Minorities in American History Textbooks (Lansing, Michigan: Michigan Department of Education, 1968); Otto Klineberg, "Life is Fun in a Smiling, Fair-Skinned World," Saturday Review, LII (1963).

Grambs, in a position paper presented at Tufts University in 1963, reviewed the need for materials depicting the Negro American. She also decried the lack of current research on the impact of instructional materials on the attitudes of students. According to Grambs:

"...the Trager-Yarrow research report is probably the only study made of the differences in education (textbook) content that is reported in the literature. As a matter of fact, it is claimed by one of the very knowledgeable experts in the field that no experimental study has been done on differences in textbook content, despite the fact that the textbook is the most consistently and constantly used educational aid in the classroom, other than the teacher."⁵⁰

Gibson and Kvaraceus report that after fourteen months of reviewing textbook studies and "new" materials designed to include the Black American:

"most of it suffers from the same emotionless, lack of reality orientation, and just plain dullness that many of the project's consultants have pointed out in the older materials."⁵¹

Members of the project came to the conclusion that some existing materials could be used in their program, but that eventually the project was going to have to devise its own materials. The materials to

⁵⁰Jean D. Grambs, "The Self-Concept: Basis For Reeducation Of Negro Youth," In: W. C. Kvaraceus, et al., Negro Self-Concept (New York: McGraw Hill, 1965), p. 22. The expert mentioned by Grambs is Arthur A. Lumsdaine. See Arthur A. Lumsdaine, "Instruments and Media of Instruction," In: N. L. Gage (ed.), Handbook of Research on Teaching (Chicago: Rand McNally & Company, 1963), p. 586.

⁵¹John S. Gibson and William C. Kvaraceus, The Development of Instructional Materials Pertaining To Race And Culture In American Life (Medford, Massachusetts: Lincoln Filene Center for Citizenship and Public Affairs, 1966), p. 31.

be devised were to be conceptual in nature. Specifically, the project felt that:

"Instructional materials are needed in the form of supportive background material and technique guides for teachers so that they can guide young learners in a nondirective discussion of the groups of which they are members and the meaning of 'freedom' which eventually can diminish the use of conventional cliches. Instructional materials are needed--perhaps in the form of records, film clips, newspapers, taped interviews, photographs--which make the unity and richness of the collective life of other racial and ethnic groups in this country a living experience for K-6 children in the classroom."⁵²

Interest and demands for integrated materials have accelerated as the decade of the 1960's has progressed. At this time, those interests and demands have resulted in a growing body of literature calling for corrections in the stereotypes presented in instructional materials--presentation of history that includes the contributions of minority groups and an examination of intercultural relations in general. The growing pressure has resulted in:

1. Legislative action designed to integrate instructional materials.⁵³
2. A growing body of literature stressing the need for developing materials which include minority groups.⁵⁴

⁵²Ibid., p. 37.

⁵³See Act No. 127, Public Acts of 1966, State of Michigan, 73rd Legislature.

⁵⁴As an example of current interest see Social Education, XXXIII (1969).

3. An influx of "new" materials, much of which still depicts the Negro, our nation's largest racial minority, as a separate entity or includes him in texts and supplementary books through integrated pictures only.

In summary, this section of the review of the literature clearly establishes a number of points important to this investigation. Interest in intercultural education, integrated materials, and the impact of materials in the classroom are not new. A number of studies have been done which provide guidance for those now interested in designing integrated materials. The studies clearly show that interest in intercultural education has not been consistent, increasing in the time period of the 1930's and 1940's and fading in the late 1950's; that the research and studies of the 1930's and 1940's do provide guidelines from which to develop integrated materials today. The guidelines support both the importance of concept development in the social studies and the need for materials which do more than provide facts as a means of changing attitudes. The review points out the need for the development of materials and techniques which combine feeling and information in a nonthreatening manner. The decade of the 1960's is filled with literature depicting the need for integrated materials. However, studies building on the guidelines of earlier research do not appear.

Attitudes and Attitude Change

This section of the chapter rests on the belief that racial attitudes are learned and can be changed by relearning. The body of literature

exploring this belief is far too large to be presented in this review. Therefore, only those studies and programs having particular relevance to this investigation have been reported.

Definitions of "attitude" are nearly as plentiful as studies on attitude change. As a working definition, this reviewer accepts the definition of Harding, Kutner, Prochansky, and Chien:

"By attitude, we mean a tendency or cluster of tendencies to react in various specific ways to another individual or to a group of individuals."⁵⁵

One always has an attitude toward something or someone and the attitude is usually identifiable as either positive or negative.⁵⁶

Attitudes are learned and their learning begins at a very early age. According to Allport:

"The first six years of life are important for the development of all social attitudes, though it is a mistake to regard early childhood alone responsible for them. A bigoted personality may be well under way by the age of six, but by no means fully fashioned."⁵⁷

Goodman's study of New Dublin children emphasizes the point that attitudes are learned early in life. She found consciousness of race in

⁵⁵J. Harding, et al., "Prejudice and Ethnic Relations," In: G. Lindzey (ed.), Handbook of Social Psychology, II (Reading, Massachusetts: Addison Wesley Publishing Co., 1954), 1022.

⁵⁶Gordon W. Allport, Pattern and Growth in Personality (New York: Holt, Rinehart and Winston, 1961), p. 347.

⁵⁷Gordon W. Allport, The Nature of Prejudice, op. cit., p. 282.

children as early as age two or two and one-half.⁵⁸ Morland⁵⁹ studied Negro and white nursery school children in Lynchburg, Virginia, and found that over one-third of the three-year-old children were either medium or high in their ability to identify pictures of Negroes and whites.

Stevenson and Stewart⁶⁰ found that by age six children not only indicated racial awareness, but were already stereotyping. Kutner,⁶¹ in a study of seven-year-old children in the Boston area, concluded that 12 per cent of his sample showed clear signs of prejudice.

Two very important tendencies are pointed out by a review of these studies:

1. Awareness of race appears very early in a child's life.
2. As children grow older, initial awareness of race gives way to identifiable racial prejudice.

The correlation between increase in age and crystallization of attitude, while more drastic among white children, is apparent among black

⁵⁸Mary Ellen Goodman, Race Awareness In Young Children, Revised edition (New York: Collier Books, 1964), p. 252.

⁵⁹J. K. Morland, "Racial Recognition by Nursery School Children in Lynchburg, Virginia," Social Forces, XXXVII (1958), 132-147.

⁶⁰Harold W. Stevenson and E. C. Stewart, "A Developmental Study of Racial Awareness in Young Children," Child Development, XXIX (1958), 408.

⁶¹B. Kutner, "Patterns of Mental Functioning Associated With Prejudice in Children," Psychological Monographs, LXXII (1958).

children as well.⁶² Minard, in a study of Iowa children, also noted this correlation and called attention to the need for early efforts to improve students' racial attitudes. Minard suggested:

"The extent to which attitudes seem to approach fixity in the upper grades should have a significant meaning toward early conditioning or improvement of pupil's race attitudes."⁶³

Research on attitude formation can be classified in many ways, depending on the emphasis of the investigation. One classification system provides for the research to be placed in one of two categories:

1. Personality-Oriented Research
2. Group-Oriented Research⁶⁴

The work of Adorno, Frenkel-Brunswik, Levinson, and Sanford is an important contribution to "Personality-Oriented Research. " In their book, The Authoritarian Personality, these authors link together ethnic prejudice and a specific personality type--characterized by rigidity, authoritarian submission, concern with in-group identification, and displacement of hostility on those in out-groups."⁶⁵

⁶²Helen G. Trager and Marian Radke-Yarrow, op. cit., p. 163.

⁶³Ralph D. Minard, "Race Attitudes of Iowa Children," Studies in Character, IV, University of Iowa (1931), 50.

⁶⁴The classification used is that presented by E. E. Davis, Attitude Change: A review and bibliography of selected research (Paris: UNESCO, 1965).

⁶⁵T. W. Adorno, et al., op. cit.

Linton and Graham⁶⁶ studied the relationship between opinion change and authoritarian attitudes. They found a definite relationship between opinion change and the variables which Adorno, et al., felt reflected the authoritarian personality.

A number of group-centered studies have identified factors which influence an individual's attitudes. Asch⁶⁷ found that in small groups the pressures exerted by majority opinion could force an individual into agreeing with judgments which ran counter to his own. Newcomb⁶⁸ in his "Benington College Study" established a relationship between the attitudes held by his sample of 250 college girls and the attitudes associated with the college. He found a positive relationship between student adoption of the attitudes associated with the college and the degree to which they accepted the college community as a reference group.

Sims and Patrick⁶⁹ studied the racial attitudes of Northern white students attending a Southern college. The study showed a positive

⁶⁶H. Linton and E. Graham, "Personality Correlates of Persuasibility," In: C. I. Hovland and I. Janis (eds.), Personality and Persuasibility, (New Haven: Yale University Press, 1959), pp. 69-101.

⁶⁷S. E. Asch, "Effects of Group Pressure Upon the Modification and Distortion of Judgment," In: H. Guetzkow (ed.), Groups, Leadership and Men, (Pittsburg: Carnegie Press, 1951).

⁶⁸Theodore M. Newcomb, Personality and Social Change (New York: Dryden, 1943).

⁶⁹B. M. Sims and J. R. Patrick, "Attitude Toward the Negro of Northern College Students," Journal of Social Psychology, VII (1936), 192-204.

relationship between length of stay at the college and adoption of the negative attitudes toward Negroes more commonly associated with their Southern classmates. The research shows that both an individual's personality and his surrounding social contacts influence his attitudes. These combined factors are complex.

Attempts to change ethnic attitudes experimentally have produced conflicting results. On the basis of their research, Adorno, Frenkel-Brunswik, Levinson, and Sanford decided that to change the ethnic attitudes of the authoritarian personality, one had to control his behavior. They called for an appeal to his fears rather than to his conscience. According to these authors:

"He must be convinced that arrayed against the overt expression of his prejudices are the law, overwhelming number of people, numerous conventional authorities, and prestige figures."⁷⁰

Wagman⁷¹ set up an experiment to test the relationship between attitude change and authoritarian personality. Specifically, he tried to determine the impact on the authoritarian personality of three different types of materials:

1. A booklet which was used to provide information on prejudice and intergroup relations.
2. Authoritarian statements supporting nondiscrimination were used. The statements were made by business and military leaders.

⁷⁰Adorno, et al., op. cit., p. 816.

⁷¹W. Wagman, "Attitude Change and Authoritarian Personality," Journal Of Psychology, XL (1955), 3-24.

3. Authoritarian statements supporting discrimination were used. These statements were also made by business and military leaders.

Two important findings for attitude change resulted from the Wagman study:

1. The attitudes of authoritarian individuals with racial prejudice are most modifiable through authoritarian suggestion. This was found true of exposure to both the statements supporting discrimination and those supporting nondiscrimination.
2. The booklet presenting nonauthoritarian information was effective for individuals who were nonauthoritarian, but the racial attitudes of authoritarian individuals were often just reinforced by these materials.

A number of studies help establish guidelines for anyone interested in the impact of materials and communications on attitudes. Janis and Feshbach⁷² have found that when communications arousing fear and anxiety are used, they stimulate a defensive reaction in the individual for whom the communication was intended. That reaction tends to interfere with the communication. Cooper and Jahoda,⁷³ in a study of ethnic attitudes, found that highly prejudiced individuals not only react defensively, but actually distort and block out information designed to

⁷²I. Janis and Seymour Feshbach, "Effects of Fear-Arousing Communications," Journal of Abnormal and Social Psychology, XLVIII (1953), 79-93.

⁷³E. Cooper, H. M. Jahoda, "The Evasion of Propaganda: How Prejudiced People Respond to Anti-Prejudice Propaganda," Journal of Psychology, XXIII (1947), 15-25.

caricature their beliefs. Feshbach and Singer,⁷⁴ after examining clinical evidence, concluded that communications that are personally threatening may actually cause prejudice to increase.

Studies of the effectiveness of educational programs in changing racial attitudes have produced the same conflicting results reported in the more controlled experimental research. In 1927, Young⁷⁵ tried to determine the impact of the course, "American Race Relations," on undergraduate students at the University of Pennsylvania. He found the course made no significant difference in student ranking of the abilities of the ethnic groups studied.

Campbell and Stover⁷⁶ reported on the effect of a short course taught to ninth grade girls. The course consisted largely of films and travel talks. The researchers reported an increase in favorableness in attitude toward Negroes as measured by both the Bogardus Social Distance Test and the Hinkley Test.

Mapheus Smith⁷⁷ found that the university course, "Immigration and Race Problems," had a significant positive effect on students at

⁷⁴Seymour Feshbach and R. Singer, "The Effects of Personal and Shared Threats Upon Social Prejudice," Journal of Abnormal and Social Psychology, LVII (1957), 411-416.

⁷⁵Donald Young, op. cit., pp. 235-242.

⁷⁶D. W. Campbell and G. F. Stover, "Teaching International-Mindedness in the Social Studies," Journal of Social Psychology, (New York: Harper and Brothers, 1937), pp. 244-248.

⁷⁷Mapheus Smith, "A Study of Change of Attitudes Toward the Negro," Journal of Negro Education, VIII (1939), 64-70.

the University of Kansas. Schloroff⁷⁸ administered a rating scale to 425 ninth grade students before and after a civics course which included classes on the history of the Negro. Students taking the course were found to be significantly more positive in their attitudes toward the Negro following the course.

Trager and Radke-Yarrow⁷⁹ conducted an experiment on changing intergroup attitudes. Their study was conducted in schools in Philadelphia. One hundred-one students in grades one and two composed the integrated sample for study. Three conditions were created for the study. In condition "X" social experiences and group membership were stressed. Direct contact with members of minority groups was provided regularly. Throughout the contact and experiences, democratic intercultural values were stressed and there was a major attempt to break down student-held stereotypes. In condition "Y" group membership was ignored and emphasis was placed on materials and attitudes depicting group prejudices prevalent in our society. The third condition was a "control" condition in which teachers were instructed to do as little intercultural discussion as possible.

The results of this study showed that the attitudes of students within each of the two experimental conditions moved in the direction

⁷⁸P. W. Schloroff, "An Experiment in the Measurement and Modification of Racial Attitudes in School Children," (Unpublished doctoral dissertation, New York University, 1930).

⁷⁹Helen G. Trager and Marian Radke-Yarrow, op. cit.

of the conditions to which they were exposed. In the "X" groups 65 per cent of the students registered more positive attitudes toward Negroes on the post-test and on interviews. In the "Y" groups 55 per cent of the students registered post-test attitudes which had become more negative toward the Negro.⁸⁰

In commenting on their findings the authors state:

"Children learn what they live; in a culture which practices and condones prejudice, one behaves and thinks with prejudice. If children are to learn new ways of behaving, more democratic ways, they must be taught new behavior and new values."⁸¹

A recent study by Litcher and Johnson⁸² explored the impact of multiethnic readers on white second grade students. These authors divided second graders into two groups. In one group students used a multiethnic reader for four months. In the second group students used the regular reader. The readers were identical with the exception of pictures and the names used to represent characters and groups.

After four months the authors state of their study:

"The evidence is quite clear. Through the use of a multiethnic reader, white children developed markedly more favorable attitudes toward Negroes."⁸³

⁸⁰Ibid., p. 301.

⁸¹Ibid., p. 362.

⁸²John H. Litcher and David W. Johnson, "Changes In Attitude Toward Negroes Of White Elementary School Students After Use of Multiethnic Readers," Journal of Educational Psychology, LX (1969), 148-152.

⁸³Ibid., p. 151.

Roth,⁸⁴ in a three-month study of fifth grade students, reported that only a combination of integrated classes and integrated materials was effective in changing the attitudes of white students towards the Negro. In Roth's study, the effects of curriculum type alone were not statistically significant.

Not all studies of educational programs report a positive shift in attitude toward the Negro. A 1932 study by Droba⁸⁵ reports no significant difference in attitude as a result of a college course on the American Negro. Manske⁸⁶ studied the effects on twenty-two high school classes exposed to ten lessons on the American Negro. Only two of the classes were reported to have shifted their attitudes in the direction in which the teacher was attempting to have them move. Eight of the classes showed movement in the opposite direction of the teacher's intention and the remainder of the classes showed no significant change.

This review of the literature on attitude change has not been meant to be inclusive. Selections have been made to show that it is possible to change attitudes, but that such change cannot always be predicted. In summary, it is felt that the research does show this possibility, both in controlled experiments and under actual classroom

⁸⁴Rodney W. Roth, "The Effects of Integral Curriculum on Negro and White Fifth Grade Students," (Unpublished doctoral dissertation, University of Michigan, 1969).

⁸⁵D. D. Droba, "Education and Negro Attitudes," Sociology and Social Research, XVII (1932), 137-141.

⁸⁶A. J. Manske, "The Reflection of Teacher's Attitudes In the Attitudes of Their Pupils," (Unpublished doctoral dissertation, Teachers College, Columbia University, New York, 1935).

conditions. The studies reviewed, however, do not give a detailed exploration of procedures and materials used to bring about the attitude change reported. This would be valuable information for one trying to determine what actually brought about the attitude change, and why attitudes moved in the direction reported. Attitude change, though possible, has not always occurred in the direction predicted.

The literature reviewed in this chapter has clearly established guidelines of importance to the current study. First, the use of concepts and concept materials was shown to be valuable for providing students with a framework for learning, remembering, and communicating information in the social studies. Second, it was shown that attitudes can be taught and modified within a regular classroom environment. Third, to have an impact on attitudes, the need for the development of materials and techniques which combine facts and feelings was identified. Fourth, the literature emphasized that attitudes are most effectively modified and redirected through means which do not pose a personal threat to the individual or individuals involved.

This study follows these guidelines and attempts to determine the impact of the concept lesson, "The Underground Railroad in Michigan," on the knowledge gains and the attitude changes of black and white fourth grade students.

CHAPTER III

RESEARCH DESIGN AND PROCEDURES

This chapter describes the locale in which the study took place and provides a detailed account of the study's design, instruments, and procedures.

Locale of the Study

This study was conducted in four elementary schools in Pontiac, Michigan. Pontiac¹ has a population of 83,168 residents, many of whom work in the automobile plants which form the backbone of the city's economy. Seventy-two per cent of the city's work force is blue collar. The median income for residents of the city is \$6,760.

The majority of Pontiac's residents, 54 per cent, have lived at their present address for less than four years. The population is mobile with much of the movement in and out of the city determined by job opportunities in the local automobile plants. Many of Pontiac's residents, both white and black, have recently arrived in the city from Southern states, searching for employment.

¹All data on Pontiac, Michigan was taken from A Profile of Southeastern Michigan: TALUS DATA (Detroit, Michigan: Detroit Regional Transportation and Land Use Study, 1968), pp. 8-9.

The city has two large, ethnic minorities; Black Americans and Mexican Americans. TALUS classifies 17 per cent of the population of Pontiac as non-white.² The city, though becoming increasingly integrated, still has distinct black, white, and Mexican American communities.

Nearly 57 per cent of Pontiac's "household heads" have less than a high school education.

Pontiac Schools were chosen for this study for three reasons:

1. The Pontiac Board of Education had officially adopted a resolution calling for all children in the school district to receive instruction in the role of the Black American in American history.³
2. The distinct ethnic communities of the city allowed for a study of integrated classes as well as segregated classes within the single school district.
3. Pontiac administrators and classroom teachers had shown extreme interest and cooperation in efforts to develop multiethnic materials.

The Sample

Nine fourth grade classes composed the sample for this study. The participating classes were selected from four Pontiac elementary schools. Racial composition was a prime consideration in determining which schools would be involved. Three types of classes were sought; integrated, black, and white.

²Ibid., p. 8

³School District of the City of Pontiac, Superintendent's Bulletin, XIV, No. 14 (May 2, 1968).

Within each school three fourth grade classes were selected for the study; two experimental classes and one control class. Only the three classes composing the black student body were not located in a single school. In this case, no single school was large enough to have three fourth grade classes. Therefore, the two experimental classes were selected from one school with a black student body, and the control class from another school located in the same community.

Each integrated class was divided into two groups; white students within an integrated classroom and black students within an integrated classroom. The resulting twelve groups were equated for intelligence, reading comprehension, and parent's employment status. The results are reported in Table 1. Table 1, Section A, presents the summary of means and standard deviations for the factors "intelligence," "reading comprehension," and "parent's employment status." Table 1, Section B, presents the summary of the analysis of variance for each of these factors. An examination of Section B shows that there were no significant differences among the twelve groups in terms of intelligence; $F(11, 173) = 1.25, p > .05$; reading comprehension, $F(11, 174) = 1.16, p > .05$; or parent's employment status, $F(11, 195) = .22, p > .05$.

Instruments Used

The instruments used in gathering data for this study were:

1. A semantic differential with the stimulus concept "black people."

TABLE 1
INTELLIGENCE, READING COMPREHENSION, AND PARENT'S EMPLOYMENT
STATUS FOR EXPERIMENTAL AND CONTROL GROUPS

A. Summary of Means and Standard Deviations

Student Body	Intelligence ^a			Reading Comprehension ^b			Parent's Employment Status ^c			
	Mean		S. D.	Mean		S. D.	White Collar	Blue Collar	Mean ^d	
	N			N			(1)	(2)	N	S. D.
Integrated:										
Exp. 1 (white)	11	100	13.2	11	43.4	32.0	2	11	1.2	0.4
(black)	11	97	9.5	11	45.9	29.0	1	9	1.2	0.3
Exp. 2 (white)	10	101	7.6	10	45.2	28.3	2	11	1.2	0.4
(black)	11	89	15.3	11	29.0	27.0	2	10	1.2	0.4
Control (white)	7	99	11.9	8	36.9	32.6	1	8	1.1	0.3
(black)	10	93	12.9	10	33.3	23.0	1	10	1.1	0.3
Segregated:										
Exp. 1 (white)	21	98	12.6	21	45.3	27.8	1	23	1.0	0.2
(black)	23	93	12.5	23	53.4	24.6	2	22	1.1	0.3
Exp. 2 (white)	19	97	12.0	17	55.4	20.5	1	20	1.0	0.2
(black)	22	96	8.9	22	41.7	23.5	3	20	1.1	0.3

TABLE 1--Continued

Student Body	Intelligence ^a		Reading Comprehension ^b		Parent's Employment Status ^c		
	N	Mean	S. D.	N	Mean	S. D.	White Collar (1)
Control (white)	16	98	10.3	17	39.3	24.3	3
(black)	25	93	8.6	25	43.2	27.6	2
							19
							23
							1.1
							1.1
							0.4
							0.3

^aLarge Thorndike Intelligence Test, Form "A." Test administered in grade three.

^bIowa Test of Basic Skills, Form "I." Test administered in grade three.

^cClassification based on A Profile of Southeastern Michigan: TALUS DATA (Detroit, Michigan: Detroit Regional Transportation and Land Use Study, 1968).

^dIn figuring the mean, each occupation classified as "blue collar" was assigned the number "1." Each occupation classified as "white collar" was assigned the number "2." The means reported in this column show "Parent's Employment Status" to be predominantly "blue collar" in all twelve groups.

B. Summary of the Analysis of Variance

Source	Degrees of Freedom	F-Ratio	Probability Level
Intelligence	11/173	1.25	p 7.05
Reading Comprehension	11/174	1.16	p 7.05
Parent's Employment Status	11/195	.22	p 7.05

2. A semantic differential with the stimulus concept "white people."
3. The Underground Railroad Form "A," designed by the investigator, to measure agreement or disagreement with the attitudes developed by the instructional material.
4. The Underground Railroad Form "F," designed by the investigator, to test the factual content of the instructional material.⁴

Two forms of the semantic differential were used to measure student attitudes toward the stimulus concepts "black people" and "white people." Each form used one of these stimulus concepts, to which students were to react.

Both forms of the instrument used the same ten polar adjective pairs through which students were to react to the stimulus concepts. All adjective pairs were correlated with the factor "evaluation." Only those adjective pairs with correlations of .75 or above were used.⁵ Each set of adjective pairs was placed on opposite ends of a five-point scale.

Dick and Di Vesta studied the reliability of the semantic differential for use with elementary school students. They reported a test-retest correlation on evaluation factor scores of .75 for fourth grade students.⁶

⁴Copies of the instruments are found in Appendix A.

⁵Charles E. Osgood, George I. Suci, Percy H. Tannenbaum, The Measurement of Meaning (Urbana, Illinois: University of Illinois Press, 1957), p. 37.

⁶Francis I. Di Vesta and Walter Dick, "The Test-Retest Reliability of Children's Ratings on the Semantic Differential," Educational and Psychological Measurement, XXVI (1966), 609.

A study of the reliability of the two forms of the semantic differential used in this study showed a reliability coefficient of .75 on the instrument using the stimulus concept "black people," and .71 on the instrument using the stimulus concept "white people." Both forms of the instrument were administered on a test-retest basis to a class of twenty-six fifth grade, white students.⁷

Suci⁸ investigated the validity of the semantic differential as a measuring device for ethnic attitudes and found a significant correlation between scores on the semantic differential for the stimulus concept "Negro," and a Thurston scale developed to measure ethnic attitudes toward the Negro.⁸

Underground Railroad Form "A" was designed by the investigator to determine student agreement or disagreement with the attitudes he tried to develop within the lesson, "The Underground Railroad in Michigan." A form of content validity for the instrument was shown by:

1. Constructing a list of positive and negative statements which the investigator felt portrayed the attitudes built into the lesson.
2. Submitting the statements and a copy of the story used in the lesson to an adult panel of four persons.

This panel was asked to respond to the statements in a way they felt consistent with the attitudes portrayed by the story. Written responses showed agreement on the part of this adult panel.

⁷Rodney W. Roth, "The Effects of Integral Curriculum on Negro and White Fifth Grade Students" (Unpublished doctoral dissertation, University of Michigan, 1969).

⁸Osgood, Suci, and Tannenbaum, op. cit., p. 193-194.

The instrument was then administered to an integrated group of fifth grade students as part of a pilot project designed to test the instruments and instructional materials developed for this study. A reliability coefficient for this instrument was computed using post-test data. The split-half method of computing reliability was used. Using the Spearman-Brown Prophecy formula, the reliability of the instrument was computed at .73.

Underground Railroad Form "F" was developed by the investigator. Both the story, A Mystery Train Trip, and Underground Railroad Form "F" were submitted to the same four members of the adult panel as a means of establishing content validity. The reliability of the instrument was computed on post-test data gathered in the pilot project. Kuder-Richardson Formula 20 was used to compute reliability as a measure of internal consistency for this instrument. The computed reliability was .81.

In addition to the use of these instruments, selected students were interviewed. No single list of questions was used for the student interviews. Instead, the selected students in experimental classes were asked to respond to questions from three predetermined categories:

1. Impressions of the lesson, "The Underground Railroad in Michigan."
2. Feelings about the characters who appeared in the lesson.
3. Comparisons between incidents which occurred in the lesson and similar incidents which were more current and often took place in the community in which the study was conducted.

Students selected from control classes were only questioned about the recent incidents which may have influenced their post-test responses.

Five forms of the semantic differential were used to examine student feelings about characters who appeared in the lesson. Each form contained a stimulus concept to which students were asked to react. The five stimulus concepts presented were:

1. Slave.
2. Slave owner.
3. Slave catcher.
4. Conductor. A drawing of the black conductor, Harriet Tubman, was presented with this stimulus concept.
5. Conductor. A drawing of the white conductor, Erastus Hussey, was presented with this stimulus concept.

All five forms of the semantic differential used the same ten polar pairs to measure student reactions. These were the same pairs used to measure student reactions to the stimulus concepts "black people" and "white people."

Instructional Materials

The instructional materials⁹ used in this study consisted of:

1. A series of twelve slides of the area from which the Underground Railroad "line" began.

⁹A copy of the printed booklet, A Mystery Train Trip, is presented in Appendix B.

2. An envelope containing four short poems, each of which described a term important to understanding the Underground Railroad.
3. An envelope containing eight drawings, two of which matched each term described by the individual poems.
4. A series of twenty slides of a local Underground Railroad "station."
5. A printed booklet entitled, A Mystery Train Trip.
6. A narrated audio-slide sequence of the story, A Mystery Train Trip.

The story and the audio-slide sequence formed the major instructional materials for this study. These materials were designed as examples of "integral history." As defined in Chapter I, integral history is history in which the story of the Black American is told as an inter-related story of the incident under study. To be considered "integral history," materials must be designed so that the Black American is seen, heard from, and included. He must be seen in the pictures and drawings that comprise the materials. He must be heard from by presenting his contributions to American history. He must be included as an interwoven part of the historical incident under study, as well as in the text, drawings, and pictures depicting the incident.

In addition, these materials are conceptual. The author designed the materials around two ideas or categories of information; railroad and Underground Railroad. The category of "railroad" was broken down into the component parts "line," "station," "conductor," and "train." During the initial phase of the instruction, these component

parts were put into working relationship to depict a ride on a train of today. Then, the category of "Underground Railroad" was broken down into the component parts "line, " "station, " "conductor, " and "train." In the remainder of the story and slides, these component parts were put into working relationship to depict a "ride" on the Underground Railroad.

Both the story, A Mystery Train Trip, and the audio-slide sequence are examples of migration. "Migration," as used in this study, is an idea. The concept or moving idea which guided the development of the materials is "Only the discontented migrate."¹⁰

Through writing style, the author tried to communicate both feelings and facts in the story, A Mystery Train Trip. In the audio-slide sequence, slides, narration, and sound effects were synchronized in an effort also to communicate both feelings and facts.

The Procedures

All experimental and control classes were pre-tested between September 15 and September 22, 1969. Experimental and control classes within each of the schools were tested on the same day. Integrated experimental and control classes were tested on September 15, 1969. Black experimental and control classes were tested on September 17, 1969. White experimental and control classes were tested on September 22, 1969.

¹⁰These definitions are consistent with those of Myles Platt, "Concepts and the Curriculum," Social Education, XXXVII (1963), 23.

Students from the three classes composing the white student body were administered:

1. The semantic differential with the stimulus concept "black people."
2. Underground Railroad Form "A."
3. Underground Railroad Form "F."

Students from the three classes comprising the black student body were administered:

1. The semantic differential with the stimulus concept "white people."
2. Underground Railroad Form "A."
3. Underground Railroad Form "F."

White students in integrated classes were administered identical instruments to those given white students who composed the white student body. Black students in integrated classes were given identical instruments to those given black students who composed the black student body.

The same test procedure was followed in all nine classes used for this study. Students were given a booklet of answer sheets. Each booklet consisted of:

1. A cover sheet for student identification.
2. The semantic differential on which students could directly respond.
3. A response sheet for Underground Railroad Form "A."
4. A response sheet for Underground Railroad Form "F."

Students completed the cover sheet, giving their birthdate, sex, teacher's name, the name of their school, and the occupation of their working parent. Before each test was taken the directions were read aloud by the investigator while students read along silently.

A time period of two weeks separated pre-testing and instruction in all experimental classes. The investigator taught all experimental classes. In Experimental 1 classes, using the audio-slide presentation, the following instructional procedures were used:

1. Color slides were used to introduce the story of Tice Davids, and one account of the beginnings of the Underground Railroad.
2. The terms, "station," "conductor," "line," "train," were introduced and definitions were given for each.
3. Color slides of a trip to an Underground Railroad "station" in Oakland County were used to reinforce the terms which had been previously introduced.
4. A set of two envelopes were distributed to each student. Envelope "one" contained four slips of paper. On each slip had been written a short verse describing one of the four terms introduced. Envelope "two" contained eight drawings, any two of which could be matched to a single verse from envelope "one." One set of four drawings was appropriate for describing the railroad of today. The other set of four drawings was appropriate for describing the Underground Railroad. After students had matched the verses with the drawings, they were instructed to listen while the investigator read a verse from envelope "one." Following the reading, students showed the investigator the drawing they selected to match with the verse. By following this procedure with all four verses, the investigator was able to determine whether or not students seemed to grasp the terms that would be used in the instructional period which followed. Student questions over the matching exercises were answered at this time.

5. The audio-slide sequence, A Mystery Train Trip, was presented. The slides, narration, and sound effects were synchronized so that pictures appeared at a time appropriate to the narration.

The procedure was identical for both Experimental 1 and Experimental 2 classes in steps one through four. Step five for Experimental 2 classes, using the oral-reading presentation, consisted of the investigator reading the story, A Mystery Train Trip, while students followed along in printed copies of the story. Pictures were neither discussed nor emphasized during the reading of the story. Classroom discussion was conducted following instruction in all experimental classes. Discussion was limited to the investigator answering questions posed by students.

The pre-test procedure was repeated for post-testing. Post-tests were given immediately after discussion in all experimental classes. Each control class was post-tested on the same day that the corresponding experimental classes were post-tested. Post-testing of control classes was done by a trained social studies consultant.

At least two students were selected for interviewing from each of the nine classes composing the sample for this study. In each class, an attempt was made to interview that student who deviated most from his positive pre-instructional attitude as measured by the semantic differential, and that student who deviated most from his negative pre-instructional attitudes, as measured by the semantic differential. All interviews were taped and transcribed for analysis by the investigator.

Data Analysis

The data gathered for this study are presented in gain scores. When appropriate, percentage gain scores¹¹ have been presented in the analysis. The two formulas used in computing the percentage gain scores are:

$$P.G. = \frac{X_2 - X_1}{R_p} 100$$

Symbol meaning:

P.G. = Percentage gain

X₂ = Post-test score

X₁ = Pre-test score

R_p = Highest score possible minus the pre-test score.

The formula above is used when the post-test score exceeds the pre-test score.

$$P.G. = \frac{X_2 - X_1}{R_n} 100$$

Symbol meaning:

P.G. = Percentage gain

X₂ = Post-test score

X₁ = Pre-test score

R_n = Pre-test score minus the lowest possible score

¹¹This technique is proposed by Allen Menlo and M. Clemens Johnson, Percentage Gain: An Alternative Approach to the Measurement of Change (Unpublished paper, the University of Michigan, no date).

This formula is used when the post-test score is less than the pre-test score.

To test the first three hypotheses, a 2 by 3 analysis of variance was used, using both gain scores and percentage gains for each of the three instruments administered. Racial composition of the sample composed the two levels of one axis of the analysis. The other axis was composed of the types of instruction used in the study; Experimental 1, using the audio-slide presentation; Experimental 2, using the oral-reading presentation; and control, in which neither of the presentations were used.

The Pearson product-moment method of correlation was used to compute the correlations necessary to test hypothesis four.

CHAPTER IV

RESULTS

In this chapter are presented the results of teaching a lesson on "The Underground Railroad in Michigan" to fourth grade students. The chapter is divided into two major sections. In section one, the results from testing will be reported. In section two, student interviews will be reported and analyzed.

To test the first three hypotheses explored in this study, a 2 by 3 analysis of variance was employed using gain scores from the instruments involved in gathering data for each hypothesis. When appropriate, per cent gain scores were also employed and reported. Two factors were explored in the analysis; instruction in integral history and racial composition.

Integral history, as described in Chapter III, was composed of two different instructional programs, each of which presented the story of "The Underground Railroad in Michigan." The first program consisted primarily of the audio-slide sequence, A Mystery Train Trip, and was presented to Experimental 1 groups. The second program consisted primarily of an oral reading of the story, A Mystery Train Trip, and was presented to Experimental 2 groups. "Racial

composition" was divided into the two categories "segregated" and "integrated."

The Tukey¹ procedure was used for comparing differences among the means obtained for individual groups. Though this procedure is considered conservative and yields fewer significant differences than most tests of significance, it was selected for its capacity for testing the differences between two or more means while holding the level of significance constant.

To test the fourth hypothesis, correlations were computed between knowledge gains as measured by Underground Railroad Form "F," and attitude changes, as measured by both the semantic differential instrument and Underground Railroad Form "A." This study used the Pearson product-movement method of correlation.

Hypothesis One

Significant² gains in information will result from teaching the lesson "The Underground Railroad in Michigan."

The results from testing this hypothesis are presented separately for black students and white students. A summary of results follows the analysis of the lesson's impact on these two groups of fourth grade students.

¹This Technique is explained in greater detail in B. J. Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill Book Company, 1962), pp. 87-89.

²All differences at or beyond the 5 per cent level are considered statistically significant in this study.

Impact on Black Students

Table 2 presents a summary of the test results from Underground Railroad Form "F" for black students. Section A of the table reports the means and standard deviations for the pre-test, post-test, and for raw-score gains. Section B of the table reports the results from the analysis of variance for the pre-test, post-test, and for the raw-score gains.

An examination of Section A of the table reveals that group mean scores on the pre-test range from a low of 5.09 in the integrated control group to a high of 7.92 for the segregated Experimental 2 group, the group in which the lesson on "The Underground Railroad in Michigan" was to be largely presented through a reading of the story, A Mystery Train Trip.

The analysis of variance for the pre-test showed no significant difference among the means which could be attributed to the racial composition of the classrooms; $F(1/101) = 2.93$, $p > .05$; the division of groups according to the type of lesson to be taught; $F(2/101) = 0.98$, $p > .05$, or to an interaction of these two variables; $F(2/101) = 2.30$, $p > .05$.

The mean gains reported in Section A of Table 2 show an increase in information for all six groups of black students involved in the study.

The post-test means ranged from a low of 8.16 achieved in the segregated control class to a high of 10.73 achieved in the integrated

TABLE 2
SUMMARY OF THE RESULTS FROM UNDERGROUND
RAILROAD FORM "F" - BLACK STUDENTS
A. Summary of Means and Standard Deviations

Instruction		Classroom Racial Composition					
		Pre-Test		Post-Test		Mean Gain (Raw Score)	
		Seg.	Int.	Seg.	Int.	Seg.	Int.
Integral History							
Exp. 1	N	24	11	24	11	24	11
	Mean	5.33	6.18	9.42	10.64	4.08	4.45
	S.D.	2.75	3.68	3.17	4.70	3.32	3.96
Exp. 2	N	24	12	24	12	24	12
	Mean	7.92	5.75	9.71	8.83	1.79	3.08
	S.D.	2.73	2.73	3.43	4.45	2.54	5.60
Control	N	25	11	25	11	25	11
	Mean	7.08	5.09	8.16	10.73	1.08	5.64
	S.D.	3.32	3.78	3.79	4.36	3.82	2.73

TABLE 2
B. Summary of the Analysis of Variance

Source	Degrees of Freedom	F-Ratio	Probability Level
Pre-Test			
Racial Composition	1/101	2.93	p 7.05
Instruction	2/101	0.98	p 7.05
Interaction	2/101	2.30	p 7.05
Post-Test			
Racial Composition	1/101	1.49	p 7.05
Instruction	2/101	0.33	p 7.05
Interaction	2/101	1.59	p 7.05
Raw Gain			
Racial Composition	1/101	7.57	p < .01 ^a
Instruction	2/101	1.97	p 7.05
Interaction	2/101	2.84	p 7.05

^aSignificant at the 1 per cent level

control class. The post-test means for the experimental groups ranged from a low of 8.83 for the integrated Experimental 2 group, to a high of 10.64 for the integrated Experimental 1 group.

The mean raw gains ranged from a low of 1.08 for the segregated control class to a high of 5.64 for the integrated control group. Mean gains for experimental classes ranged from a low of 1.79 for the segregated Experimental 2 group to a high of 4.45 for the integrated Experimental 1 group of black students. Because of this large gain in information registered by the integrated control group, no significant difference was found among the mean gains for experimental and control groups which could be attributed to instruction.

No simple explanation has been found for the large gain in information registered by the integrated control group. However, follow-up interviews with students, parents, the classroom teacher, and continued analysis have resulted in the discovery of a series of circumstances which contributed to this gain. The classroom teacher did not teach the class information which would have affected the test results. The pre-test mean for the group, 5.09, showed it to have less knowledge about the information presented in the lesson than any of the other five groups with which it was to be compared. Yet, this group of eleven black students made greater gains in factual information than any group studied. The evidence gathered by the investigator suggests that these gains had two causes:

1. For two students the pre-test and the appearance of the investigator acted as a catalyst for their own existing interest in the Underground Railroad.

Both students scored well on the pre- and post-test, averaging 12 out of 30 correct on the pre-test while the entire class averaged only 5.09 correct. On the post-test, these same two students averaged 19 correct out of 30, while the entire class averaged 10.73 correct. Follow-up interviews revealed that both these students had gone to the library to further their reading on "The Underground Railroad" between pre- and post-testing and that they had shared the information they gained with other black students in class--their close friends.

2. For black parents, a presentation by the investigator acted as a catalyst for their existing interest in the story of the Black American.

Between pre- and post-testing, the investigator was invited to address the P. T. A. in the integrated elementary school. The topic had a human relations theme and used slides of the actual location of homes, roadways, buildings, and people who were prominent in operating the "line" of the Underground Railroad reported in the story, A Mystery Train Trip.

The audience was integrated and composed mostly of parents and teachers of students who attended the school. The presentation was successful and resulted in a discussion among the investigator and several parents. Black parents tended to ask very specific questions about "The Underground Railroad in Michigan" and about the people associated with it. Some asked for a complete verbal listing of places to see in Michigan and of Black Americans who were prominent in the Underground Railroad movement.

Follow-up interviews with black parents and white parents who attended the P. T. A. meeting revealed that while those who attended the meeting discussed it at home with other family members, black parents tended to share specific information about black history with family members and friends, while white parents tended to discuss the presentation as . . . "a good presentation which other members of the family and neighborhood should have seen."

Though the large factual gains obtained by the integrated control group tends to qualify the findings from the results from Underground Railroad Form "F," important trends are evident from Table 2. Black students in integrated groups did tend to gain more factual information than did black students in segregated groups. This supports one of the accepted reasons for integrated education; that black students will learn more in integrated classes. However, this belief must be qualified. An examination of Table 2, Section A reveals that the mean gains in information registered by black students in a segregated classroom using the audio-slide sequence as the basis for instruction, 4.08, rivaled the gains made by black students using the same approach in an integrated class, 4.45. Indeed, these gains are not significantly different. The gains in information made by the segregated Experimental 1 group, 4.08, exceeds the gains made by the Experimental 2 classes, using the reading of A Mystery Train Trip in both segregated, 1.79, and integrated, 3.08, groups.

The impact of the audio-slide approach used in Experimental 1 groups can perhaps best be seen by comparing the total mean gain for Experimental 1 groups, 8.53, to those registered by Experimental 2 groups, 4.87 (See Table 2, Section A, Mean Gain). This impact is further emphasized by comparing the mean gains of the segregated Experimental 1 group, 4.08, with that of the segregated Experimental 2 group, 1.79, or to that of the segregated control group, 1.08. The mean gains registered by the Experimental 2 group and the control group are not significantly different. However, the difference between the mean gains made by the segregated Experimental 1 group and those made by the segregated control group approach significance, $p < .10$.

However, because of the large gain in information registered by the integrated control group, the difference among the means for Experimental 1, Experimental 2, and control groups are not statistically significant and the hypothesis "Significant gains in information will result from teaching the lesson 'The Underground Railroad in Michigan'" is rejected for black students.

Impact on White Students

Table 3 presents a summary of the test results from Underground Railroad Form "F" for white students. The means and standard deviations for the pre-test, post-test, and raw score gains are presented in Section A of the table. The analysis of variance for the pre-test, post-test, and raw score gain is presented in Section B.

TABLE 3
SUMMARY OF THE RESULTS FROM UNDERGROUND
RAILROAD FORM "F" - WHITE STUDENTS

A. Summary of Means and Standard Deviations

Instruction	Classroom Racial Composition					
	Pre-Test		Post-Test		Mean Gain (Raw Score)	
	Seg.	Int.	Seg.	Int.	Seg.	Int.
Integral History						
N	24	13	24	13	24	13
Exp. 1	Mean 5.42	7.77	11.58	12.31	6.17	4.54
S.D.	3.59	3.59	5.41	4.80	6.38	3.31
Exp. 2	N	13	21	13	21	13
Mean	4.38	5.62	12.05	11.08	7.67	5.46
S.D.	2.65	2.75	4.86	4.37	4.81	3.86
Control	N	9	22	9	22	9
Mean	5.86	4.67	9.00	7.56	3.14	2.89
S.D.	2.92	2.92	4.15	3.64	4.19	2.15

TABLE 3
B. Summary of the Analysis of Variance

Source	Degrees of Freedom	F-Ratio	Probability Level
Pre-Test			
Racial Composition	1/96	1.48	$p > .05$
Instruction	2/96	2.26	$p > .05$
Interaction	2/96	2.56	$p > .05$
Post-Test			
Racial Composition	1/96	0.32	$p > .05$
Instruction	2/96	5.52	$p < .01^a$
Interaction	2/96	0.44	$p > .05$
Raw Gain			
Racial Composition	1/96	1.80	$p > .05$
Instruction	2/96	4.44	$p < .05^b$
Interaction	2/96	0.35	$p > .05$

^aSignificant at the 1 per cent level

^bSignificant at the 5 per cent level

The pre-test scores range from a mean of 4.38 for the segregated Experimental 2 group to a high of 7.77 for white students in the integrated Experimental 1 group. The differences among the pre-test means for Experimental 1, Experimental 2, and control groups are not significant, however; $F(2/96) = 2.26$ $p > .05$. Neither are the differences between the means for integrated groups and those for segregated groups significant on the pre-test.

The post-test scores range from 7.56 in the integrated control group to a high of 12.31 for the integrated Experimental 1 group. Post-test results on the analysis of variance show a highly significant difference among the means for experimental and control groups for white students (See Table 3, Section B). This difference, $F(2/96) = 5.52$, $p < .01$, favors the experimental groups.

An examination of the raw gains in information reported in Section A of Table 3 shows a range of scores from a low of 2.89 for the integrated control group to a high of 7.67 for the segregated Experimental 2 group.

All groups do gain in factual information from pre- through post-testing. Section B of Table 3 presents evidence of a significant difference in information gains between the experimental and control groups; $F(2/96) = 4.44$, $p < .05$. The effect of racial composition is not a significant contributor to the mean gain in information. However, white students did tend to learn more in segregated classes.

An examination of the means reported in Section A of Table 3 shows that white students gained more information through the oral presentation used with Experimental 2 groups than they did with the audio-slide approach used with corresponding Experimental 1 groups. However, this conclusion must be qualified somewhat as students in both segregated experimental groups learned more than students in integrated classes. The tendency for white students to learn more from the oral approach used in segregated groups is reinforced by the fact that only the mean gain for the segregated Experimental 2 groups, 7.67, is significantly different from its corresponding control group, 3.14, in the amount of information gained, $p < .05$.

An examination of Table 3, Section B shows that teaching integral history contributed significantly to the mean gains in information registered by students in the experimental groups; $F(2/96) = 4.44$, $p < .05$. Therefore, the hypothesis "Significant gains will result from teaching the lesson 'The Underground Railroad in Michigan'" is confirmed for white students.

Summary. This section of the chapter reported knowledge gains by black and white fourth grade students. The results for black students were:

1. The hypothesis "Significant gains in information will result from teaching the lesson, 'The Underground Railroad in Michigan, '" was rejected.
2. Groups taught through the use of the audio-slide approach scored greater gains in information than groups taught the oral-reading approach.

3. When using the audio-slide approach, black students in a segregated classroom learn as much factually as black students in an integrated classroom.

The results for white students were:

1. The hypothesis "Significant gains in information will result from teaching the lesson, 'The Underground Railroad in Michigan, '" was confirmed.
2. Greater gains in information took place in groups using the oral-reading approach than in groups using the audio-slide approach.
3. Classroom racial composition was not a significant influence in determining gains in information.

Hypothesis Two

Attitudes of black students will grow more positive toward the stimulus concept "white people" as a result of exposure to the lesson "The Underground Railroad in Michigan."

A semantic differential with the stimulus concept "white people" was used to gather data for this hypothesis. The results apply only to the attitudes of black students. The comparable attitudes for white students are treated in the next section.

Table 4 presents a summary of the test results from the semantic differential using the stimulus concept "white people." Section A of the table presents the means and standard deviation for pre-test, post-test, and mean gains. The mean gains are presented in both raw and per cent gain scores. Section B of the table presents the analysis of

TABLE 4

SUMMARY OF THE RESULTS FROM SEMANTIC DIFFERENTIAL STIMULUS CONCEPT "WHITE PEOPLE" - BLACK STUDENTS

A. Summary of Means and Standard Deviations

Instruction	Classroom Racial Composition							
	Pre-Test		Post-Test		Mean Gain (Raw Score)		Mean Gain (Per cent Gain)	
	Seg.	Int.	Seg.	Int.	Seg.	Int.	Seg.	Int.
Integral History								
N	24	11	24	11	24	11	24	11
Exp. 1	33.38	37.17	34.29	39.18	0.92	2.00	13.35	18.93
S.D.	9.49	8.20	8.94	6.59	6.47	5.76	37.91	28.29
Exp. 2								
N	24	12	24	12	24	12	24	12
Mean	36.87	41.33	35.13	38.83	-1.75	-2.50	5.43	12.42
S.D.	13.03	7.56	12.59	10.42	12.82	7.12	44.75	58.57
Control								
N	24	11	24	11	24	11	24	11
Mean	34.36	38.82	27.72	33.91	-6.64	-4.91	-26.96	-18.12
S.D.	12.38	6.71	12.09	7.30	9.75	3.78	37.97	15.03

TABLE 4
B. Summary of the Analysis of Variance

Source	Degrees of Freedom	F-Ratio	Probability Level
Pre-Test			
Racial Composition	1/101	3.69	p > .05
Instruction	2/101	1.03	p > .05
Interaction	2/101	0.01	p > .05
Post-Test			
Racial Composition	1/101	5.10	p < .05 ^a
Instruction	2/101	3.41	p < .05 ^a
Interaction	2/101	0.11	p > .05
Mean Gain (Raw Score)			
Racial Composition	1/101	0.14	p > .05 ^b
Instruction	2/101	5.07	p < .01 ^b
Interaction	2/101	0.16	p > .05
Mean Gain (Per cent Gain)			
Racial Composition	1/101	0.74	p > .05
Instruction	2/101	8.16	p < .01 ^b
Interaction	2/101	0.01	p > .05

^aSignificant at the 5 per cent level

^bSignificant at the 1 per cent level

variance for the pre-test, post-test, and mean gains, which again uses both raw scores and per cent gain scores for comparison.

The possible range of scores on the semantic differential was from a low of ten points to a high of fifty points. A low score is associated with a negative attitude about the stimulus concept used, while a high score is associated with a positive attitude. The range of scores for groups of black students on the pre-semantic was from a low of 33.38 in the segregated Experimental 1 group to a high of 41.33 in the integrated Experimental 2 group.

Table 4, Section A, presents evidence that black students in integrated groups have more positive attitudes toward the stimulus concept "white people" on the pre-test than they do in segregated groups. These differences in attitude are clearly recognizable, though not statistically significant; $F (1/101) = 3.69, p > .05$. This tendency of integrated classes to be more positive in their attitude toward the stimulus concept "white people" continues on the post-test, where it does reach significance; $F (1/101) = 5.10, p < .05$.

Post-test scores range from a low of 27.72 for the segregated black control group to a high of 39.18 for the integrated Experimental 1 group using the audio-slide presentation. The impact of instruction on attitudes of black students is significant, with both Experimental 1 and Experimental 2 groups being more positive than control groups following instruction, $F (2/101) = 3.41, p < .05$. Also significant for developing positive attitudes toward "white people" is the impact of being in an integrated class, $F (1/101) = 5.10, p < .05$.

An examination of the mean gain data in Table 4, Section B, presents further evidence that instruction in the experimental classrooms made a highly significant impact on the attitudes of black students, $F(2/101) = 5.07$, $p < .01$. Both segregated and integrated Experimental 1 groups, using the audio-slide approach, showed actual gains in attitude toward the concept "white people," while both Experimental 2 groups, using the oral-reading approach, showed slight overall losses. Per cent gain results show all experimental groups growing more positive in attitudes toward "white people."

The audio-slide presentation used with Experimental 1 groups had greatest impact on the attitudes of black students toward "white people." The importance of the presentation is emphasized by the fact that only Experimental 1 groups registered gains in attitude toward "white people," which are significantly different than their corresponding control groups. The segregated Experimental 1 group is significantly more positive in its attitude toward "white people" than the segregated control group on both raw score mean gains and per cent gains, while the integrated Experimental 1 group is significantly more positive in its attitude toward "white people" than its corresponding control group when considering per cent gain scores. The importance of this type of presentation is further emphasized by the fact that gains reported in Section A, Table 4, for the integrated Experimental 1 group are not significantly more positive than those reported for the segregated Experimental 1 group. This difference of impact between Experimental 1 and

Experimental 2 groups is easily seen by comparing the combined mean gain for both Experimental 1 groups, 2.92, with the combined mean gain for both Experimental 2 groups, -4.25.

Though both control groups registered gains in information, (See Table 2, Section A) their attitude grew less positive toward "white people" between pre- and post-testing.

Being in an integrated classroom does not make a significant difference in the attitudes of black students toward "white people," according to the results of this study, $p > .05$, when considering both mean raw score and per cent gain score results reported in Section B of Table 4.

Thus, when considering mean gains in attitude measured in raw score form, the hypothesis "Attitudes of black students will grow more positive toward the stimulus concept 'white people' as a result of exposure to the lesson 'The Underground Railroad in Michigan'" is confirmed for Experimental 1 groups exposed to the audio-slide sequence. When one considers the results reported in per cent gain scores, the hypothesis is confirmed for both Experimental 1 and Experimental 2 groups.

Summary. This section of the chapter reported the attitude change of black students toward the stimulus concept "white people." The results were:

1. The hypothesis "Attitudes of black students will grow more positive toward the stimulus concept 'white people' as a result of exposure to the lesson, 'The Underground Railroad in Michigan,'" was confirmed for black students using the audio-slide approach.

2. The hypothesis was rejected for black students using the oral-reading approach.
3. Racial composition of the classroom was not an important influence on black student gains in attitude toward "white people."
4. In a segregated, black student body, use of the audio-slide approach was especially important to building and maintaining positive attitudes toward "white people."

Hypothesis Three

"Attitudes of white students will grow more positive toward the stimulus concept "black people" as a result of exposure to the lesson 'The Underground Railroad in Michigan.'"

A semantic differential with the stimulus concept "black people" was used to gather data for this hypothesis. The results apply only to the attitudes of white students.

Table 5 presents a summary of results from the semantic differential using the stimulus concept "black people." Section A of the table reports the means and standard deviations for the pre-test, post-test, and mean gains for white students. Mean gains are reported using both raw gain scores and per cent gain scores. Section B reports the analysis of variance for the pre-test, post-test, and mean gains again using both raw and per cent gain scores.

As with the results from the semantic differential, already reported for black students, the higher the score, the more positive the attitude toward the stimulus concept.

TABLE 5
SUMMARY OF THE RESULTS FROM SEMANTIC DIFFERENTIAL
STIMULUS CONCEPT "BLACK PEOPLE" - WHITE STUDENTS

A. Summary of Means and Standard Deviations

Instruction	Classroom Racial Composition					
	Pre-Test		Post-Test		Mean Gain (Raw Score)	
	Seg.	Int.	Seg.	Int.	Seg.	Int.
Integral History						
	24	13	24	13	24	13
	31.96	38.15	30.17	36.31	-1.79	-1.85
Exp. 1	11.75	7.67	10.38	7.81	11.85	5.68
Exp. 2	21	13	21	13	21	13
	31.76	42.08	29.19	38.92	-2.57	-3.15
	9.52	3.55	8.05	9.02	10.06	7.09
Control	22	9	22	9	22	9
	33.55	37.55	17.59	33.44	-15.95	-4.22
	11.04	7.65	8.37	8.14	10.27	11.04
					24	13
					-8.81	-4.15
					42.02	23.53
					21	13
					-7.84	7.39
					39.22	54.54
					22	9
					-65.77	-10.12
					30.91	37.76

TABLE 5
B. Summary of the Analysis of Variance

Source	Degrees of Freedom	F-Ratio	Probability Level
Pre-Test			
Racial Composition	1/96	11.53	$p < .01^a$
Instruction	2/96	0.30	$p > .05$
Interaction	2/96	0.81	$p > .05$
Post-Test			
Racial Composition	1/96	32.30	$p < .01^a$
Instruction	2/96	8.55	$p < .01^a$
Interaction	2/96	2.32	$p > .05$
Raw Gain			
Racial Composition	1/96	3.13	$p > .05$
Instruction	2/96	6.20	$p < .01^a$
Interaction	2/96	3.70	$p < .05^b$
Per cent Gain			
Racial Composition	1/96	9.44	$p < .01^a$
Instruction	2/96	8.11	$p < .01^a$
Interaction	2/96	3.59	$p < .05^b$

^aSignificant at the 1 per cent level

^bSignificant at the 5 per cent level

The scores of groups of white students on the pre-semantic ranged from a low of 31.76 for the segregated Experimental 2 class to a high of 42.08 for the integrated Experimental 2 class. Table 5, Section B, presents evidence that white students in integrated groups were significantly more positive in their attitudes toward "black people" on the pre-test than were white students in segregated groups; $F(1/96) = 11.53, p < .01$.

Much of this difference between integrated and segregated groups is accounted for by the difference between both the means for the integrated Experimental 1 and the segregated Experimental 1 groups and the difference between the integrated and segregated Experimental 2 groups. In both cases these differences are significant, $p < .05$. There are no significant differences among the means for combined Experimental 1, Experimental 2, and control groups.

Post-test results, reported in Section A of Table 5, show that integrated groups have more positive attitudes toward "black people" than segregated groups of white students; $F(1/96) = 32.30, p < .01$. Group scores for segregated groups on the post-test range from a low of 17.59 for the segregated control group to a high of 30.17 for the segregated Experimental 1 group. The scores for integrated groups ranged from a low of 33.44 obtained by the integrated control group to a high of 38.92 obtained by the integrated Experimental 2 group. The importance of classroom integration for white students can be seen by examining the post-test results for the two control groups.

The post-test mean for the integrated control group, 33.44, is significantly more positive than the post-test mean for the segregated control group, 17.59, $p < .05$.

The impact of instruction is also evident when examining the post-test results. Section B, Table 5, presents evidence that there is a significant difference among the means for Experimental 1, Experimental 2, and control classes; $F(2/96) = 8.55$, $p < .01$.

The lesson, "The Underground Railroad in Michigan," seems to have had greatest impact in segregated experimental groups. Both the segregated Experimental 1 and Experimental 2 groups are significantly more positive in their attitudes toward "black people" than are white students in the segregated control group, $p < .05$.

An examination of the raw-score mean gains in Section A, Table 5, shows that all six groups of white students had more negative attitudes toward "black people" following instruction than they had expressed on the pre-test. A partial explanation of this loss is now offered prior to presenting the rest of the results.

Pontiac high schools had a series of racial confrontations between the time pre-testing had been completed and instruction in the experimental classes began.³ On September 25, four days before instruction was to begin, a confrontation occurred at one high school, involving between 200 and 300 students. On September 26, the second

³Reports of these confrontations are found in the local newspaper, The Pontiac Press, in a series of articles between September 25 and October 3.

high school had a series of fist fights between black and white students. As a result of these confrontation, both high schools were temporarily closed. Police, school administrators, parents, and leaders in the black community worked to keep the situations from becoming even more explosive.

Many parents of elementary school children reacted to the situation by taking their children home from school and keeping them home during the two days in which the confrontations seemed most explosive. This parental action was prompted in part by rumors of further violence and threats of violence. Fear and mistrust were dominant throughout the city.

No elementary schools in the city were closed, but student interviews clearly showed that the racial tensions which had gripped the city had also gained importance in the minds of the students involved in this study. In addition, two of the elementary schools in the study are located within a few blocks of the high school in which the first confrontation took place.

Thus, while there were losses in attitude among white students, which may have been caused by the confrontations, instruction had a significant impact on the attitudes of white students toward "black people"; $F(2/96) = 6.20, p < .01$, when comparing experimental and control groups. Both segregated experimental groups remained significantly more positive in their attitude toward the stimulus concept than did the segregated control group. The means for both groups differ from the mean for the control groups by more than the 8.6 points necessary for significance.

The importance of instruction in segregated groups is further highlighted by the fact that each segregated experimental group registered less actual loss in attitude toward "black people" than did its corresponding integrated experimental group. The segregated Experimental 1 group, using the audio-slide presentation, actually registered less loss in attitude, -1.79, than any other group of white students. Though analysis of variance does not show that racial composition of a group makes a significant contribution to maintaining positive attitudes, an examination of the means for raw score gains of the segregated and integrated control groups does stress its importance. The mean loss for the segregated control group, -15.95, is significantly greater than the loss reported for the integrated control group, -4.22.

The interaction effect between instruction and racial composition of the group is also significant when considering raw gain scores; $F(2/96) = 3.70$, $p < .05$. The very negative shift in attitude recorded by the segregated control group seems to be responsible for the interaction effect, and suggests that both integration and instruction can be important to building positive attitudes of white students toward "black people."

Because of the significant difference between segregated and integrated groups on the pre-test, per cent gain scores are also reported in the explanation of the results reported in Table 5.⁴ Section A of the table

⁴Per cent gain scores are used to equalize the effects of differences on the pre-test. For further information on this technique see Allen Menlo and M. Clemens Johnson, Percentage Gain: An Alternative Approach to the Measurement of Change, (Unpublished paper, The University of Michigan, no date).

presents evidence that five of the six groups of white students involved in the study showed losses in attitude toward "black people" between pre- and post-testing. Only one group, the integrated Experimental 2 group, registered a gain, 7.39. Again, instruction seems to have had greatest impact on segregated groups of white students. The differences between the per cent gains for both segregated experimental groups and the segregated control group are significant, $p < .05$. The differences between the integrated experimental groups and the corresponding control group are not significant, though there is an obvious tendency for both to be more positive in their attitudes toward "black people" than the control group.

When considering per cent gain, the tendency is for the oral-reading presentation used with Experimental 2 groups to have made greater positive impact on the attitudes of white students than corresponding Experimental 1 groups. The analysis of variance for the per cent gain scores, reported in Section B of Table 5, shows that instruction did have a significant impact on the attitudes of white students toward "black people"; $F(2/96) = 8.11$, $p < .01$. Being in a racially integrated classroom is also shown to be an important factor in developing positive attitudes toward the stimulus concept "black people"; $F(1/96) = 9.44$, $p < .01$. The importance of white students being part of an integrated class has been emphasized by results from the pre-test, post-test, and per cent gains. In each case this impact has been significant. The importance of instruction in building or maintaining positive attitudes is

stressed by its significance on the post-test, raw mean gains, and per cent mean gains.

The significant interaction between instruction and racial composition, $F(2/96) = 3.59$, $p < .05$, suggests that a combination of instruction in integral history, through an oral-reading approach and being in an integrated classroom, would be most effective in building or maintaining positive attitudes of white students toward "black people." In addition, the impact of instruction with segregated groups of white students is clearly shown through a comparison of the per cent mean gains for the Experimental 1 group, -8.81, the Experimental 2 group, -7.84, and the control group, -65.77.

Whether or not one accepts or rejects the hypothesis "Attitudes of white students will grow more positive toward the stimulus concept 'black people' as a result of exposure to the lesson 'The Underground Railroad in Michigan'" is open to serious differences in interpretation. If one considers only mean gain reported in raw gain scores, then experimental and control classes alike scored more negatively on the post-semantic than they did on the pre-semantic. If one considers per cent gain scores, the integrated Experimental 2 class does improve its attitude toward "black people." Because of the significant pre-test differences reported, this study accepts the per cent gain scores reported and considers the hypothesis accepted for the integrated Experimental 2 class. Though the hypothesis is rejected for the remaining experimental groups, the significant impact of instruction on the attitudes of white students in segregated groups and, in general, on experimental groups

in comparison to control groups, makes this a qualified rejection. Experimental groups were significantly more positive in their attitudes toward "black people" than control groups, even though they actually suffered slight losses on the semantic differential.

Summary. This section of the chapter reported on the attitude change of white students toward the stimulus concept "black people."

The results were:

1. The hypothesis "Attitudes of white students will grow more positive toward the stimulus concept "black people" as a result of exposure to the lesson, 'The Underground Railroad in Michigan, '" was confirmed for white students taught through an oral-reading approach in an integrated classroom.
2. The hypothesis was rejected for white students taught through an oral-reading approach in a segregated classroom.
3. The hypothesis was rejected for white students taught through the audio-slide approach in either a segregated or integrated classroom.
4. Instruction through either of the two approaches was important to maintaining positive attitudes toward "black people" for white students in segregated classrooms.
5. Being in an integrated classroom was important to white students for building and maintaining positive attitudes toward "black people."

Hypothesis Four

A positive relationship exists between the amount of knowledge gained through exposure to the lesson and the degree of attitude change which develops as a result of this exposure.

The results from testing this hypothesis are presented separately for black students and white students. A summary of results follows the analysis of the lesson's impact on these two groups of fourth grade students.

Impact on Black Students

Two attitude instruments were used for gathering data for this hypothesis; Underground Railroad Form "A," an instrument used to register student agreement or disagreement with the attitudes portrayed in the lesson; and the semantic differential, used to measure the attitudes of black students toward "white people" and the attitudes of white students toward "black people." Only semantic differentials with the stimulus concepts "white people" and "black people" were used to gather data for hypotheses two and three, respectively. However, both Underground Railroad Form "A" and the two semantic differentials were used to gather data for hypothesis four. A more complete summary of results from Underground Railroad Form "A" is presented later in this chapter.

Table 6 presents a summary of the results from Underground Railroad Form "F," the knowledge instrument; Underground Railroad Form "A," the attitude instrument; and the semantic differential with the stimulus concept "white people." The summary is presented first for black students in Experimental 1 groups. Section A of the table presents the summary of means and standard deviations for segregated

and integrated Experimental 1 groups of black students. Section B of the table presents the intercorrelations among the results from the three criterion instruments for the segregated group. Section C of the table presents the intercorrelations among the results from the three criterion instruments for the integrated group.

An examination of Section A of Table 6 shows that both the segregated and the integrated Experimental 1 groups gained in knowledge about the experimental lesson and in attitude about "white people" as a result of instruction. At the same time, both groups registered losses in agreement with attitudes portrayed by the lesson.

Section B of Table 6 provides evidence of no significant correlation between knowledge about the experimental lesson and agreement with the attitudes it portrays on the pre-test, $-.04$, for the segregated group. Neither were the post-test correlations between these two variables significant, $-.12$. However, there is a slight tendency in both instances for black students in the segregated Experimental 1 group to disagree with the attitudes portrayed in the lesson, based on what they know about it before and after instruction. The same negative tendency exists when considering the correlations between mean gains in information, 4.22 , and mean gains in agreement with the attitudes portrayed by the lesson, $-.74$, $(-.04)$.

The pre-test correlation between what black students in the segregated Experimental 1 group know about the information presented in the lesson, Form "F," and how positive their attitudes are toward

TABLE 6

SUMMARY OF MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS AMONG UNDERGROUND RAILROAD FORM "F," UNDERGROUND RAILROAD FORM "A," AND THE SEMANTIC DIFFERENTIAL, FOR EXPERIMENTAL I GROUPS - BLACK STUDENTS

A. Summary of Means and Standard Deviations

Variables	Experimental I	
	Segregated (N = 23)	Integrated (N = 11)
Pre-Semantic (White People)		
Mean	34.04	37.18
Standard Deviation	9.10	8.20
Post-Semantic (White People)		
Mean	35.00	39.18
Standard Deviation	8.42	6.59
Mean Gain, Semantic (Raw Score)		
Mean	.96	2.00
Standard Deviation	6.61	5.76
Mean Gain, Semantic (% Gain)		
Mean	13.93	18.93
Standard Deviation	38.66	28.29
Pre-Form "A" (Attitude)		
Mean	74.30	73.00
Standard Deviation	7.77	12.43
Post-Form "A" (Attitude)		
Mean	73.57	71.64
Standard Deviation	7.02	11.02

TABLE 6--Continued

Variables	Experimental I	
	Segregated (N=23)	Integrated (N=11)
Mean Gain, Form "A" (Raw Score)		
Mean	-.74	-1.36
Standard Deviation	10.67	11.60
Mean Gain, Form "A" (% Gain)		
Mean	-1.14	-2.73
Standard Deviation	18.07	20.05
Pre-Form "F" (Knowledge)		
Mean	5.22	6.18
Standard Deviation	2.75	3.68
Post-Form "F" (Knowledge)		
Mean	9.43	10.64
Standard Deviation	3.24	4.70
Mean Gain, Form "F" (Raw Score)		
Mean	4.22	4.45
Standard Deviation	3.33	3.96
Mean Gain, Form "F" (% Gain)		
Mean	12.52	16.74
Standard Deviation	27.42	23.88

TABLE 6

B. Summary of the Intercorrelation of Variables for the Segregated Experimental I Group - Black Students (N = 23)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.72 ^c	1.00										
3 Mean Gain, Semantic (Raw Score)	-.46 ^a	.29	1.00									
4 Mean Gain, Semantic (Per cent Gain)	-.48 ^a	.69 ^c	.75 ^c	1.00								
5 Pre-Form "A" (Attitude)	.28	-.09	.26	-.43 ^a	1.00							
6 Post-Form "A" (Attitude)	-.41 ^a	-.50 ^a	-.07	-.23	-.04	1.00						
7 Mean Gain, Form "A" (Raw Score)	-.47 ^a	-.27	.31	.16	-.75 ^c	.69 ^c	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	-.48 ^a	-.32	.26	.12	-.67 ^c	.76 ^c	.99 ^c	1.00				
9 Pre-Form "F" (Knowledge)	.43 ^a	.08	-.48 ^a	-.37	-.04	-.20	.10	-.15	1.00			
10 Post-Form "F" (Knowledge)	-.02	-.15	-.15	-.15	.07	-.12	-.13	-.16	.39	1.00		
11 Mean Gain, Form "F" (Raw Score)	-.37	-.21	.25	.16	.10	.04	-.04	-.04	-.44 ^a	.65 ^c	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	-.22	-.15	.11	.10	.08	-.18	-.18	-.19	-.20	.74 ^c	.89 ^c	1.00

^aSignificant at the 5 per cent level - two-tailed test

^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at the .1 per cent level - two-tailed test

TABLE 6

C. Summary of the Intercorrelation of Variables for the
Integrated Experimental I Group - Black Students
(N = 11)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.72 ^a	1.00										
3 Mean Gain, Semantic (Raw Score)	-.60 ^a	.12	1.00									
4 Mean Gain, Semantic (Per cent Gain)	-.33	.36	.88 ^b	1.00								
5 Pre-Form "A" (Attitude)	.16	.10	-.12	-.09	1.00							
6 Post-Form "A" (Attitude)	.04	.23	.21	.06	.52	1.00						
7 Mean Gain, Form "A" (Raw Score)	-.14	-.14	.32	.16	-.58	.40	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	-.11	.08	.25	.05	-.39	.58	.97 ^c	1.00				
9 Pre-Form "F" (Knowledge)	.33	.43	.02	.11	-.19	.00	.21	.10	1.00			
10 Post-Form "F" (Knowledge)	.19	.22	-.01	-.04	.22	.65 ^a	.38	.43	.58	1.00		
11 Mean Gain, Form "F" (Raw Score)	-.09	-.14	-.03	-.15	.44	.77 ^b	.26	.42	-.25	.65 ^a	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	-.01	-.12	-.12	-.25	.42	.58	.32	.49	-.17	.69 ^a	.98 ^c	1.00

^aSignificant at the 5 per cent level - two-tailed test

^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at the .1 per cent level - two-tailed test

"white people" is significantly positive: .43, $p < .05$. Post-test correlation between the two variables shows no significant relationship. However, a slight positive trend is evident when considering mean gain correlation, .25.

Black students in the segregated Experimental 1 class did gain in information as a result of instruction. They also gained in attitude toward "white people," while registering slight losses in agreement with the attitudes portrayed in the experimental lesson. Because of this loss, and because the slight positive trend between increasing knowledge of the lesson and attitudes toward "white people" is not significant, Hypothesis Four is rejected for the segregated Experimental 1 group.

Section C, Table 6, presents evidence of no significant relationship on the pre-test between the amount of knowledge about the experimental lesson, Form "F," and agreement with the attitudes which the lesson presented, Form "A," for the integrated Experimental 1 group, -.19. An examination of post-test results, however, shows a significant positive relationship between what this group of black students knew about the experimental lesson and the degree to which they agreed with the attitudes it attempts to develop, .65, $p < .05$. Though not significant, mean gains in the attitudes developed in the lesson do tend to correlate positively with mean gains in factual knowledge presented by the lesson.

The pre-test correlation between what black students in the integrated Experimental 1 class knew about the lesson and how they felt

about "white people" is slightly positive, but not significant, .33.

This positive trend remains on the post-test, .22. However, an examination of the correlation between mean gain in attitude toward "white people" and mean gain in factual information shows a slight negative trend, $-.15$. The more black students in the integrated Experimental 1 class knew about the lesson, the less positive they were in their attitudes toward "white people."

Black students in the integrated Experimental 1 group did show gains in knowledge about the lesson and they were more positive in their attitude toward "white people" following instruction. However, there was less agreement with the attitudes developed by the lesson, following its presentation. The correlation between knowledge gain and increased agreement with the attitudes developed in the lesson is positive, though not significant. On the other hand, the correlation between knowledge gains and increased positive attitude toward "white people" shows a slight negative trend, though, again, the correlation is not significant. Because of this, the hypothesis is rejected for black students in an integrated Experimental 1 group, just as it was in the segregated group.

Table 7 presents a summary of the results from the same tests for black students in Experimental 2 groups. The pattern of presentation is the same as for Table 6.

Section A of Table 7 shows that both the segregated and integrated groups registered gains in information and in agreement with

the attitudes built into the lesson. However, both groups also registered losses in attitude toward "white people" when raw gain scores are considered.

Section B of the table provides no evidence of a significant correlation on the pre-test between what students in the segregated group knew about the information to be presented in the lesson, Form "F, " and agreement with the attitudes contained in the lesson, Form "A, " $-.07$. Nor, is there any significant correlation between these variables apparent from examining the correlations between them from post-tests, $.24$, or from mean gains, $-.07$.

Section B of the table presents evidence of no significant correlation between what black students knew on the pre-test on "The Underground Railroad in Michigan" and their attitude toward "white people," $.04$. This same lack of correlation exists when examining the post-test correlation, $-.01$, and the correlation between mean gains, $-.12$.

Though black students in the segregated Experimental 2 group do gain in information about the experimental lesson, and in agreement with the attitudes it attempts to develop, there is no significant correlation between what the students learned and how they felt about the attitudes developed by the lesson. This group registered losses in attitude toward "white people" at the same time it gained in information about the lesson. In addition, there was no significant correlation between what students learned and how they felt about "white people." Therefore, Hypothesis Four is rejected for black students in the segregated Experimental 2 group.

TABLE 7

SUMMARY OF MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS AMONG UNDERGROUND RAILROAD FORM "F," UNDERGROUND RAILROAD FORM "A," AND THE SEMANTIC DIFFERENTIAL, FOR EXPERIMENTAL 2 GROUPS - BLACK STUDENTS

A. Summary of Means and Standard Deviations

Variables	Experimental 2	
	Segregated (N=22)	Integrated (N=11)
Pre-Semantic (White People)		
Mean	36.41	41.82
Standard Deviation	13.54	7.73
Post-Semantic (White People)		
Mean	34.18	39.63
Standard Deviation	12.75	10.53
Mean Gain, Semantic (Raw Score)		
Mean	-2.23	-2.18
Standard Deviation	13.31	7.37
Mean Gain, Semantic (% Gain)		
Mean	1.96	15.65
Standard Deviation	45.18	60.30
Pre-Form "A" (Attitude)		
Mean	69.14	66.45
Standard Deviation	5.24	15.37
Post-Form "A" (Attitude)		
Mean	71.73	75.91
Standard Deviation	5.44	10.24

TABLE 7--Continued

Variables	Experimental 2	
	Segregated (N=22)	Integrated (N=11)
Mean Gain, Form "A" (Raw Score)		
Mean	2.59	9.45
Standard Deviation	5.56	15.08
Mean Gain, Form "A" (% Gain)		
Mean	4.14	13.17
Standard Deviation	10.01	20.70
Pre-Form "F" (Knowledge)		
Mean	7.86	5.45
Standard Deviation	2.81	2.66
Post-Form "F" (Knowledge)		
Mean	9.82	9.00
Standard Deviation	3.54	4.63
Mean Gain, Form "F" (Raw Score)		
Mean	1.95	3.55
Standard Deviation	2.41	5.63
Mean Gain, Form "F" (% Gain)		
Mean	7.77	2.90
Standard Deviation	13.47	42.85

TABLE 7

B. Summary of the Intercorrelation of Variables for the Segregated Experimental 2 Group - Black Students
(N = 22)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.49 ^a	1.00										
3 Mean Gain, Semantic (Raw Score)	-.03	.46 ^a	1.00									
4 Mean Gain, Semantic (Per cent Gain)	.33	.54 ^b	.91 ^c	1.00								
5 Pre-Form "A" (Attitude)	.07	-.18	-.24	-.30	1.00							
6 Post-Form "A" (Attitude)	.28	.02	-.26	-.30	.46 ^a	1.00						
7 Mean Gain, Form "A" (Raw Score)	.20	.19	-.03	-.01	-.50 ^a	.55 ^b	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	.23	.19	-.05	-.02	-.44 ^a	.59 ^a	1.00	1.00				
9 Pre-Form "F" (Knowledge)	.04	-.18	-.21	-.15	-.07	.39	.45 ^a	.46 ^a	1.00			
10 Post-Form "F" (Knowledge)	.23	-.01	-.25	-.14	-.08	.24	.32	.32	.73 ^c	1.00		
11 Mean Gain, Form "F" (Raw Score)	.29	.18	-.12	-.02	-.04	-.10	-.07	-.07	-.09	.61 ^b	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	.26	.18	-.09	.01	-.06	-.11	-.05	-.09	-.09	.59 ^b	.96 ^c	1.00

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at the .1 per cent level - two-tailed test

TABLE 7
C. Summary of the Intercorrelation of Variables for the
Integrated Experimental 2 Group - Black Students
(N = 11)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.71 ^b	1.00										
3 Mean Gain, Semantic (Per cent Gain)	-.03	.68 ^b	1.00									
4 Mean Gain, Semantic (Per cent Gain)	.33	.84 ^c	.86 ^d	1.00								
5 Pre-Form "A" (Attitude)	.09	.12	.09	.29	1.00							
6 Post-Form "A" (Attitude)	.55	.35	-.08	.31	.36	1.00						
7 Mean Gain, Form "A" (Raw Score)	.29	.11	-.14	-.09	-.77 ^c	.31	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	.31	.08	-.21	-.06	-.61 ^b	.48	.95 ^d	1.00				
9 Pre-Form "F" (Knowledge)	.01	.08	.10	.14	-.62 ^b	-.02	.62 ^b	.64 ^b	1.00			
10 Post-Form "F" (Knowledge)	-.34	.03	.40	.24	.24	-.23	-.41	-.37	-.13	1.00		
11 Mean Gain, Form "F" (Raw Score)	-.28	-.01	.28	.14	.49	-.18	-.63 ^a	-.61 ^a	-.58	.88 ^d	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	-.39	.03	.46	.28	.37	-.33	-.60 ^a	-.61 ^a	-.39	.90 ^d	.92 ^d	1.00

^aSignificant at the 5 per cent level - one-tailed test

^bSignificant at the 5 per cent level - two-tailed test

^cSignificant at the 1 per cent level - two-tailed test

^dSignificant at the .1 per cent level - two-tailed test

Section C, Table 7, presents evidence of a significant negative correlation on the pre-test between how much of the information presented in the experimental lesson black students in the integrated Experimental 2 group already knew prior to instruction, Form "F," and the degree to which they agreed with the attitudes developed by the lesson, Form "A," $-.62, p < .05$. The more they knew about the lesson prior to instruction, the more they tended to disagree with the attitudes it contained.

Post-test results show that this negative relationship has been lessened following instruction, $-.23$. However, the trend still remains. An examination of the correlation between mean gain on Underground Railroad Form "A" and Underground Railroad Form "F," $-.63, p < .05$, reinforces the negative relationship already mentioned. The more black students in this group learned about the lesson, the more they disagreed with the attitudes it tried to develop. However, in spite of this negative correlation, the attitudes of black students in the integrated Experimental 2 group did show greater agreement with the attitudes the story portrayed, following instruction with a mean gain of 9.45 (See Table 7, Section A).

Section C presents no evidence of significant correlation between knowledge about the experimental lesson and feelings about "white people" on the pre-test, $.01$. Both post-test and mean gain correlations between these two variables reinforce the pre-test findings. However, there is a tendency for an increase in the amount

of information to lead to more positive feelings about "white people," .28. This is true in spite of the fact that while black students in the integrated Experimental 2 group gain in factual knowledge of the lesson, they actually are less positive about "white people" following instruction than they were prior to it. Because of the significant negative correlations between mean gain in information and mean gain in agreement with the attitudes portrayed by the lesson and because the correlation between mean gain in information and black students' attitudes toward "white people" is not significantly positive, Hypothesis Four is rejected for the integrated Experimental 2 group.

Impact on White Students

Table 8 presents a summary of the results from these tests for white students in Experimental 1 groups in the same manner as was done for black students in Tables 6 and 7.

Section A of the table shows that both the segregated and integrated groups of white students gained in information about "The Underground Railroad in Michigan," Form "F," and in agreement with the attitudes contained in the lesson following instruction, Form "A." At the same time, both groups showed less positive attitudes toward "black people" on the post-test semantic differential than they had on the pre-test. White students in the integrated group tended to have more positive attitudes toward "black people," 39.64, on the pre-test than did white students in the segregated group, 32.24. This same

tendency existed on the post-test with the integrated group registering a mean score of 38.73 while the segregated group registered a mean score of 28.86.

White students from the integrated group tended to agree less with the attitudes developed by the lesson than did the segregated group on both pre- and post-tests. An examination of Table 8, Section A, also shows that white students in the integrated group knew more about the information contained in the lesson prior to instruction, 7.09, than did segregated white students, 5.33. However, following instruction, the segregated group, using the audio-slide presentation, knew as much about the lesson, 11.81, as did the integrated group, who also used the audio-slide presentation, 11.45.

An examination of Section B of Table 8 shows no significant correlation between what segregated white students in the Experimental 1 group knew about "The Underground Railroad in Michigan," Form "F," and the degree to which they agreed with the attitudes the lesson attempted to develop, Form "A," on the pre-test, .06. The correlation between these two variables was not significant following instruction either. However, a very slight positive trend is evident when examining the results from correlating the post-tests, .22, and the per cent gain scores, .10.

The relationship between what white students in the segregated Experimental 1 group knew about the experimental lesson on the pre-test and how they felt about "black people" is significantly negative,

TABLE 8

SUMMARY OF MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS AMONG UNDERGROUND RAILROAD FORM "F," UNDERGROUND RAILROAD FORM "A," AND THE SEMANTIC DIFFERENTIAL, FOR EXPERIMENTAL 1 GROUPS - WHITE STUDENTS

A. Summary of Means and Standard Deviations

Variables	Experimental 1	
	Segregated (N = 21)	Integrated (N = 11)
Pre-Semantic (White People)		
Mean	32.24	39.64
Standard Deviation	11.03	6.48
Post-Semantic (White People)		
Mean	28.86	38.73
Standard Deviation	10.21	5.59
Mean Gain, Semantic (Raw Score)		
Mean	-3.38	-.91
Standard Deviation	10.15	4.76
Mean Gain, Semantic (% Gain)		
Mean	-13.89	-.35
Standard Deviation	39.60	20.90
Pre-Form "A" (Attitude)		
Mean	74.86	68.55
Standard Deviation	8.47	10.14
Post-Form "A" (Attitude)		
Mean	75.29	68.82
Standard Deviation	10.02	8.49

TABLE 8--Continued

Variables	Experimental 1	
	Segregated (N = 21)	Integrated (N = 11)
Mean Gain, Form "A" (Raw Score)	.43	.27
Mean	11.72	9.56
Standard Deviation		
Mean Gain, Form "A" (% Gain)	.77	-1.10
Mean	20.89	16.87
Standard Deviation		
Pre-Form "F" (Knowledge)	5.33	7.09
Mean	3.67	3.48
Standard Deviation		
Post-Form "F" (Knowledge)	11.81	11.45
Mean	5.71	4.72
Standard Deviation		
Mean Gain, Form "F" (Raw Score)	6.48	4.36
Mean	6.55	3.59
Standard Deviation		
Mean Gain, Form "F" (% Gain)	22.17	16.67
Mean	30.76	23.07
Standard Deviation		

TABLE 8

B. Summary of the Intercorrelation of Variables for the Segregated Experimental I Group - White Students (N = 21)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.55 ^b	1.00										
3 Mean Gain, Semantic (Raw Score)	-.54 ^a	.41	1.00									
4 Mean Gain, Semantic (Per cent Gain)	-.30	.61	.93 ^c	1.00								
5 Pre-Form "A" (Attitude)	-.03	-.16	-.14	.14	1.00							
6 Post-Form "A" (Attitude)	-.21	.13	.37	.32	.20	1.00						
7 Mean Gain, Form "A" (Raw Score)	-.16	.23	.41	.37	-.55 ^b	.71 ^c	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	-.19	.20	.41	.37	-.44 ^a	.78 ^c	.99 ^c	1.00				
9 Pre-Form "F" (Knowledge)	-.48 ^a	-.16	.36	.24	.06	.16	.09	.06	1.00			
10 Post-Form "F" (Knowledge)	.11	.14	.02	-.03	.16	.22	.07	.06	.07	1.00		
11 Mean Gain, Form "F" (Raw Score)	.36	.21	-.19	-.16	.10	.10	.01	.01	-.50 ^a	.83 ^c	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	.26	.16	-.12	-.15	.08	.18	.09	.10	-.45 ^a	.84 ^c	.98 ^c	1.00

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at the .1 per cent level - two-tailed test

TABLE 8

C. Summary of the Intercorrelation of Variables for the
Integrated Experimental 1 Group - White Students
(N = 11)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.70 ^a	1.00										
3 Mean Gain, Semantic (Raw Score)	-.54	.22	1.00									
4 Mean Gain, Semantic (Per cent Gain)	-.53	.22	.97 ^c	1.00								
5 Pre-Form "A" (Attitude)	-.20	-.59	-.43	-.40	1.00							
6 Post-Form "A" (Attitude)	-.08	-.29	-.23	-.21	.49	1.00						
7 Mean Gain, Form "A" (Raw Score)	.13	.37	.25	.24	-.63 ^a	.37	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	.15	.35	.21	.20	-.55	.46	.99 ^c	1.00				
9 Pre-Form "F" (Knowledge)	.59	.45	-.27	-.32	-.10	.50	.54	.58	1.00			
10 Post-Form "F" (Knowledge)	-.13	-.17	-.02	-.07	.33	.69 ^a	.27	.30	.66 ^a	1.00		
11 Mean Gain, Form "F" (Raw Score)	-.74 ^b	-.66 ^a	.23	.22	.53	.43	-.17	-.16	-.11	.68 ^a	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	-.58	-.56	.13	.11	.54	.65 ^a	.01	.04	.11	.79 ^b	.94 ^c	1.00

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at the .1 per cent level - two-tailed test

-.48, $p < .05$. The more they knew about the lesson to be taught, the poorer their attitudes toward "black people." Post-test and mean gain correlations help show the impact of the lesson on white students' attitudes. Post-test correlation actually shows a slight positive correlation between what students know about the lesson and how they feel about "black people," .14. Though both mean gain correlations are slightly negative, they are not significant.

White students in the segregated Experimental 1 group did gain in information about "The Underground Railroad in Michigan." In addition, they also showed greater agreement with the attitudes developed by the story following instruction. However, they registered losses in attitude toward "black people" between pre- and post-testing. As reported earlier, Pontiac had a series of racial incidents in its schools during the study. Follow-up interviews show that these incidents did effect the attitudes of the students in the study. The effects of the audio-slide presentation is perhaps best seen in the change in correlation between knowledge about the lesson and attitude toward "black people." The significant negative correlation between these two variables, -.48, $p < .05$, has been reduced to a slight positive trend following instruction, .14.

However, because of the lack of significant correlation following instruction, Hypothesis Four is rejected for white students in the segregated Experimental 1 group.

Section C, Table 8, presents no evidence of a significant correlation between gains in information about the lesson and gains in

agreement with the attitudes portrayed by it, .04, or between gains in information and gains in attitude about "black people," .11. Some of the impact of the lesson can be seen, however, from a closer examination of the table. The pre-test correlation between Form "A," measuring agreement with attitudes portrayed by the story, and Form "F," measuring knowledge of information contained in the story, was not significant, -.10. The post-test correlation between these two instruments, however, was significantly positive, .69, $p < .05$. This lends support to the idea that the more white students in the integrated Experimental 1 group knew about the lesson, the more they agreed with the attitudes it tried to develop. An examination of the correlation between gains in information and gains in agreement with the attitudes developed by the lesson, however, shows no significant relationship, .04.

The relationship between what white students knew about the lesson and how they felt about "black people" prior to the lesson is positive and approaches significance, .59, $p < .10$. Following the lesson, this relationship no longer exists, although a comparison between per cent gains in attitude toward "black people" and per cent gains in information about the lesson tends to be positive, .11.

White students in the integrated Experimental 1 group did learn factual information from the lesson. They also registered very slight gains in agreement with the attitudes developed by the lesson, with slight losses in attitude about "black people." The correlation between

the information which was gained and the attitude changes which took place both toward the story and toward "black people," however, is not significant and the hypothesis is rejected for white students in the integrated Experimental 1 group.

Table 9 presents a summary of the results from these tests for white students in Experimental 2 groups. The pattern of presentation is the same as for the previous three tables.

Section A of the table presents evidence that both the segregated and integrated groups registered gains in information about "The Underground Railroad in Michigan," Form "F," as well in agreement with the attitudes which the lesson attempted to develop, Form "A." Both groups also recorded actual losses in attitude toward "black people" following instruction. Here again, it is important to point out that the racial incidents which occurred in Pontiac between pre- and post-testing may have had an effect on the study's findings. Also, because of the extremely high pre-test score on the semantic differential recorded by the integrated group, 42.20, per cent gain scores become increasingly important in this section. When per cent gain scores are used, the integrated group actually has gained in attitude toward "black people" following instruction, 5.67.

Pre-test scores show the integrated group possessing more information about the lesson to be taught and more positive feelings about "black people" than the segregated group. However, the integrated group on the pre-test tended to lag behind in agreement with

the attitudes the lesson tried to portray. Post-test results show the segregated group tended to know more about the lesson following instruction, 12.32, than did the integrated group, 11.70. However, the segregated group also tended to grow more negative in its attitude toward "black people" than did the integrated group when considering either raw gain scores or per cent gain scores.

Section B of Table 9 presents evidence of a significant positive correlation between what white students in the segregated Experimental 2 group learned about "The Underground Railroad in Michigan," and the degree to which they agreed with the attitudes the lesson tried to develop, .49, $p < .05$. The pre-test correlation between what these students knew about the lesson prior to instruction and the degree to which they agreed with the attitudes it stresses was not significant, .06. However, the lesson's impact begins to be seen by examining the post-test correlation, which shows an increased, though not significant, correlation of .36.

The pre-test correlation between what the white students in the segregated experimental group knew about the lesson to be taught, Form "F," and their attitude toward "black people" is not significant, .02. However, a highly significant negative correlation exists between these two variables when considering both raw score mean gains, $-.44$, $p < .05$, and per cent gains, $-.42$, $p < .05$.

White students in the segregated Experimental 2 group did increase their knowledge about "The Underground Railroad in Michigan."

TABLE 9

SUMMARY OF MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS AMONG UNDERGROUND RAILROAD FORM "F," UNDERGROUND RAILROAD FORM "A," AND THE SEMANTIC DIFFERENTIAL, FOR EXPERIMENTAL 2 GROUPS - WHITE STUDENTS

A. Summary of Means and Standard Deviations

Variables	Experimental 2	
	Segregated (N = 19)	Integrated (N = 10)
Pre-Semantic (White People)		
Mean	32.37	42.20
Standard Deviation	9.46	4.08
Post-Semantic (White People)		
Mean	28.63	39.20
Standard Deviation	8.07	8.98
Mean Gain, Semantic (Raw Score)		
Mean	-3.74	-3.00
Standard Deviation	9.83	6.45
Mean Gain, Semantic (% Gain)		
Mean	-12.45	5.67
Standard Deviation	38.39	51.61
Pre-Form "A" (Attitude)		
Mean	69.89	68.10
Standard Deviation	10.81	9.06
Post-Form "A" (Attitude)		
Mean	70.42	74.90
Standard Deviation	9.51	7.91

TABLE 9 -- Continued

Variables	Experimental 2	
	Segregated (N = 19)	Integrated (N = 10)
Mean Gain, Form "A" (Raw Score)		
Mean	0.53	6.80
Standard Deviation	12.17	5.05
Mean Gain, Form "A" (% Gain)		
Mean	-0.67	11.57
Standard Deviation	20.80	8.55
Pre-Form "F" (Knowledge)		
Mean	4.37	5.70
Standard Deviation	2.54	3.13
Post-Form "F" (Knowledge)		
Mean	12.32	11.70
Standard Deviation	4.91	4.64
Mean Gain, Form "F" (Raw Score)		
Mean	7.95	6.00
Standard Deviation	4.98	4.03
Mean Gain, Form "F" (% Gain)		
Mean	26.58	23.50
Standard Deviation	33.83	20.58

TABLE 9

B. Summary of the Intercorrelation of Variables for the Segregated Experimental 2 Group - White Students

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.38	1.00										
3 Mean Gain, Semantic (Raw Score)	-.65 ^d	.46 ^c	1.00									
4 Mean Gain, Semantic (Per cent Gain)	-.47 ^c	.62 ^d	.96 ^e	1.00								
5 Pre-Form "A" (Attitude)	-.34	-.15	.21	.15	1.00							
6 Post-Form "A" (Attitude)	.30	-.12	-.39	-.32	.29	1.00						
7 Mean Gain, Form "A" (Raw Score)	.53 ^c	.04	-.48 ^c	-.38	-.66 ^d	.53 ^c	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	.53 ^c	.03	-.49 ^c	-.39	-.55 ^c	.63 ^d	.98 ^e	1.00				
9 Pre-Form "F" (Knowledge)	.02	.06	.03	-.04	.06	.45	.30	.31	1.00			
10 Post-Form "F" (Knowledge)	.40	-.05	-.43	-.39	-.11	.36	.38	.41	.23	1.00		
11 Mean Gain, Form "F" (Raw Score)	.38	-.08	-.44 ^a	-.36	-.14	.13	.23	.24	-.28	.87 ^e	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	.49 ^c	-.07	-.53 ^b	-.42 ^a	-.26	.35	.50 ^a	.49 ^a	-.10	.85 ^e	.89 ^e	1.00

^aSignificant at the 5 per cent level - one-tailed test

^bSignificant at the 1 per cent level - one-tailed test

^cSignificant at the 5 per cent level - two-tailed test

^dSignificant at the 1 per cent level - two-tailed test

^eSignificant at the .1 per cent level - two-tailed test

TABLE 9

C. Summary of the Intercorrelation of Variables for the Integrated Experimental 2 Group - White Students

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.76 ^d	1.00										
3 Mean Gain, Semantic (Raw Score)	.43	.91 ^e	1.00									
4 Mean Gain, Semantic (Per cent Gain)	.30	.80 ^d	.92 ^e	1.00								
5 Pre-Form "A" (Attitude)	.36	.36	.28	.12	1.00							
6 Post-Form "A" (Attitude)	.29	.39	.36	.17	.83 ^d	1.00						
7 Mean Gain, Form "A" (Raw Score)	-.19	-.04	.06	.04	-.49	.08	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	-.15	.00	.09	.02	-.31	.27	.93 ^d	1.00				
9 Pre-Form "F" (Knowledge)	-.10	-.25	-.28	-.36	-.54	-.16	.72 ^c	.68 ^c	1.00			
10 Post-Form "F" (Knowledge)	.10	.38	.47	.32	.08	.49	.62	.69 ^c	.52	1.00		
11 Mean Gain, Form "F" (Raw Score)	.19	.63 ^c	.76 ^b	.65 ^a	.51	.69 ^c	.16	.27	-.18	.75 ^c	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	.24	.57	.64 ^a	.50	.51	.73 ^c	.23	.36	-.04	.81 ^d	.97 ^e	1.00

^aSignificant at the 5 per cent level - one-tailed test

^bSignificant at the 1 per cent level - one-tailed test

^cSignificant at the 5 per cent level - two-tailed test

^dSignificant at the 1 per cent level - two-tailed test

^eSignificant at the .1 per cent level - two-tailed test

Following instruction, they did show more agreement with the attitudes the lesson tried to develop. However, they grew more negative in their attitude toward "black people" at the same time. Because of this, Hypothesis Four is confirmed for the relationship between knowledge gain and degree of agreement with the attitudes developed by the lesson, but rejected for the relationship between knowledge gain and attitude toward "black people."

Section C of Table 9 presents evidence of a slight, though not significant positive relationship between what the integrated Experimental 2 group learned about "The Underground Railroad in Michigan," Form "F," and agreement with the attitudes it attempts to develop, Form "A," .16. Evidence of the lesson's impact can be seen by comparing the pre-test correlation between Form "F" and Form "A," -.54, with the correlation between these same variables on the post-test, .49. Though not significant, a positive trend is evident.

The pre-test correlation between what the integrated group knew about the lesson to be taught and their attitude toward "black people" was not significant, -.10. Post-test results, however, begin to show a positive correlation between knowledge about the lesson and attitude toward "black people," .38. Mean gains presented in both raw scores and per cent gain scores reinforce this trend. Raw score gains show a significant positive relationship between the two variables, .76, $p < .01$, while the correlation between per cent gain scores for the two variables approaches significance, .50, $p < .10$.

White students in the integrated Experimental 2 group registered gains in information about "The Underground Railroad in Michigan," greater agreement with the attitudes portrayed by the lesson, and when considering per cent gain scores, a more positive attitude toward "black people" following instruction. A positive trend between knowledge about the lesson and agreement with the attitudes it portrays is evident but not significant. The relationship between knowledge gains and gains in attitude toward "black people" following instruction is significantly positive. Therefore, Hypothesis Four is rejected for the integrated white Experimental 2 group when considering the relationship between knowledge gains and agreement with attitudes developed by the lesson. It is confirmed for this group of white students when considering the relationship between knowledge gained through the lesson and attitude toward "black people."

Summary. This section of the chapter reported on the correlations between (1) knowledge gains and increased agreement with the attitudes portrayed by the lesson, "The Underground Railroad in Michigan, and (2) knowledge gains and gains in attitude toward the specific stimulus concept. The results for black students were:

1. No significant positive relationship existed between knowledge gains and increased agreement with the attitudes portrayed by the lesson for any of the four groups of black students.
2. No significant correlation existed between knowledge gains and gains in attitude toward "white people" for any of the four groups.

3. The hypothesis "A positive relationship exists between the amount of knowledge gained through exposure to the lesson and the degree of attitude change which develops as a result of this exposure" was rejected for all four experimental groups of black students. The hypothesis was rejected for (1) the relationship between knowledge gains and increased agreement with the attitudes portrayed by the lesson, and (2) the relationship between knowledge gains and gains in attitude toward the stimulus concept "white people."

The results for white students were:

1. A significant positive correlation existed between knowledge gains and increased agreement with the attitudes portrayed by the lesson in only one of the four groups of white students tested--the segregated group taught through the oral-reading approach.
2. A significant positive correlation existed between knowledge gains and gains toward "black people" in only one of the four groups of white students tested--the integrated group taught through the oral-reading approach.
3. The hypothesis was confirmed for the relationship between knowledge gains and increased agreement with the attitudes portrayed by the lesson for white students in the segregated classroom, taught through the oral-reading approach.
4. The hypothesis was rejected for the relationship between knowledge gains and increased agreement with the attitudes portrayed by the lesson for white students in the integrated classroom, taught through the oral-reading approach.
5. The hypothesis was rejected for the relationship between knowledge gains and increased agreement with the attitudes portrayed by the lesson for white students in both integrated and segregated classrooms using the audio-slide approach.
6. The hypothesis was confirmed for the relationship between knowledge gains and gains in attitude toward "black people" for white students in an integrated classroom taught through the oral-reading approach.

7. The hypothesis was rejected for the relationship between knowledge gains and gains in attitude toward "black people" for white students in a segregated classroom taught through the oral-reading approach.
8. The hypothesis was rejected for the relationship between knowledge gains and gains in attitude toward "black people" for white students in both integrated and segregated classrooms using the audio-slide approach.

Analysis of the Results for Black Students in
The Integrated Control Group

Because of the unusual gains in information made by black students in the integrated control group, a brief summary of the results from testing this group will be reported in this section.

Table 10 presents a summary of results from Underground Railroad Form "A," Underground Railroad Form "F," and the semantic differential for white and black students in the integrated control class. Section A of the table presents a summary of means and standard deviations for black students and white students in the class. Section B of the table presents the intercorrelations among these variables for black students within the integrated control class. Section C presents the intercorrelations among these same variables for white students within the integrated control class.

An examination of Section A, Table 10, shows that the attitude of black students toward "white people," 38.50, was approximately the same as that of white students toward "black people," 38.00, on the pre-test. Post-test results for both groups are also nearly alike; 33.40 for black students in the integrated class and 33.00 for white

students in the same class. Further examination of pre-test results shows that black students in the integrated control class had greater knowledge of the information contained in the experimental lesson, 5.50, than did white students, 4.14. However, they tended to lag behind the white students in agreement with the attitudes contained in the lesson. Post-test results show this same tendency existing.

Section B of the table presents evidence of a positive correlation between what black students learned about "The Underground Railroad in Michigan" on their own and in conversation with others and their attitude toward "white people." The pre-test correlation between what black students knew about the information to be presented by the lesson and their attitude toward "white people" was positive, .48, but not significant. The post-test correlation between these two variables is significantly positive, .68, $p < .05$, and provides evidence that the more black students learned about "The Underground Railroad in Michigan," the more positive their attitude became toward "white people." Further evidence of this positive relationship is provided by an examination of the correlation between the variables for mean gains, presented in both raw gain per cent gain scores. The first correlation using raw scores shows a strong positive trend, .53, while the second, using per cent gain scores approach significance, .60, $p < .10$.

Both pre- and post-test correlations between information known about the experimental lesson and agreement with the attitudes it

TABLE 10

SUMMARY OF MEANS, STANDARD DEVIATIONS, AND INTER-CORRELATIONS FROM UNDERGROUND RAILROAD FORM "A," UNDERGROUND RAILROAD FORM "F," AND THE SEMANTIC DIFFERENTIAL, INTEGRATED CONTROL GROUP

A. Summary of Means and Standard Deviations

Variables	Integrated Control Group	
	Black Students (N = 10)	White Students (N = 7)
Pre-Semantic		
Mean	38.50	38.00
Standard Deviation	6.98	7.66
Post-Semantic		
Mean	33.40	33.00
Standard Deviation	7.49	8.89
Mean Gain Semantic (Raw Score)		
Mean	-5.10	-5.00
Standard Deviation	3.93	12.54
Mean Gain Semantic (Per cent Gain)		
Mean	-19.00	-12.02
Standard Deviation	15.55	43.12
Pre-Form "A"		
Mean	67.40	70.00
Standard Deviation	7.71	10.86
Post-Form "A"		
Mean	72.20	75.00
Standard Deviation	5.73	7.02
Mean Gain, Form "A" (Raw Score)		
Mean	4.80	5.00
Standard Deviation	9.47	5.48
Mean Gain, Form "A" (Per cent Gain)		
Mean	6.82	8.09
Standard Deviation	15.99	8.21
Pre-Form "F" (Knowledge)		
Mean	5.50	4.14
Standard Deviation	3.72	1.77
Post-Form "F" (Knowledge)		
Mean	10.80	7.57
Standard Deviation	4.59	2.76
Mean Gain, Form "F" (Raw Score)		
Mean	5.30	3.43
Standard Deviation	2.63	2.07
Mean Gain Form "F" (Per cent Gain)		
Mean	22.37	13.34
Standard Deviation	11.96	8.02

TABLE 10

B. Summary of the Intercorrelation of Variables for the Integrated Control Group - Black Students
(N = 10)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	.86 ^b	1.00										
3 Mean Gain, Semantic (Raw Score)	-.15	.39	1.00									
4 Mean Gain, Semantic (Per cent Gain)	.32	.76 ^b	.88 ^c	1.00								
5 Pre-Form "A" (Attitude)	-.54	-.66 ^a	-.29	-.51	1.00							
6 Post-Form "A" (Attitude)	.29	.13	-.28	-.11	.03	1.00						
7 Mean Gain, Form "A" (Raw Score)	.62	.61	.07	.35	-.80 ^b	.58	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	.64 ^a	.60	.01	.31	-.71 ^a	.68 ^a	.99 ^c	1.00				
9 Pre-Form "F" (Knowledge)	.48	.47	.03	.20	-.12	-.35	-.12	-.16	1.00			
10 Post-Form "F" (Knowledge)	.54	.68 ^a	.33	.51	-.25	-.29	.02	-.01	.82 ^b	1.00		
11 Mean Gain, Form "F" (Raw Score)	.27	.53	.53	.61	-.27	-.01	.21	.01	.02	.59	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	.43	.65 ^c	.47	.60	-.26	-.15	.13	.12	.45	.88 ^c	.90 ^c	1.00

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at the .1 per cent level - two-tailed test

TABLE 10

C. Summary of the Intercorrelation of Variables for the Integrated Control Group - White Students

	1	2	3	4	5	6	7	8	9	10	11	12
	(N = 7)											
1 Pre-Semantic (White People)	1.00											
2 Post-Semantic (White People)	-.14	1.00										
3 Mean Gain, Semantic (Raw Score)	-.71	.80 ^a	1.00									
4 Mean Gain, Semantic (Per cent Gain)	-.65	.81 ^a	.97 ^c	1.00								
5 Pre-Form "A" (Attitude)	-.34	.03	.23	.16	1.00							
6 Post-Form "A" (Attitude)	.00	-.09	-.07	-.17	.90 ^b	1.00						
7 Mean Gain, Form "A" (Raw Score)	.67	-.18	-.54	-.54	.83 ^a	-.50	1.00					
8 Mean Gain, Form "A" (Per cent Gain)	.70	-.26	-.61	-.62	-.77 ^a	-.41	.99 ^c	1.00				
9 Pre-Form "F" (Knowledge)	.25	-.42	-.45	-.34	-.81 ^a	-.80 ^a	.58	.52	1.00			
10 Post-Form "F" (Knowledge)	.24	.08	-.10	.09	-.50	-.66	.13	.06	.66	1.00		
11 Mean Gain, Form "F" (Raw Score)	.12	.46	.26	.41	.04	-.20	-.32	-.37	.03	.77 ^a	1.00	
12 Mean Gain, Form "F" (Per cent Gain)	.17	.37	.16	.33	-.05	-.28	-.25	-.30	.16	.85 ^a	.99 ^c	1.00

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at the .1 per cent level - two-tailed test

presents show a slight negative trend for black students in the integrated control class. The correlation using mean gain scores shows no significant relationship between knowledge gains and increase in agreement with the attitudes portrayed in the story.

Black students in the integrated control class, getting information about "The Underground Railroad in Michigan" for themselves, and from friends, not only registered large gains in knowledge about the subject, 5.30, but also registered gains in agreement with the attitudes the lesson portrayed. Though these students registered an actual loss in attitude toward "white people," -5.10, there was a strong tendency for an increase in knowledge about the lesson to be accompanied by more positive attitude toward "white people." This relationship approaches significance when considering per cent gain scores, $p < .10$.

Section C of Table 10 is presented but not discussed, as no special circumstances were found to have influenced knowledge gains by white students in the integrated control classroom.

Summary. This section of the chapter reported an analysis of the results for black students in the integrated control group. The results show that:

1. Black students scored large gains in information about the lesson, though they received no classroom instruction in its content.
2. Black students gained in agreement with the attitudes portrayed by the lesson, but grew more negative in attitude toward "white people."

3. No significant correlation existed between knowledge gains and increased agreement with the attitudes portrayed by the lesson or between knowledge gains and gains in attitude toward "white people."

Analysis of the Results From Underground Railroad Form "A"

The results from Underground Railroad Form "A" are presented separately for black students and white students. A summary of the results follows the analysis of the lesson's impact on these two groups.

Impact on Black Students

Table 11 presents a summary of results from Underground Railroad Form "A" for black students. Section A of the table reports the means and standard deviations for the pre-test, post-test, and mean gains; both raw score and per cent gain. Racial composition, instruction, and the interaction between the two, are considered in the presentation of results. Section B presents the analysis of variance.

The possible range of scores on Underground Railroad Form "A" was from a low of 25 to a high of 125 points. The higher the score on this instrument, the more the individual or the group agrees with the attitudes portrayed in the lesson. An examination of the pre-test results shows group means ranging from a low of 67.08 points for the integrated Experimental 2 group to a high of 73.79 points for the segregated Experimental 1 group. Integrated groups tend to score less positively on the pre-test than do segregated groups of black

TABLE 11

SUMMARY OF THE RESULTS FROM UNDERGROUND
RAILROAD FORM "A" - BLACK STUDENTS

A. Summary of Means and Standard Deviations

Instruction	Classroom Racial Composition							
	Pre-Test		Post-Test		Mean Gain (Raw Score)		Mean Gain (Per cent Gain)	
	Seg.	Int.	Seg.	Int.	Seg.	Int.	Seg.	Int.
Integral History								
N	24	11	24	11	24	11	24	11
Mean	73.79	73.00	73.08	71.64	-0.71	-1.36	-1.10	-2.73
S. D.	8.01	12.43	7.26	11.02	10.43	11.60	17.68	20.05
Exp. 1								
N	24	12	24	12	24	12	24	12
Mean	68.54	67.08	71.79	74.00	3.25	6.92	4.77	8.50
S. D.	5.59	14.82	8.90	11.79	8.14	16.86	15.32	25.51
Exp. 2								
N	25	11	25	11	25	11	25	11
Mean	72.60	67.73	70.44	71.82	-2.16	4.09	-4.68	5.61
S. D.	6.20	7.39	7.22	5.58	7.67	9.29	14.40	15.69
Control								
N	25	11	25	11	25	11	25	11
Mean	72.60	67.73	70.44	71.82	-2.16	4.09	-4.68	5.61
S. D.	6.20	7.39	7.22	5.58	7.67	9.29	14.40	15.69

TABLE II
B. Summary of the Analysis of Variance

Source	Degrees of Freedom	F-Ratio	Probability Level
Pre-Test			
Racial Composition	1/101	1.73	p > .05
Instruction	2/101	3.22	p < .05 ^a
Interaction	2/101	0.49	p > .05
Post-Test			
Racial Composition	1/101	0.16	p > .05
Instruction	2/101	0.35	p > .05
Interaction	2/101	0.39	p > .05
Raw Gain			
Racial Composition	1/101	2.07	p > .05
Instruction	2/101	2.82	p > .05
Interaction	2/101	0.88	p > .05
Per cent Gain			
Racial Composition	1/101	1.28	p > .05
Instruction	2/101	1.95	p > .05
Interaction	2/101	0.89	p > .05

^aSignificant at the 5 per cent level

students. In addition, Experimental 2 groups score less positively on Underground Railroad Form "A" on the pre-test than do Experimental 1 groups.

The difference among the means for Experimental 1, Experimental 2, and control groups is significant on the pre-test; $F(2/101) = 3.22$, $p < .05$. This difference in means is largely the result of the low scores registered by both the segregated and integrated Experimental 2 groups.

Post-test means ranged from a low of 70.44 achieved in the segregated control class to a high of 74.00 scored by the integrated Experimental 2 group. Because of the significant difference among the means for Experimental 1, Experimental 2, and control groups on the pre-test, mean gains will be reported in both raw gain and per cent gain scores. Experimental 1 groups, using the audio-slide presentation registered losses in attitude in both integrated and segregated groups, regardless of method of reporting mean gains. The segregated group did tend to lose less in attitude, -1.10, toward the lesson than did the corresponding integrated group, -2.73 (See Table 11, Section A, Per cent Gain).

Both Experimental 2 groups registered greater agreement with the attitudes portrayed in the lesson following instruction, with black students from the integrated group showing greater gains in agreement, 8.50, than the segregated group of black students, 4.77 (See Table 11, Section A, Per cent Gain).

The impact of instruction has been to eliminate the significant difference among the means for Experimental 1, Experimental 2, and control groups found on the pre-test. Greatest impact seems to have taken place in Experimental 2 groups, where actual gains in attitude were recorded for both integrated and segregated groups.

Impact on White Students

Table 12 presents a summary of the results from Underground Railroad Form "A" for white students following the same pattern as in Table 11.

An examination of the pre-test results shows group means ranging from a low of 67.92 points for the integrated Experimental 2 group to a high of 75.58 points for the segregated Experimental 1 group. Integrated experimental groups tend to agree less with the attitudes the lesson portrays than do segregated experimental groups. In addition, Experimental 2 groups of white students agree less with these attitudes than do Experimental 1 groups prior to instruction.

Group means on the post-test ranged from a low of 63.95 for the segregated white control group to a high of 75.71 for the segregated Experimental 1 group. Post-test and mean gain results both show the impact which being in an integrated group has on white students' feelings toward the attitudes portrayed in the lesson. Students in all of the integrated groups gained in agreement with the attitudes portrayed by the lesson following instruction. However, only the Experimental 1

TABLE 12

SUMMARY OF THE RESULTS FROM UNDERGROUND
RAILROAD FORM "A" - WHITE STUDENTS

A. Summary of Means and Standard Deviations

Instruction	Classroom Racial Composition					
	Pre-Test		Post-Test		Mean Gain (Raw Score)	
	Seg.	Int.	Seg.	Int.	Seg.	Int.
Integral History						
N	(24)	(13)	(24)	(13)	(24)	(13)
Exp. 1 Mean	75.58	68.08	75.71	69.69	0.13	1.62
S. D.	8.70	9.44	10.23	8.35	12.97	10.02
					(24)	(13)
					0.47	1.26
					22.68	17.46
Exp. 2 Mean	(21)	(13)	(21)	(13)	(21)	(13)
S. D.	70.62	67.92	70.29	71.38	-2.13	5.51
	10.52	9.53	9.08	9.93	20.42	15.59
Control	(22)	(9)	(22)	(9)	(22)	(9)
N	70.14	71.56	63.95	75.44	-13.67	6.34
Mean	10.44	12.42	9.98	7.92	18.51	8.80
S. D.						

TABLE 12
B. Summary of the Analysis of Variance

Source	Degrees of Freedom	F-Ratio	Probability Level
Pre-Test			
Racial Composition	1/96	1.92	p > .05
Instruction	2/96	0.50	p > .05
Interaction	2/96	1.49	p > .05
Post-Test			
Racial Composition	1/96	1.20	p > .05
Instruction	2/96	0.76	p > .05
Interaction	2/96	6.44	p < .01 ^b
Raw Gain			
Racial Composition	1/96	5.08	p < .05 ^a
Instruction	2/96	0.51	p > .05
Interaction	2/96	1.27	p > .05
Per cent Gain			
Racial Composition	1/96	5.62	p < .05 ^a
Instruction	2/96	0.69	p > .05
Interaction	2/96	1.98	p > .05
aSignificant at the 5 per cent level		bSignificant at the 1 per cent level	

group, among the segregated groups, actually gained in agreement with these attitudes, 0.13. The importance of the combination of instruction and integration is reinforced by a significant interaction effect reported on the post-test; $F (2/96) = 6.44$, $p < .01$. However, only racial composition is significant when considering either per cent gain scores, $F (1/96) = 5.62$, $p < .05$ or raw gain scores, $F (1/96) = 5.08$, $p < .05$.

Summary. This section reported the results from Underground Railroad Form "A." The results for black students show that:

1. No significant increase in agreement with the attitudes portrayed by the lesson resulted from instruction.
2. No significant increase in agreement with the attitudes portrayed by the lesson resulted from the racial composition of the classroom.

The results for white students show that:

1. No significant increase in agreement with the attitudes portrayed by the lesson resulted from instruction.
2. Students in integrated classrooms increased in agreement with the attitudes portrayed by the lesson significantly more than students in segregated classrooms.

Intercorrelations: Sex and Intelligence as Factors

This section of the chapter presents a brief summary of additional correlations explored by the study. In total, intercorrelations among fifteen variables were computed in the study. Here, concentration is on two variables; sex and intelligence. The relationship among these two variables to gains in information, gains in agreement with the

attitudes portrayed by the lesson "The Underground Railroad," and changes in attitude toward the stimulus concepts presented in each semantic differential will be reported.

The results from computing these intercorrelations are presented separately for black students and white students. A summary of results follows the two presentations.

Twelve of the remaining thirteen variables have already been reported in an earlier section of the chapter. The remaining variable, parent's occupational status, will not be reported as the sample of pupils whose parents were white collar workers was too small for valid comparison. Tables of the complete intercorrelations of the fifteen variables examined by the study for each of the eight experimental groups appear in Appendices C and D.

Impact on Black Students⁵

Segregated Experimental 1 - Black Students

This study found no significant correlation between sex and gains in information about the lesson "The Underground Railroad in Michigan" for black students in the segregated Experimental 1 group. In addition, no significant correlation was found between sex and increased agreement with the attitudes portrayed in the lesson or between sex and gains in attitude toward "white people."

⁵For the complete summary of means, standard deviations, and intercorrelations among variables for individual groups of black students, see Tables 13 through 16 in Appendix C.

An examination of Table 13, Section B, in Appendix C, does show intelligence to be related to gains in information about the lesson, $.39, p < .10$. It also shows that high intelligence is negatively related to gains in attitude toward "white people," $-.41, p < .05$.

Integrated Experimental 1 - Black Students

Sex differences were not important in the integrated Experimental 1 group for determining gains in information about the lesson or in determining changes in attitude, either about the attitudes portrayed in the lesson or about "white people." Intelligence was not found to be significantly related to information gains or attitude change in the integrated Experimental 1 group of black students.

Segregated Experimental 2 - Black Students

Section B of Table 15 in Appendix C shows that girls tend to learn more than boys in the segregated Experimental 2 group of black students, $.40, p < .10$. However, sex is not significantly correlated with gains in attitude toward "white people," or with gains in agreement with the attitudes portrayed in the lesson. Intelligence was not found to be significantly correlated with either gains in information, increased agreement with attitudes portrayed by the lesson, or with gains in attitude toward "white people." A close examination of the correlations between intelligence and the post-semantic or the mean gains on the semantic, shows a slight tendency for black students with

higher intelligence scores to be less positive about "white people" following instruction.

Integrated Experimental 2 - Black Students

No significant correlation was found between sex and gains in information about the lesson or in increased agreement with the attitudes it portrays. Though not significant, girls did tend to register more positive attitudes toward "white people" than did boys. Only the relationship between gains in information and intelligence approach significance in the integrated Experimental 2 group, .59, $p < .10$.

Impact on White Students⁶

Segregated Experimental 1 - White Students

No significant correlation was found between sex and gains in information about "The Underground Railroad in Michigan," increased agreement with the attitudes the lesson portrays or gains in attitude toward "black people." Intelligence was positively correlated with gains in information, but not with the remaining two factors.

Integrated Experimental 1 - White Students

No significant correlation was found between sex and gains in information about the lesson, increased agreement with the attitudes

⁶ For a complete summary of means, standard deviations, and intercorrelations among variables for individual groups of white students, see Tables 17 through 20 in Appendix D.

portrayed by the lesson, or with gains in attitude toward "black people." An examination of the mean gain data also shows that intelligence is not significantly related to any of these three variables.

Segregated Experimental 2 - White Students

Sex and mean gain in knowledge were not significantly correlated for these white students. However, following instruction, girls increased more in agreement with the attitudes portrayed in the story than boys, $.52, p < .05$. At the same time, girls grew more negative than boys in their attitude toward "black people," $-.53, p < .05$. Intelligence was found to be negatively correlated with gains in attitude about "black people," $-.46, p < .05$.

Integrated Experimental 2 - White Students

No significant relationship was found between sex and gains in information about the lesson, gains in agreement with the attitudes it portrays, or with increased positive attitude toward the stimulus concept "black people." Intelligence was also not significantly correlated with these three variables.

Summary. This section of the chapter reported on the inter-correlations of the factors "sex" and "intelligence" with (1) knowledge gains, (2) increased agreement with the attitudes portrayed by the lesson, and (3) gains in attitude toward a specific concept. The results for black students show that:

1. Sex was not significantly correlated with knowledge gains, increased agreement with the attitudes portrayed by the lesson or gains in attitude toward "white people" for any of the four experimental groups.
2. Intelligence was not significantly correlated with knowledge gains or increased agreement with the attitudes portrayed by the lesson for any of the four experimental groups.
3. Intelligence was significantly correlated with gains in attitude toward the stimulus concept "white people" in only one of the four experimental groups--the segregated group taught through the audio-slide approach. This correlation was negative.

The result for white students show that:

1. Sex was not significantly correlated with knowledge gains in any of the four experimental groups.
2. Sex was significantly correlated with increased agreement with the attitudes portrayed by the lesson in only one of the four experimental groups tested--the segregated group using the oral-reading approach. This correlation was positive. Girls increased more in agreement with the attitudes portrayed by the lesson than did boys.
3. Sex was significantly correlated with gains in attitude toward "black people" in only one of the four groups tested--the segregated group using the oral-reading approach. This correlation was negative. Girls grew more negative in their attitude toward "black people" than did boys.
4. Intelligence was significantly correlated with knowledge gains in only one of the four experimental groups tested--the segregated group using the audio-slide approach. The correlation was positive.
5. Intelligence was not significantly correlated with increased agreement with the attitudes portrayed by the lesson in any of the four experimental groups.
6. Intelligence was significantly correlated with gains in attitude toward "black people" in only one of the four

groups--the segregated group taught through the oral-reading approach. The correlation was negative.

Student Interviews

Students from Experimental 1, Experimental 2, and control classes were interviewed in an effort to determine such things as specific portions of the lesson which students liked better than others, student attitudes toward the characters portrayed in the lesson, and incidents beyond the lesson which may have effected the results of the study. To help make these determinations, a total of twelve students were interviewed from experimental groups. In this section of the chapter these interviews are reported.

Students who reflected greatest change from pre- through post-testing on the semantic differential were interviewed, and an accompanying change in attitude was assumed. Interviews were then used to supplement statistical analysis. The method of reporting is informal, but both the type of presentation to which particular students were exposed and racial composition of groups will be considered in the analysis.

Impact on Black Students

A total of seven black students were interviewed from experimental groups. Three of the students interviewed were from Experimental 1 groups, integrated, and segregated black. The remaining four were from Experimental 2 groups. Two of the three black students

interviewed from Experimental 1 groups grew more positive in their attitude toward "white people" following instruction than they had been on the pre-test, 24 to 36 and 20 to 34. The remaining student grew less positive, 46 to 33. Two of the four students from Experimental 2 groups grew negative about "white people" following instruction, 37 to 14 and 50 to 10. Of the remaining two, one grew less positive, 50 to 40, while the other grew more positive following instruction, 28 to 34.

In general, the black students expressed interest in the lesson. All seven students expressed an interest in having a personal copy of the written story, A Mystery Train Trip. Further interest was expressed by words like "exciting" or wanting to read the story to a family member, in addition to the general observations of the investigator and individual classroom teachers.

Student interests, however, were not just expressed in general terms. A review of the seven interviews shows that six of the seven students interviewed responded specifically to questions of interest in the lesson, recalling particular parts of the lesson which had "dramatic impact." Thus, black students tended to comment on parts of the lesson in which there was suspense, as when Harriet Tubman nearly got captured by slave catchers, where someone died, as in the story of Tice Davids, or in parts of the lesson in which suspense or the unknown occurred, as in the slides of the house which had two secret rooms, or a particular incident from A Mystery Train Trip, as when the Crosswhite family was portrayed being rushed to Jackson, Michigan in the back of a wagon. Two examples illustrate this interest:

Student Interview "A"⁷

Interviewer: Why don't you begin by telling me what you think of what we did in class yesterday.

Student: You could say it was lots of fun and I learned something from these things.

Interviewer: How did you like the story and the slides?

Student: I'd love to see them again.

Interviewer: Which part did you like best?

Student: I liked the ones where it showed all inside the house.

Interviewer: How would you like to be inside one of the rooms of the house?

Student: I'd be scared half to death! I'm scared of the dark. I have to have a night light in my room!

Note: Only three slides in this series of twenty show darkness:

1. A slide of the basement entrance to the house. The slide pictures the darkness of the basement. Students were asked to imagine what it must have been like to enter the basement and its darkness as a slave in the year 1850.
2. A slide of nothing but darkness as students were asked to imagine what it must have been like to wait inside a small secret room, hidden behind a chest of drawers while others walked around outside.
3. A slide of a dark room with a man silhouetted against the window.

⁷Each black student has been given an identifying letter. This same letter is used throughout this section to identify the student being interviewed.

Student Interview "B"

Interviewer: Now, here's what we are going to do. I have a job for you. This job is a pretty easy one. Just talk about the lesson on the Underground Railroad which we worked on together, O. K. ?

Student: Yes.

Interviewer: Talk about what you liked about the lesson, what you disliked about it. Tell me anything you want to, and start whenever you are ready.

Student: I liked the one about Harriet Tubman.

Interviewer: What did you like about Harriet Tubman?

Student: I liked where she hid and she would fall asleep. I liked where she couldn't know how to read and she had her book upside down and the man said he was going to kill her.

Note: What the student is describing in the lesson is a section from the short matching test using the two sets of envelopes, and a response to student questions about Harriet Tubman. All of what she says was presented in the lesson with the exception of "the man said he was going to kill her." No information about anyone wanting to kill Tubman was presented. However, mention was made of the reward of \$40,000 to be paid for her capture, dead or alive.

When asked by the investigator to choose from the lesson a character they would most like to be, black students tended to choose black characters. Only one of the seven black students interviewed didn't respond directly to the question. However, an examination of his responses to the five characters explored by the study shows that he gave his most positive rating to Harriet Tubman, 44, and his second most positive rating to slave, 40. One student responded simply "a conductor" and did not differentiate between Harriet Tubman and Erastus Hussey as conductors. Even his ratings of these two characters on

semantic differentials show them both rated very positively, 45 for Erastus Hussey and 43 for Harriet Tubman. One black student definitely chose to be the white conductor, Erastus Hussey, though his ratings of characters on the semantic differentials show little difference between his rating of Erastus Hussey, 49, and his rating of Harriet Tubman, 50.

The remaining four students chose to be black characters from the lesson. One chose to be like Tice Davids, though he was aware that Davids died in an effort to escape to freedom. Three excerpts from student interviews illustrate this and other choices of black characters:

Student Interview "C"

Interviewer: If I gave you a choice and said you could be anyone in the lesson you wanted to be, whom would you choose?

Student: I'd like to be the boy who tried to get across the river.
(Student couldn't recall name.)

Interviewer: You'd like to be Tice Davids. Remember, he died.

Student: I know!

Interviewer: Do you think you'd like to die?

Student: No.

Interviewer: How would you change the story of Tice Davids if you could?

Student: Let him live.

Interviewer: Would you let him get to freedom or get caught?

Student: Get to freedom.

Note: The character, Tice Davids, appears only in the introduction and was not presented as a stimulus concept on a semantic differential, so the investigator does not know how the student compared Tice Davids with other characters in the lesson.

A second student chose to be like Harriet Tubman. She wanted to be like Tubman in spite of the fact that she was aware of Tubman's physical injury.

Student Interview "B"

Interviewer: If I gave you a choice and you could be anyone in our lesson you wanted to be, whom would you choose?

Student: I would want to be Harriet Tubman.

Interviewer: Why would you like to be Harriet Tubman?

Student: Because I liked when she fell asleep and when she got hit here. (Student points to right temple.)

Interviewer: And what happened to her for the rest of her life?

Student: She would fall asleep.

Note: The student is referring to a reported incident in which Harriet Tubman stepped between an escaping slave and his "owner." The "owner" picked up an object and threw it in an attempt to stop the escaping slave. Harriet Tubman got hit by the thrown object instead. Because of this injury, she might become unconscious at any time. The affliction was pointed out in the matching exercise.

The remaining two black students wanted to be the slave in the story. One black student wanted to be the slave "...because there would be lots of adventures." The second student was more specific and associated escape with happiness, freedom, and material well-being.

Student Interview "D"

Interviewer: If you had a choice, whom would you like to be in the lesson?

Student: The one that would escape to freedom and be happy.

Interviewer: Do you think he was happy when he escaped?

Student: Yes, if he knew he could escape.

Interviewer: Do you think the black man who escaped and made his way to Canada was happy when he got there?

Student: Yes!

Interviewer: Why?

Student: Because he could get rich and come back and get his wife and children and they could be free.

Note: No mention was made of material satisfaction during instruction. The only escaped slave which the lesson mentioned returning to help other escaped slaves was Harriet Tubman. It is apparent from an examination of the interviews that both of these students wanted to be "escaping slaves."

During student interviews, a role-playing situation was created in which students were asked to react to the interviewer's need for help as he became

1. a slave needing help to get to freedom.
2. a white man who had automobile difficulty in a black neighborhood.

As the interviews continued, the roles were reversed and students were asked whether they, black men, could expect help in these same two situations from white people.

In general, the responses of black students show their willingness to extend help to the interviewer when necessary. In situations in which the interviewer described himself as a slave coming to them for help, five of the six students who responded to this section of the interview said "yes" to requests for help. One student answered "no"

to a request for help when the interviewer described himself as "black and attempting to find his way to Canada and freedom." The only reason offered by the student was "Because you might be a conductor."

One student responded "yes" to a plea for help, but placed a very realistic qualification on his answer:

Student Interview "D"

Interviewer: I'm a black slave and I'm knocking on your door. Would you help me?

Student: Yes. Some of them wouldn't!

Interviewer: What kind of person do you think wouldn't?

Student: A mean guy.

Interviewer: If you were a black man, would you help me?

Student: I couldn't. I'd be a slave, too.

Interviewer: You might not be. There were free black men.

Student: I would help you.

Interviewer: Supposing I knock on your door and I'm a black man and you are a white man. Would you help me?

Student: No!

Interviewer: Why not?

Student: Because they are mean and cruel and they would try to take you back to slavery.

Note: This student makes a definite distinction between who would help and who could help. As a black man, he feels that the slave could not be of help, but once the black is identified as free, the student becomes willing and able to help. As a white man, he could help, but he wouldn't because white men "...are mean and cruel and they would try to take you back to slavery."

Four of the five students responding "yes" to the interviewer's plea for help also felt that the interviewer would help them in a situation which required help.

Two students of the four placed an emphasis on "friendship" as a qualification for help. An excerpt from an interview of one of the students points out this qualification and also the feeling of answering help with help.

Student Interview "E"

Interviewer: Supposing it is over a hundred years ago when your grandma's grandma was kind of young, O.K. ? You and I are there and you came to my house and said "Robert Payne, I want to make my way to Canada?" Would I help you?

Student: If you were my friend, I'd help you.

Interviewer: From what you now know about me, would I help you?

Student: I think you would.

Interviewer: Supposing I reverse the situation. Let's make it tough. I'm the slave coming to your door. I say "I'm Bob Payne and I want to find my way to Canada." Would you help me?

Student: Yes, cause you would have done the same thing for me.

This feeling of helpfulness between the interviewer and the individual student is maintained in both role-playing situations from the past and in current problem situations in which either the student or interviewer needed help from the other.

In general, students who responded to this section of the interview responded positively to situations in which they were asked to be helpful to the investigator or in which the investigator was asked to be

helpful to them. This situation of positive helpfulness broke down, however, when the interviewer's neighbors or the student's neighbors were brought into the conversation. Only one black student of the four questioned about their relationship with the interviewer's neighbors definitely responded "yes" to the question of whether the interviewer's white neighbors would extend help to him if needed. Even this student qualified his response with "I think he would be helpful too." The other three students either responded "No" or further qualified their answers. Two examples illustrate the lack of help black students foresaw coming from the interviewer's white neighbor.

Student Interview "C"

Interviewer: Do you think they would help you if you had a flat tire in front of their house?

Student: No!

Interviewer: Why not?

Student: They don't know anything about me.

Interviewer: What would happen if you said, "I'm a friend of Bob Payne's."

Student: They'd probably help me.

Student Interview "D"

Interviewer: Do you think my neighbors would help you?

Student: No!

Interviewer: Why not?

Student: Because they don't know me.

Interviewer: Supposing I came right out and said "This is (student's name) and he is trying to find his way to freedom." Do you think they would help?

Student: Yes.

Interviewer: Why do you think so?

Student: Because you told them my name and I was your best friend.

Interviewer: Do you think they would help you if you came along and said "I'm (student's name) and I'm trying to find my way to freedom"?

Student: No!

Interviewer: Why don't you think they would help you?

Student: Because they think I am out to kill them or something like that.

Interviewer: Supposing it is today and there is no slavery. You knock on my door. You are a black man who needs help. Would I help you?

Student: I don't know.

Interviewer: What do you think?

Student: Yes.

Interviewer: Supposing it is my neighbor?

Student: Is he nice or mean?

Interviewer: I don't know. You decide.

Student: Yes!

Interviewer: Why?

Student: Because you would help me.

Interviewer: Supposing you went to another white neighborhood. Would you expect help there?

Student: No.

Interviewer: Why not?

Student: Because one time a boy was chasing me and my twin cousins. We were over at my grandmothers. And, we ran up on a real high porch and this lady told us to get out of her yard.

Interviewer: Was she white?

Student: Yes!

Black students felt help would be extended only if they and the interviewer were linked as friends.

Five of the seven black students interviewed listed similar limitations on any help the interviewer could expect from the students' neighbors. Two students were not asked to role play this portion of the interview. Two of the remaining five students answered positively, that their neighbors would help the interviewer if he were in a situation which required help, either in the past or now. One of these students simply stated "I would suppose they would help you." The second attached friendship to the probability of help.

Student Interview "C"

Interviewer: Supposing I have a flat tire in your neighborhood and I said "Hey, I need some help."

Student: I would help you.

Interviewer: But if you aren't home, what would happen?

Student: I'd tell my neighbor.

Interviewer: You'd tell your neighbor that Bob Payne is coming into the neighborhood and may need help?

Student: I'd tell them if you came by and you needed some help, you could do it for him.

Interviewer: Would that mean that we are friends then?

Student: Yeah!

The remaining three students replied in phrases like "I don't know...", "I couldn't say," as well as "Well...I have sort of grouchy neighbors."

Student responses to the interviewer's questioning about what changed their minds about "white people" brought direct responses from five black students. One of the five said he changed his mind because his cousin knew the answers and he got them from his cousin. Two examples illustrate student reasons for changing their minds about "white people."

Student Interview "B"

Interviewer: Do you think you have changed your mind?

Student: Yes.

Interviewer: Why?

Student: I don't know.

Interviewer: This paper says your opinion of "white people" got better. Why?

Student: Because I think some are nice.

Interviewer: Did the story affect your opinion?

Student: A little.

Interviewer: What part?

Student: The part where it says something about white people helping black people.

Interviewer: On the first test you said "white people" are unpleasant and now you say, "Mr. Payne, 'white people' are very pleasant." What changed your mind?

Student: Some are pleasant and some aren't.

Interviewer: Were you thinking of a particular person when you checked "very pleasant"?

Student: Yes, you!

Interviewer: Whom were you thinking about when you said very unpleasant?

Student: A little white girl on my grandmother's street. She doesn't like me and I don't like her.

Note: This student identifies three factors that may have influenced her attitude toward "white people." Two of these, the lesson and the interviewer, are reinforcing and positive. Both are mentioned by the student as reasons for her post-instruction attitude toward "white people." The third, the little girl, was a pre-test occurrence. This student's attitude toward "white people" grew more positive between pre- and post-testing. Another of the students who gave reasons for their attitude change toward "white people" stated simply "When I did this one I was thinking of people that I knew and liked."

Only one of the five students responding mentioned school racial disturbances, which occurred between pre- and post-testing, as incidents that could have changed his mind about "white people." Even then, a direct question had to be asked about the incident before he replied.

Student Interview "E"

Interviewer: Can you think of anything that happened in the last two weeks that would have made you feel worse?

Student: When this little girl and this little boy were playing, this other white boy he came and beat up on the white boy.

Interviewer: Did anything that happened in our schools make you change your mind?

Student: Yes.

Interviewer: In what way?

Student: That they threw these kids out the window and these white kids tried to start something, too.

Interviewer: Did that make you mad?

Student: Yes.

Interviewer: But, did it make you mad enough to change your mind?

Student: Yes, cause I don't think that is right!

Interviewer: Did anything else happen that made you change your mind?

Student: No.

Note: This student expressed greatest loss in attitude toward "white people" of all students interviewed, 50 to 10.

In summary, interviews of black students from experimental groups show:

1. That black students remembered and liked best the dramatic incidents from the lesson.
2. That black students tended to identify with the black characters from the lesson. This was true even when the black characters had been seriously hurt or even killed.
3. That black students made a distinction between the relationship which they have with the interviewer, a member of white society whom they know, and the relationship they are likely to have with other members of white society, represented by the interviewer's neighbors.
4. That black students made a distinction between the relationship the interviewer has with them and the relationship he is likely to have with other members of black society, represented by each student's neighbors.
5. That many things effected student attitudes--instruction, the teacher, personal experiences with white people, and racial incidents within the city-community. Further, some evidence has been shown that factors may either reinforce or counter each other depending upon their time of occurrence.

Impact on White Students

A total of five white student interviews are reported in this portion of the chapter. Three of the students were from Experimental 1 groups, and the remaining two were from Experimental 2 groups. Of the three students from Experimental 1 groups, one showed a shift in attitude from negative to positive, 21 to 42; the second showed little change in attitude toward "black people," 46 to 44, but he registered large gains in the attitudes portrayed in the lesson, 54 to 67; the third registered a loss in attitude toward "black people," 47 to 29. One of the two students interviewed from Experimental 2 groups registered an overall gain in attitude toward "black people," 18 to 29, while the second registered a large loss in attitude toward "black people," 40 to 20.

Based on the interviews, teacher comments, and observations of the investigator, white students seemed to be interested in the lesson. White students, like their black peers, seemed to be attracted to and seemed to remember dramatic incidents, times in the lesson when there was suspense, mystery, or tragedy. All five of the students interviewed mentioned the slides of the local "station" among those parts of the lesson they liked and remembered. Reactions to the question of which part of the lesson was liked most, ranged from "People trying to get others to freedom" to an identification of exact slides, "Where you showed the cat and where the other door was." References to parts of the lesson which were liked tended to be specific,

and to reflect excitement and interest in the instruction. Two interviews illustrate those parts of the lesson in which students were most interested:

Student Interview "T"⁸

Interviewer: What did you like best?

Student: The house.

Interviewer: What did you like best about the house?

Student: The second part.

Interviewer: Let's see, I don't think I remember. What was the second part?

Student: I don't know if it was the second part where you showed the stairs.

Interviewer: What else did you like about it?

Student: Where you showed where the cat and the other door was.

Interviewer: ... Do you remember what happened when we opened those doors?

Student: It was dark in there!

Note: What the student is describing is actually two slides. The first slide pictured a cat and two entrances to the local "station." Students were asked in the lesson which entrance way they would probably have used as slaves in the year 1850. The second slide showed a view of the dark cellar as students were told this was the way they would probably have entered.

Student Interview "U"

Interviewer: What do you think you liked most about the story?

⁸Each white student has been given an identifying letter. This same letter is used throughout this section to identify the student being interviewed.

Student: People trying to get others to freedom.

Interviewer: What do you remember best about it?

Student: About the house with the secret rooms. How did you ever find them out?

Interviewer: I got lucky. My boss was in Royal Oak talking to some teachers. One of them said, "Hey, I know where there is an Underground Railroad 'station.'" I drove to the home with my boss, and then started putting in some phone calls. I found out that a friend of my brother-in-law owned the house.

Student: Do you think they knew where the secret rooms were?

Interviewer: They knew where one was, but I don't know about the second one.

Student: You mean the one with the stairs?

Interviewer: They knew about the one with the stairs, but I don't know if they knew about the one behind the chest of drawers. Did you like any of the other slides?

Student: Yes, I liked them all!

Four of the five white students interviewed wanted to be like a character in the lesson who was helpful to escaping slaves. The remaining student chose to be a slave owner "Because I could get a lot more work out of them." In this case, a review of his semantic differential reactions to the characters in the story shows that his reactions to a slave owner, 37, are less positive than his attitude toward either the "conductor," Harriet Tubman, 45, or to the "conductor," Erastus Hussey, 45. However, an examination of the remainder of his interview does reveal that the racial confrontation in some of the city schools had probably influenced his choice of characters. In addition, his attitude toward "black people" had grown less positive between pre-testing, 47, and post-testing, 29.

One student, whose attitude toward "black people" had grown more positive, chose to be a "conductor" "Cause I wouldn't want to be a slave," and "Cause I wouldn't want slaves to do all that work." Though he didn't differentiate between being a white conductor and a black conductor during the interview, an examination of his reactions to conductors, on semantic differentials for these characters, shows more positive attitude towards the black conductor, Harriet Tubman, 46, than towards the white conductor, Erastus Hussey, 39.

A second of the four white students who chose to be "conductors" chose to be Erastus Hussey, white conductor. An examination of her reactions to both Erastus Hussey and Harriet Tubman on semantic differentials shows her ranking of the black conductor. Harriet Tubman 44, to be more positive than her reaction to the white conductor, Erastus Hussey, 39.

Further examination of her interview shows that fear of being hurt influenced her choice of characters.

Student Interview "V"

Interviewer: ...I'm going to give you a choice. You can no longer be (student's name). You must be one of these people: A slave, a slave catcher, a slave owner, a Harriet Tubman type of conductor, or an Erastus Hussey type of conductor. Which would you like to be?

Student: It's a hard choice!

Interviewer: Which one do you think you'd like to be?

Student: Erastus Hussey, because I wouldn't like to have a ball thrown at me.

The remaining two white students chose to be like Harriet Tubman. One chose to be like Tubman though she could give no specific reason why. An examination of her rating of characters did show that she gave a more positive rating to Harriet Tubman, 46, than she did to Erastus Hussey, 42. The second of the two students who voiced a desire to be Tubman in the lesson couldn't remember her name. Excerpts from his interview, however, identify both the character he selected and his reason for the selection.

Student Interview "U"

Interviewer: If I gave you a choice and said you could be anyone in the lesson you wanted to be, which one would you most like to be?

Student: A runaway slave and a guy who helped slaves.

Later in the interview:

Interviewer: You can be anyone in the lesson you want to be. Whom would you like to be?

Student: If I was a lady, I'd be that lady (Harriet Tubman).

Interviewer: Why would you like to be a conductor?

Student: To help people get freedom.

The two interviews which have just been presented show that the white students wanted to be a character from the story who was helpful to escaping slaves. When the two characters who were helpful in the lesson were examined, students chose to be the black conductor, Harriet Tubman. Students showed no reluctance in choosing to become a black character from the lesson.

During the interview situation, the interviewer assumed the role of black man and asked students whether they would extend help to him as a black man in problem situations - as a runaway slave, and as a black man having problems in a white neighborhood. At times, the roles were reversed and students were asked to portray a black man asking white people for help.

An examination of the interviews shows that all five of the students interviewed would extend help to the black man when it was needed. In addition, they felt that as a black man they could expect help from the interviewer.

One of the five students interpreted the interviewer's questions only in light of the lesson.

Student Interview "U"

Interviewer: If I were a black man and I came to your door right now and said, "I want more freedom, " would you help me ?

Student: I would try to.

Interviewer: How would you help me ?

Student: Like it was in those pictures.

Interviewer: Do you think your neighbors would help me ?

Student: No!

Interviewer: Why not ?

Student: Cause they probably would be slave owners.

Interviewer: Supposing we say it is over a hundred years ago. I am a black man and I came and knocked on your neighbor's door. Would they help me find my way to freedom ?

Student: They would probably tell.

Interviewer: Why don't you think they would help me ?

Student: If you didn't know them, they probably would be slave owners.

Interviewer: Do you think your neighbors would feed me right now if I were black?

Student: They might, but they'd be fooling you.

Interviewer: Why do you think they would fool me ?

Student: They would make you stay there and one would sneak out and tell the other people.

Note: This student interpreted the responses of the interviewer as if they all were dealing with the lesson in spite of the interviewer's efforts to introduce right now on two occasions. The results from his pre- and post-tests on the semantic differential with the stimulus concept "black people" show that he remained very positive on both, scoring 46 on the pre-test and 44 on the post-test. The impact of the instruction can be seen from his gain in the attitudes presented in the experimental lesson, 54, on the pre-test and 67 on the post-test, as well as from his responses on the interview. Evidence of the distinction between what the interviewer and the student would do for each other and what neighbors would do is evident from both the student's "no" response to whether or not the student's neighbors would offer help to the interviewer as a black man, and from his statement that even when they offered help "...they'd be fooling you."

Two of the five students who expressed willingness to help the interviewer as an escaping slave did so in spite of the fact that they were aware of the trouble they could get into through their action. Neither student made a distinction between extending help to the interviewer as a black slave, and later, as a black man of today. Examples of this willingness to help despite possible trouble are:

Student Interview "W"

Interviewer: Supposing it's over a hundred years ago and I am a black slave coming to your door. Knock! Knock!

Student: Hello.

Interviewer: Miss (student's name) ?

Student: Yes ?

Interviewer: I need help!

Student: Well, O.K., come on in.

Interviewer: I haven't had any food for a long time.

Student: Well, you can have something to eat.

Interviewer: That's kind of you. I have friends outside, too.

Student: Tell them to come on in.

Interviewer: Here's what we are doing. We are trying to get to Canada. Can you help us ?

Student: Yes, I think so!

Interviewer: What can you do ?

Student: Well, I could take you on a train.

Interviewer: A real train ?

Student: No.

Interviewer: What kind of train ?

Student: Like a carriage.

Interviewer: Will I be able to see anything from the carriage ?

Student: No, I'll have to put blankets and straw all over you.

Interviewer: What happens if you get caught ?

Student: Well, I don't know.

Interviewer: You know that you can be punished!

Student: Yes, I know that.

Interviewer: But, you are still going to help ?

Student: Yes!

Student Interview "V"

Interviewer: I'm asking you to pretend to be different people, O.K. ?
You tell me how you would react as each person. It's over a hundred years ago and I am a black slave. Whom do you want to be ?

Student: The conductor.

Interviewer: O.K., you are the conductor. I'm knocking on your door.

Student: Yes!

Interviewer: I need some help.

Student: Come on in.

Interviewer: I'm trying to run away to freedom. I have my family with me. Can you help me ?

Student: Well, maybe I can give you some food and hide you until night time and then take you to a "station" and put you on a train.

Interviewer: I haven't had anything to eat.

Student: Would you like something ?

Interviewer: Yes. What do you have ?

Student: Ham soup and maybe stuff like that.

Interviewer: Do you know that if you get caught helping me, you can be punished and maybe even put into jail ?

Student: I'm just going to take that risk!

Interviewer: Why would you take that risk for me ?

Student: Because I like to help people.

The sense of helpfulness on the part of white students was not limited to the past. Students, in general, expressed willingness to help the interviewer, as a black man of today. All four students who were asked to respond to a black man's needs for help while in their

neighborhood did so without hesitation. The black man was described as having car trouble and needing help. Students offered to help fix his tire, babysit with his family while the automobile trouble was being solved, fix something to eat for the black man and his family, and let him use the telephone to call for additional help. An example of student willingness to extend help to the black man of today is:

Student Interview "W"

Interviewer: Supposing it is right now, 1969. I'm a black man and I am knocking at your door. Knock!

Student: Yes!

Interviewer: I'm going through your neighborhood and having trouble.

Student: What kind of trouble?

Interviewer: First, my car broke down. And, I have a flat tire.

Student: We'll help you!

Interviewer: Good, is it all right if I come in and use your telephone?
(Pause) The wrecker service doesn't answer. Can your dad help me?

Student: Yes!

Interviewer: How about your mother?

Student: She can fix cars pretty good!

Interviewer: What can you do? I have my children with me.

Student: I can play with them.

White students, like their black peers, grew more uncertain of help being extended when neighbors were involved. Interviews of four white students contained questions of whether or not neighbors would extend help to a black man who was having trouble in a white

neighborhood. One of the white students responded positively to help for the black man from neighbors. She responded positively both in role playing a slave needing help, and as a black of today needing help while in a white neighborhood. When presented with a situation in which a black man and his family were moving into her neighborhood. she felt both she and her neighbors would welcome the family.

Student Interview "V"

Interviewer: You be a neighbor and I'll be a black father. Hi there! I'm Bob Payne. I have just moved into your neighborhood.

Student: Well, I hope you like it.

Interviewer: I have six children and I think all of them will like this neighborhood.

Student: We only have three, but I'm sure they will like your children.

Interviewer: I hope so. I think it would be nice if our children played together...

Student: So do I!

Interviewer: ...and went to school together, and got to know each other. I usually have a discussion group that gets together every Thursday night. Would you like to come?

Student: If it is all right with you, I would.

Interviewer: Oh, sure! We have coffee and cake and sit around and just talk. Do you think you'd like to do that?

Student: Yes.

Interviewer: That's at 7:30 and you may bring some of your friends with you if you like.

Student: All right!

Interviewer: Do you think your friends will come?

Student: Some won't.

Interviewer: Which of your friends would not come?

Student: Like the ones where their wives are working.

Interviewer: Well, if their wives are working, I wouldn't expect them to come. Do you know any neighbors who wouldn't have been as nice to the black man as we just were to each other?

Student: No.

Interviewer: Do you think that as a black man I would have been welcomed in your neighborhood?

Student: Yes.

Interviewer: Do you think that in my neighborhood you, as a black man, would have been welcomed?

Student: I don't know. I have never been in your neighborhood.

The remaining three white students reacted to questions of whether or not their neighbors would extend help to a black man with statements that ranged from "Maybe yes, maybe no" to an absolute "No!" One student was asked to play the role of a black lady. She was then asked to seek help in a white neighborhood. Her responses show that beyond the relationship she has with the interviewer, she would expect no help.

Student Interview "W"

Interviewer: You are a black lady. You are in my neighborhood.

Student: Knock!

Interviewer: Yes.

Student: Mr. Payne, I have a flat tire and I can't get any help anywhere.

Interviewer: Gee, I wonder why not? Have you tried anyone else in neighborhood?

Student: Yes.

Interviewer: Why wouldn't they help you?

Student: I don't know.

Interviewer: How many houses did you try?

Student: About six.

Interviewer: And nobody helped you?

Student: No.

Interviewer: What did they say when you knocked?

Student: They said they can't! And, they said they are all busy.

Interviewer: Do you think they are all busy?

Student: I don't know.

Interviewer: Well, how can I help you?

Student: Well, you can fix my tire for me.

Interviewer: Fix your tire?

Student: Yes. No, just let me use your phone.

Interviewer: Do you really think that I would fix your flat tire?

Student: Yes, because I think you are a nice guy.

Four of the five white students interviewed were asked questions about whether or not they had recently changed their minds about anything. Three of the four students replied that they had changed their minds about "black people." Their responses, like those reported for black students, show that instruction and the racial incidents that happened in the city-community competed for effect on their attitudes. Three examples illustrate these influences:

Student Interview "W"

Interviewer: It looks like you have changed your mind about something in the last two weeks. Have you?

Student: Yes.

Interviewer: About what?

Student: Well, about some things I have seen that made me change my mind.

Interviewer: What made you change your mind?

Student: I see that black people are really nice, nicer than I ever thought they were, and the white people were really nicer to them than they are now.

Interviewer: Can you think of any special part that made you change your mind?

Student: No, because it all really helped.

Note: This student had a pre-test score of 21 on the semantic differential with the stimulus concept "black people." Following instruction, her post-test score was 42. The pre-test score is negative while her post-test score is very positive. Throughout her interview, she did not mention the racial incidents that had occurred between pre-testing and post-testing.

For one student, the racial incidents were a very personal experience and caused her to change her mind about "black people."

Student Interview "V"

Interviewer: Can you think of anything you may have changed your mind about recently?

Student: You mean on the test?

Interviewer: Maybe.

Student: The first time I put down that black people are valuable, but my brother goes to (Name of high school) and he said that the black people up there (not audible) and I changed my mind about that one.

Interviewer: I see. What do you think happened at (Name of high school)?

Student: My brother got thrown through a window!

Interviewer: Did he get hurt?

Student: No, he's all right.

Interviewer: Who threw him out of the window?

Student: I don't know. He didn't tell us that.

Interviewer: Were they white boys or black boys?

Student: One was white and the other black.

Interviewer: Whose fault was it that problems occurred at (Name of high school)?

Student: It was mostly black people that went to the window and stuff. I think it was the blacks.

Interviewer: What happened at (Name of the second city high school in which racial incidents had occurred)?

Student: They were throwing rocks in the window, and I don't know if it's true or not, but my neighbor heard that two girls got stabbed.

Interviewer: Where did you get most of your information?

Student: My mom looks at television and listens to the radio and stuff. And, my neighbor picks up stuff on a police radio.

Interviewer: Do you talk about the things you hear with the other students who live in your neighborhood?

Student: There's not very many.

Interviewer: You probably get most of your information from adults then?

Student: Yes, from my mom and dad.

Note: Only one student was reported to have been thrown out a window. No stabbings were reported by the local newspaper. This student's attitude toward "black people" changed from a positive score of 40 on the pre-test to a negative score of 20 on the post-test.

Student Interview "T"

Interviewer: If I told you that your test of facts was much better yesterday than it was two weeks ago, how would you feel?

Student: Fine!

Interviewer: Have you changed your mind about anything during that time, too?

Student: I don't know.

Interviewer: Did you change your mind about how you feel about me?

Student: No!

Interviewer: Did you change your mind about black people during that time?

Student: Yes!

Interviewer: Did you change your mind about the Detroit Lions during that time?

Student: No!

Interviewer: How did you change your mind about black people?

Student: Because most of them are free now.

Interviewer: Did you change your mind in any other way? Have you studied anything about black people or have you read anything about black people?

Student: Yeah, I read something.

Interviewer: What did you read?

Student: I can't remember.

Interviewer: Was it in the paper?

Student: I heard something on T.V.

Interviewer: What did you hear?

Student: They get arrested sometimes and start fights.

Interviewer: Where did that happen?

Student: In our school everybody talked about it, and it was in the papers, too.

Interviewer: Is everyone in the school talking about it now?

Student: Not everybody.

Interviewer: What happened?

Student: They started a fight over at the high school.

Interviewer: So, you think black people started the fight.

Student: That's what they said!

Interviewer: How do you feel about black people?

Student: Worse! I think they're getting back at something.

Interviewer: What do you think they are getting back at?

Student: They used to get pushed around and they aren't going to get pushed around anymore.

Note: This student registered a loss in attitude toward "black people" between pre- and post-testing.

The interviews of white students reinforce the findings from the interviews of black students:

1. White students, like their black peers, remembered and liked best the dramatic incidents from the story.
2. White students, like their black peers, made a distinction between their relationship with the interviewer and what help they as "black people" could expect from him, and the relationship and expectations "black people" could have for help from white society, represented by neighbors of the interviewer.
3. White students, like their black peers, made a distinction between the help they would give to the interviewer, as a black man, and the help that could be expected from neighbors. However, black students put more emphasis on the friendship between the

interviewer and the student as a means of getting neighbor help.

4. White students' attitudes toward "black people" were affected by a variety of influences, such as instruction, parents, television, and the racial incident which occurred in city schools.

In addition, the interviews point out that white students can and some do identify with black historical characters by choosing to be like them.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purpose

It was the purpose of this study to determine the effects of teaching the lesson, "The Underground Railroad in Michigan," to fourth grade students. The lesson was identified as a concept lesson developed as an example of "integral history." The term "concept" was defined as "an idea around which related information is gathered and organized." The term "integral history" was defined as "history in which the role of the Black American is presented as an interwoven part of the historical incident under study."

The literature reviewed earlier in the study indicated the importance of concepts for providing a framework or structure, for promoting recall and for making knowledge useful. The literature further suggested that if attitudes are to be modified, one must combine feelings and facts and teach them in a non-threatening manner.

Procedures

This study was conducted in four elementary schools in Pontiac, Michigan. Nine fourth grade classes composed the sample.

Classroom racial composition was a prime consideration in the selection of the sample. Three classes were chosen from each of three student bodies; an all-white student body, an all-black student body, and an integrated student body. Experimental and control classes were chosen within each student body on a random basis. In this way, an Experimental 1, Experimental 2, and control class were established within each of the three student bodies. Each integrated class was further divided into two groups; white students within an integrated classroom and black students within an integrated classroom. The resulting twelve groups were equated for intelligence, reading comprehension, and parent's occupational status.

All twelve groups were pre-tested on knowledge about the lesson, "The Underground Railroad in Michigan," on the degree of student agreement or disagreement with the attitudes portrayed in the lesson and on their attitude toward a specific stimulus concept. For black students that stimulus concept was "white people." For white students the stimulus concept was "black people."

Following an interval of two weeks, students in experimental groups were taught the lesson "The Underground Railroad in Michigan." Students in Experimental 1 groups were taught the lesson mainly through an audio-slide approach which tried to combine facts and feelings. Students in Experimental 2 groups were taught the lesson mainly through an oral reading of the story, A Mystery Train Trip. The story also tried to combine feelings and facts. Control groups

received no instruction in the lesson. Experimental groups were administered post-tests immediately following instruction. Experimental and control groups within the same student body were tested on the same day.

On the day following instruction, selected students were interviewed in an effort to determine:

1. Specific parts of the lesson which students liked most.
2. Student attitudes toward the characters portrayed in the lesson.
3. Incidents beyond the lesson which may have effected the results of the study.

Students who reflected greatest change in attitude on the semantic differential between pre- and post-testing were selected for interview. A total of eighteen such students were interviewed, two from each classroom.

The Hypotheses

1. Significant gains in information will result from teaching the lesson, "The Underground Railroad in Michigan."
2. Attitudes of black students will grow more positive toward the stimulus concept "white people" as a result of exposure to the lesson, "The Underground Railroad in Michigan."
3. Attitudes of white students will grow more positive toward the stimulus concept "black people" as a result of exposure to the lesson, "The Underground Railroad in Michigan."

4. A positive relationship exists between the amount of knowledge gained through exposure to the lesson and the degree of attitude change which develops as a result of that exposure.

Analysis of Data

To test the first three hypotheses explored in this study, a 2 by 3 analysis of variance was employed using mean gain scores from the instruments involved in gathering data. When appropriate, per cent gain scores were also employed and reported. Two factors were explored in the analysis; instruction in integral history and classroom racial composition. Instruction in integral history was composed of the two different instructional programs. Classroom racial composition was composed of two categories; integrated and segregated. The Tukey procedure was used for comparing differences among the means for individual groups.

To test the fourth hypothesis, correlations were computed between gains in knowledge and shifts in attitude on semantic differentials and between gains in knowledge and changes in the degree of agreement with the attitudes portrayed by the lesson. This study used the Pearson product-moment method of correlation.

Analysis of student interviews was informal. No single list of questions was asked of students being interviewed. Instead, students from experimental groups were asked to respond to questions from three predetermined categories:

1. Impressions of the lesson "The Underground Railroad in Michigan."
2. Feelings about the characters who appeared in the lesson.
3. Comparisons between incidents which occurred in the lesson and incidents which were more current and often took place in the community in which the study was conducted.

Students in control groups were only questioned about the recent incidents which may have influenced their post-test results.

Hypothesis One

Significant gains in information will result from teaching the lesson "The Underground Railroad in Michigan."

Impact on Black Students

The results from testing this hypothesis show that exposing black students to a conceptual lesson in integral history did not result in significant gains in information when gains in experimental groups were compared to gains in control groups. Therefore, the hypothesis is rejected.

Black students in integrated classes did gain significantly more information than black students in segregated classes. However, the results must be qualified as the integrated control group registered

large gains in information on the experimental lesson. (See Chapter IV, pages 117-121.) In addition, black students tended to gain greater information in Experimental 1 groups than in Experimental 2 groups. The Experimental 1 group from the segregated student body registered gains in information which rivaled those made by the integrated Experimental 1 group and approached significance when compared to the segregated control group.

Impact on White Students

The results from testing this hypothesis show that exposing white students to a conceptual lesson in integral history did result in significant gains in information when comparing gains by experimental groups to gains by control groups. Therefore, the hypothesis is confirmed.

Classroom racial composition did not significantly effect gains in information by white students. White students tended to gain greater information in segregated student bodies. In addition, they tended to gain more information in Experimental 2 groups, using the oral-reading approach, than in Experimental 1 groups using the audio-slide sequence. The segregated Experimental 2 group gained significantly more information than its corresponding control group.

Hypothesis Two

Attitudes of black students will grow more positive toward the stimulus concept "white people" as a result of exposure to the lesson, "The Underground Railroad in Michigan."¹

The results from testing this hypothesis show that instruction in the concept lesson in integral history had a significant impact on the attitudes of black students toward "white people." Most of this impact was the result of gains in attitudes made in integrated and segregated Experimental 1 groups. Experimental 1 groups registered raw score gains in attitude toward "white people," while Experimental 2 groups registered slight losses. Only the segregated Experimental 1 group gained significantly more in attitude toward "white people" than its corresponding control group.

The hypothesis is confirmed for Experimental 1 groups, in which actual raw score gains were registered toward the stimulus concept "white people."

¹Between pre-testing and instruction a series of racial incidents occurred in Pontiac high schools. Student interviews show that these incidents had a negative effect on the attitudes of some black students toward "white people." See Chapter IV, page 84 for a description of the incidents.

Hypothesis Three

Attitudes of white students will grow more positive toward the stimulus concept "black people" as a result of exposure to the lesson, "The Underground Railroad in Michigan."²

The results from testing this hypothesis show that instruction had a significant impact on the attitudes of white students toward "black people." This impact was especially felt in segregated groups where both Experimental 1 and Experimental 2 groups were significantly more positive in their attitude toward "black people" than the segregated control group when considering either post-test, raw mean gain, or per cent gain results. Much of this significance was caused by an extreme loss in attitude by the segregated control group. Being in an integrated classroom was also of significant benefit to white students in building and maintaining positive attitudes toward "black people." Though instruction was a significant contributor to maintaining positive attitudes toward "black people," only the integrated Experimental 2 group actually registered per cent gains in attitude toward the stimulus concept.

In addition, an interaction effect was found between instruction in integral history and racial composition of the classroom. These

²Student interviews show that the racial incidents in Pontiac high schools also had a negative effect on the attitudes of some white students toward "black people."

findings suggest that a combination of instruction in integral history through the oral-reading approach, and being in an integrated classroom, leads to greatest gain in attitude of white students toward "black people."

Confirming or rejecting this hypothesis is a matter of interpretation. This study accepts the hypothesis for white students in the integrated Experimental 2 group and rejects the hypothesis, with qualifications, for the remainder of the experimental groups. The attitudes of both the segregated Experimental 1 and Experimental 2 groups toward "black people" were significantly more positive than those of the segregated control group, though they did register slight overall losses.

Hypothesis Four

A positive relationship exists between the amount of knowledge gained through exposure to the lesson and the degree of attitude change that results from that exposure.

Black Students: Experimental 1

Both the segregated and integrated Experimental 1 groups of black students gained in knowledge about "The Underground Railroad in Michigan." In addition, both gained in attitude toward "white people" while losing in agreement with the attitudes portrayed in the lesson.

This study found no significant relationship between knowledge gains and increased agreement with the attitudes portrayed in the lesson for black students in the segregated Experimental 1 group. In addition, no significant relationship was found between knowledge gains and gains in attitude toward "white people."

A correlation between knowledge gains and increased agreement with the attitudes portrayed by the lesson becomes more apparent for students in the integrated Experimental 1 group. The post-test correlation between these two variables is significantly positive. The more black students in the integrated Experimental 1 group knew about "The Underground Railroad in Michigan," the more they tended to agree with the attitudes the lesson portrayed. The mean gain correlation, however, is not significant.

No significant correlation between knowledge gains and gains in attitude toward "white people" was found by this study for students in the integrated Experimental 1 group.

Black Students: Experimental 2

Both the segregated and integrated Experimental 2 groups gained in factual knowledge about "The Underground Railroad." They also registered gains in agreement with the attitudes portrayed in the lesson. However, both Experimental 2 groups registered losses in attitude toward "white people."

No significant correlation was found for the segregated Experimental 2 group between gains in knowledge about "The Underground Railroad in Michigan" and increased agreement with the attitudes portrayed in the lesson. In addition, this study found no significant correlation between gains in knowledge about the lesson and gains in positive attitude toward "white people."

A significant negative correlation was found on the pre-test between what black students in the integrated class knew about "The Underground Railroad in Michigan" and the degree to which they agreed with the attitudes it portrayed.

Post-test and mean gain correlations show that this negative relationship remained following instruction.

No significant relationship was found between gains in knowledge of "The Underground Railroad in Michigan" and attitude toward "white people" for black students in the integrated Experimental 2 group.

Since no significant relationship was found between gains in knowledge about the lesson and either increased agreement with the attitudes it portrayed or gains in positive attitude toward "white people," the hypothesis is rejected for black students in both Experimental 1 and Experimental 2 groups.

White Students: Experimental 1

Both the segregated and integrated Experimental 1 groups gained in factual knowledge about "The Underground Railroad in Michigan."

In addition, both registered slight gains in agreement with the attitudes the lesson portrayed. However, both groups lost in attitude toward the stimulus concept "black people."

This study found no significant relationship between gains in knowledge about "The Underground Railroad in Michigan" and increased agreement with the attitudes the lesson portrayed for white students in the segregated Experimental 1 group. Also, no significant correlation was found between gains in knowledge about the lesson and gains in the attitude of white students in the segregated Experimental 1 group toward "black people."

In the integrated Experimental 1 group, no significant correlation was found between gains in knowledge about the lesson and increased agreement with the attitudes it portrayed or between knowledge gains and gains in attitude toward "black people."

White Students: Experimental 2

The segregated and integrated Experimental 2 groups both gained in factual knowledge about "The Underground Railroad in Michigan" and in agreement with the attitudes this lesson portrayed. However, only the integrated Experimental 2 group registered per cent gains in attitude toward "black people."

A significant positive relationship was found in this study between gains in knowledge about "The Underground Railroad in Michigan" and increased agreement with the attitudes the lesson portrayed for white

students in the segregated Experimental 2 group. In addition, a significant negative relationship was found between gains in knowledge about "The Underground Railroad in Michigan" and gains in attitude toward "black people."

This study found no evidence in the integrated Experimental 2 group of a significant, positive relationship between gains in knowledge about "The Underground Railroad in Michigan" and increased agreement with the attitudes it portrayed. However, when using raw gain scores, a significant positive relationship was found between gains in knowledge about the lesson and increased positive attitude toward "black people." The more students learned about "The Underground Railroad in Michigan," the more they tended to gain in positive attitude toward "black people."

A significant positive relationship between knowledge gains and gains in attitude was found in only the segregated Experimental 2 group when considering agreement with the attitudes portrayed in the lesson, and in the integrated Experimental 2 group when considering the relationship between knowledge gains and gains in attitude toward "black people." Because of these findings, the hypothesis is accepted in only these two classes and for the specific correlations presented.

Intercorrelations: Sex and Intelligence as Factors

In total, intercorrelations among fifteen variables were computed by this study. The intercorrelations among twelve of these variables

have already been reported. This portion of the summary of the results reports two additional variables, sex and intelligence and their inter-correlations with gains in information, gains in agreement with the attitudes portrayed in the lesson, "The Underground Railroad in Michigan," and gains in positive attitude toward the stimulus concepts. The fifteenth variable, parent's occupational status, will not be reported, as the sample of white collar workers was too small for valid comparison.

Black Students

This study found no significant relationship between sex and knowledge gains for any of the experimental groups of black students. In addition, no significant relationship was found between sex and gains in attitude toward "white people."

No distinct relationship was found by this study between intelligence and gains in knowledge about "The Underground Railroad in Michigan." In two of the four groups, segregated Experimental 1, and integrated Experimental 2, this relationship does approach significance, however.

The relationship between intelligence and increased agreement with the attitudes portrayed by the lesson was not found to be significant by the study. In the segregated Experimental 1 group, a significant negative relationship was found between intelligence and gains in attitude toward "white people." The higher the intelligence rating of

the students, the less positive they grew in their attitude toward "white people" between pre- and post-testing. This same relationship does not approach significance in any of the remaining three groups of black students.

White Students

This study found no significant relationship between sex and gains in knowledge about "The Underground Railroad in Michigan" in any of the four experimental groups of white students. In only one group, segregated Experimental 2, was sex correlated with increased agreement with the attitudes portrayed in the lesson. Girls in the group tended to become more in agreement with these attitudes than boys. In this same group, a significant negative relationship was found between sex and gains in attitude toward "black people." Girls grew less positive in their attitude toward "black people" than boys between pre- and post-testing. This relationship between sex and attitude toward "black people" was not found in the remaining three experimental groups of white students.

A significant positive correlation was found between intelligence and knowledge gains in only one of the four experimental groups of white students; the segregated Experimental 1 group. The relationship between these two variables for the remaining three groups tends to be positive, though not significantly so.

No significant relationship was found between intelligence and gains in agreement with the attitudes portrayed by the lesson, "The Underground Railroad in Michigan," in any of the four groups of white

students tested. In addition, this study found no consistent correlation between intelligence and gains in attitude toward "black people." In only one group, the segregated Experimental 2 group, did this relationship reach significance. In that group, intelligence was negatively correlated with gains in attitude toward "black people." The higher the intelligence rating of the students, the less positive they grew in attitude toward "black people" between pre- and post-testing.

Summary from Underground Railroad Form "A"

In addition to the results already reported, a 2 by 3 analysis of variance was computed for the results from Underground Railroad Form "A," the instrument used to determine agreement or disagreement with the attitudes portrayed by the lesson. The factors used for this analysis were identical to those used for Underground Railroad Form "F" and each of the two semantic differentials.

The results showed that neither instruction nor classroom racial composition made any significant difference among the means for Experimental 1, Experimental 2, or control groups for black students. However, a significant difference was found on the pre-test among experimental and control groups. Experimental 1 groups were more positive on the pre-test than were Experimental 2 groups. This difference was eliminated following instruction.

For white students, no significant difference in instruction was found between experimental and control groups in terms of increased

agreement with the attitudes portrayed in the lesson, "The Underground Railroad in Michigan." However, integrated groups gained significantly more in agreement with the attitudes than did segregated groups.

Interview Summary

The analysis of student interviews shows that:

1. Both black students and white students were attracted by dramatic incidents from the lesson, parts in which suspense was built, fear aroused, or sudden death or injury occurred.
2. Black students identified with black characters from the lesson, even though those characters were hurt or killed in the historical incident portrayed.
3. White students identified with black characters by choosing to be like them.
4. Student attitudes toward racial groups were effected by instruction and can be modified, but that these efforts, in turn, were modified by personal experience, television, parents, and race relations within the community.

Conclusions

Based on the findings of this study, the following conclusions are made:

1. Teaching facts through an audio-slide approach tends to be of greater benefit to black students than teaching the same facts through an oral-reading approach.

Gains in factual knowledge were greater in Experimental 1 groups using the audio-slide approach than in Experimental 2 groups using

the oral-reading approach. This is true of both integrated and segregated groups.

2. When using the audio-slide approach, black students in a segregated classroom learn as much factually as black students in an integrated classroom.

Gains in information made by black students in the segregated Experimental 1 group rivaled those made by black students in the integrated Experimental 1 group and tended to exceed gains made by all other experimental groups.

3. Instruction in integral history, through an audio-slide approach as defined in this study, contributes to building and maintaining the positive attitudes of black students toward "white people."

Both the integrated and segregated Experimental 1 groups using this approach grew more positive in their attitude toward "white people" following instruction in "The Underground Railroad in Michigan," in spite of the racial incidents which occurred in Pontiac high schools during the study.

4. In a segregated classroom, instruction in integral history through an audio-slide approach, has a significant positive impact on the attitudes of black students toward "white people."

In spite of the negative effect of racial incidents in Pontiac high schools, the segregated Experimental 1 group became significantly more positive in attitude than did the segregated control group following instruction. In addition, its gain statistically rivaled that of the integrated Experimental 1 group, the only other experimental group to gain in attitude toward "white people."

5. Being in an integrated classroom has no significant effect on the learning of factual information by white students.

Racial composition of the classroom was not found to be a significant influence in determining mean gains in information by white students. Though the trend was not significant, white students tended to learn more information in segregated classes than in integrated classes.

6. White students tend to learn more factual information from the oral-reading approach to the concept lesson of integral history than through the audio-slide approach.

Both the segregated and integrated Experimental 2 groups tended to gain more information on the lesson than corresponding Experimental 1 groups. While instruction was found to be a significant contributor to gains in knowledge about the lesson, the largest significant gain was made by the segregated Experimental 2 group, using the oral-reading approach.

7. Instruction in integral history, as defined and taught in this study, is important to building and maintaining positive attitudes of white students toward "black people," especially in a segregated classroom.

The integrated Experimental 2 group actually registered per cent gains in attitude toward black people, in spite of the racial incidents that occurred in Pontiac schools. In the segregated student body, the control group registered a large loss in attitude toward "black people," while both the Experimental 1 and Experimental 2 groups remained significantly more positive.

8. Being in an integrated classroom is important for white students in building and maintaining positive attitudes toward "black people."

Prior to instruction, white students in integrated groups were significantly more positive in attitude toward "black people" than were white students in segregated groups. The importance of being in an integrated class continues following instruction, as white students in the segregated control group registered a significantly larger loss in attitude toward "black people" than did the integrated control group.

9. Facts alone have little effect on positive attitude change.

When considering black students, no significant positive correlation was found between an increase in knowledge about "The Underground Railroad in Michigan" and either an increase in agreement with the attitudes the lesson portrayed or gains in attitude toward the stimulus concept "white people."

Only one positive relationship was found between knowledge gains and increased agreement with the attitudes portrayed by the lesson. This correlation was found for white students in the segregated Experimental 2 group. In addition, only one significant positive correlation was found between knowledge gains and gains in positive attitude toward "black people." This relationship between increased knowledge and more positive attitudes was found in the integrated Experimental 2 group - white students.

Students who registered largest changes in attitude, when interviewed, tended to best remember facts presented through dramatic

incidents, incidents portraying mystery, suspense, and fear. When these students stated why they changed their attitudes, it was because of a combination of factors, including feelings, rather than because of specific facts.

Recommendations

On the basis of the findings of this study, the following recommendations are made:

1. Increased research needs to be done on the impact of varying types of instructional programs on elementary school students.

This investigator suggests that such research is not only important now, but will become increasingly so as pressures continue to build for integrated classrooms and an integrated curriculum. There are indications that black students and white students may not learn factual information equally well from the same type of instruction. In addition, the results from the study suggest that there may also be differences in the type of presentations which have greatest effect on ethnic attitudes. Short lessons, studied intensely, may provide valuable direction for the development of future instructional materials and teaching techniques.

In addition, this study should be reproduced in the hope that racial strife would not play so important an influence on the results. If the study is repeated, a clearer dichotomy should be established between the types of presentations used. It is further recommended that additional concept materials in integral history be developed so that the effects over a longer period of instruction can be studied.

The influences of teacher personality on the results should also be considered and studied in future research.

2. Special materials need to be developed in "integral history" - materials which combine both facts and feelings.

The results from this study suggest that facts alone will not change the attitude of fourth grade students. Yet, student interviews reveal that "dramatic incidents," incidents which build fear, suspense, sympathy, etc., may be important contributors to the modification of attitudes.

3. Integrated classrooms need to make greater use of multiple materials to give both black students and white students an equal opportunity to learn factual information.

A lecture or oral-reading presentation, while beneficial to white students, tended to be less beneficial to black students.

4. School officials should not wait for integration of their school districts and individual classrooms before introducing "integral history."

Once developed, concept lessons in "integral history" should be introduced into the curriculum. For, while integrated classrooms are of benefit in modifying the attitude of white students toward "black people," so, too, is instruction in "integral history."

5. Elementary school teachers in segregated white schools need not wait for special materials in integral history to begin teaching about the Black American.

Dramatic stories in which Black Americans are truthfully portrayed in constructive or contributing roles may prove useful in

building or maintaining positive ethnic attitudes of white students toward "black people."

6. Teachers of segregated black students should make liberal use of audio-visual materials in their teaching.

The results from this study indicate that the use of these materials is helpful to black students in learning facts. Such an approach also seems helpful in building positive attitudes toward "white people" when teaching integral history.

7. Researchers should give increased attention to indirect means of maintaining and modifying the ethnic attitudes of elementary school students-- means that involve the study of cooperative ventures by blacks and whites throughout history, as well as the conflict situations.

Historical role playing should be further investigated as a means of maintaining and building positive relationships among ethnic groups.

The instructional materials used in the study often developed situations in which students were asked to imagine how they would feel as a conductor and as a slave, hidden in a secret room, or riding in the back of a wagon. The positive attitudes expressed for conductors and black people in student interviews indicate this is an important area for further classroom research in attitude modification.

8. Integrated adult education classes should be considered as a means of bettering ethnic relations.

The classes need not be established around pure factual content, but could be centered around presentations that made liberal use of both facts and feelings--not as preachment, but within historical incidents. Interviews of students and parents show:

1. Parents tend to share experiences with their children.
2. Parents are influential in building negative, as well as positive attitudes, toward ethnic groups in their children. Perhaps dramatic presentations before PTA groups would be of use in building or maintaining positive attitudes.

APPENDIX A INSTRUMENTS

	Page
Underground Railroad Form "A"	198
Underground Railroad Form "F"	207
Semantic Differential "White People"	215
Semantic Differential "Black People"	216

Underground Railroad: Form "A"

The purpose of this part of our study is to find out how each of us feels about the people and the things that happen in A Mystery Train Trip. This is not a test! There are no "right" or "wrong" answers! Simply read each statement silently and then choose the one response which best describes the way you feel about the people or happenings which are mentioned.

This is how it should be done:

Please read statement "Example: 100." carefully! Then, read responses A, B, C, D and E. Now, find "Sample: 100." on the response sheet marked "Underground Railroad 'A.'"

If you feel that playing baseball is great fun, place an "X" in the circle that appears beneath the letter "C."

If you feel that playing baseball is o.k. but not really great fun, place an "X" in the circle beneath the letter "A."

If you feel that playing baseball is no fun at all, place an "X" in the circle that appears beneath the letter "D."

If you feel that playing baseball is not much fun, place an "X" in the circle that appears beneath the letter "B."

If you can't decide how you feel about playing baseball, place an "X" in the circle that appears beneath the letter "E."

If you have any questions about how to record your responses, please ask them before reading any of the other statements which have been given to you.

Remember!

1. Read each statement and each of the responses carefully.
2. Choose the response that best tells how you feel about the statement.
3. Find the number of the statement on your response sheet.
4. Place an "X" in the circle which represents or "stands for" the response you wish to make.

Underground Railroad: Form "A"

Sample: 100. Playing baseball is fun.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

Please begin

1. It is good to help others who are in trouble.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

2. It is easier to "say what is right" than to do "what is right."

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

3. Adults who refuse to take off their hats when introduced to other adults are not very mannerly.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

4. Brave people never hide from others.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

5. A man should never give up any of his property without a fight.

A. Agree

C. Agree very much

B. Disagree

D. Disagree very much

E. Uncertain

6. A slave was a person who didn't have the ability to do anything better.

A. Agree

C. Agree very much

B. Disagree

D. Disagree very much

E. Uncertain

7. It is better to tell others "what is right" than to do "what is right" ourselves.

A. Agree

C. Agree very much

B. Disagree

D. Disagree very much

E. Uncertain

8. Some people should have more rights than others.

A. Agree

C. Agree very much

B. Disagree

D. Disagree very much

E. Uncertain

9. People should never expect help from someone they don't know.

A. Agree

C. Agree very much

B. Disagree

D. Disagree very much

E. Uncertain

10. Doing "what is right" may get others angry with me.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

11. It is always easy to do what is "right."

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

12. Trusting people you don't know is always foolish.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

13. Which of the following people would you feel sorriest for?

- A. A person responsible for capturing and returning slaves to their owners.
- B. An escaping slave attempting to find his way to freedom.
- C. A slave owner from whom slaves had escaped.
- D. A man who could be punished for helping slaves escape from their owners.
- E. Uncertain

14. When many people refuse to help others, I should refuse to help them also.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

15. People who use strange sounding words when they speak are not to be trusted as much as people who use the same words that most of us do.

A. Agree	C. Agree very much
B. Disagree	D. Disagree very much
E. Uncertain	

16. If given a choice, people would rather loose their freedom than their food and clothing.

A. Agree	C. Agree very much
B. Disagree	D. Disagree very much
E. Uncertain	

17. Which of the following people would you expect to know most about what the term "freedom" means?

A. An escaping slave attempting to find his way to freedom.
B. A person responsible for catching slaves who are attempting to run away to freedom.
C. A slave owner who has many slaves to work for him.
D. A man who helps slaves find freedom.
E. Uncertain

18. I should always do "what is right" even when others refuse to do so.

A. Agree	C. Agree very much
B. Disagree	D. Disagree very much
E. Uncertain	

19. People are only helpful when they are paid for what they do.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

20. Which of the following people would you like most to be?

- A. An escaping slave attempting to find his way to freedom
- B. A person responsible for catching slaves who are attempting to run away to freedom.
- C. A slave owner who has many slaves to work for him.
- D. A man who helps slaves find freedom.
- E. Uncertain

21. People who don't look like most of us don't have the same feelings most of us have either.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

22. A person would be very foolish to help others if giving them help might mean losing something he valued very much.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

23. People who break the law should always be punished.

- | | |
|--------------|-----------------------|
| A. Agree | C. Agree very much |
| B. Disagree | D. Disagree very much |
| E. Uncertain | |

24. Running away from someone or something can be a brave thing to do.

A. Agree

C. Agree very much

B. Disagree

D. Disagree very much

E. Uncertain

25. People who have enough food, clothing, and shelter (a house) should be happy with their lives.

A. Agree

C. Agree very much

B. Disagree

D. Disagree very much

E. Uncertain

UNDERGROUND RAILROAD: "A"

Sample: 100. A. B. C. D. E.



1. A. B. C. D. E.



2. A. B. C. D. E.



3. A. B. C. D. E.



4. A. B. C. D. E.



5. A. B. C. D. E.



6. A. B. C. D. E.



7. A. B. C. D. E.



8. A. B. C. D. E.



9. A. B. C. D. E.



10. A. B. C. D. E.



11. A. B. C. D. E.



12. A. B. C. D. E.



13. A. B. C. D. E.



14. A. B. C. D. E.



15. A. B. C. D. E.



16. A. B. C. D. E.



17. A. B. C. D. E.



18. A. B. C. D. E.



19. A. B. C. D. E.



20. A. B. C. D. E.



21. A. B. C. D. E.



22. A. B. C. D. E.



23. A. B. C. D. E.



24. A. B. C. D. E.



25. A. B. C. D. E.



Underground Railroad: Form "F"

The purpose of this part of our study is to find out how much you know about the lesson "The Underground Railroad in Michigan." It is a test of how much you know about the lesson right now. It is not a test that will be given a grade and returned to you. You cannot pass or fail the test.

QUESTIONS 1-10

Read each question carefully and place an "X" in the circle that represents your answer.

Sample:

100. Which of the following professional baseball players is on the Detroit Tigers?

A. Ted Williams

C. Willie Mays

B. Willie Horton

D. Mickey Mantle

Please place an "X" in the circle which represents your answer.

100. A. B. C. D.
 ☐ ☐ ☐ ☐

The correct answer to the question "Which of the following professional baseball players is on the Detroit Tigers is "B, Willie Horton." If you have placed an "X" in the circle beneath the letter "B," you are correct.

QUESTIONS 11-20

Please place an "X" in the circle beneath the letter "T" if a statement is true. Place an "X" in the circle beneath the letter "F" if the statement is false.

Map: Read the directions printed on the map page carefully. Remember, do all of your work directly on the map.

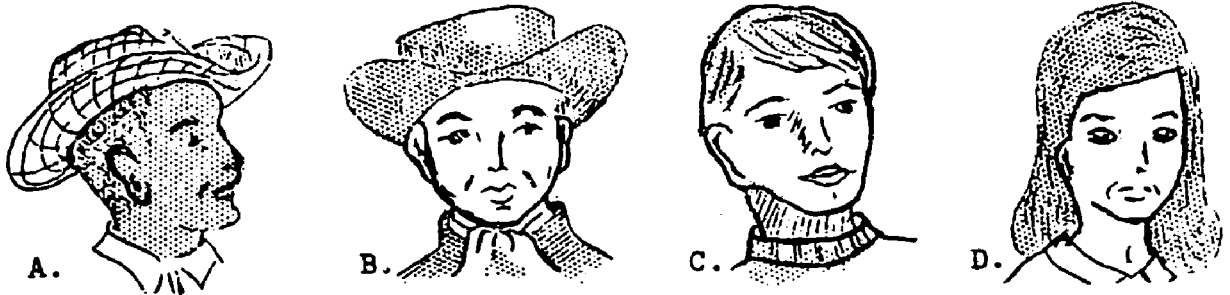
1. Which of these is a Quaker belief?

- A. All men are equal and deserving of our love.
- B. Some men are better than others.
- C. It is mannerly to take off one's hat when meeting others.
- D. Leaving one's hat on proves he is better than others.

2. Which of the following cities was not a "station" on the Underground Railroad?

- A. Cassopolis
- B. Battle Creek
- C. Marshall
- D. Traverse

3. Which of the following drawings is meant to be Erastus Hussey?



4. How far had escaping slaves traveled through Michigan when they reached Jackson?

- A. One-half of the way across the State of Michigan.
- B. One-fourth of the way across the State of Michigan.
- C. They had traveled entirely across the State of Michigan.
- D. They had just entered Michigan.

5. Which of these statements best tells what kind of man Isaac Jacobs was?

- A. He was helpful when he felt he was going to get paid for his work on the Underground Railroad.
- B. He was helpful even when he knew that he wouldn't get paid for his work on the Underground Railroad.
- C. He was not helpful at all, even when he knew he should be.
- D. He was mean to other people, even when they didn't do anything mean to him.

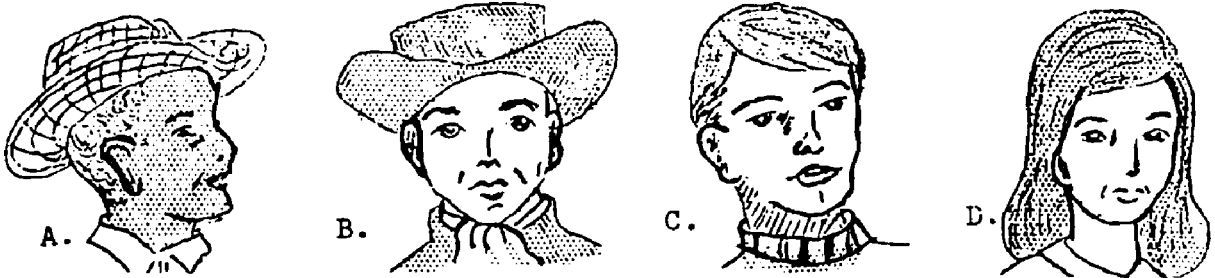
6. What was the "Underground Railroad"?

- A. It was a railroad which was built under the ground.
- B. It was the name of the company that owned railroad lines.
- C. It was a secret railroad which was very difficult to identify.
- D. It was a "make believe" railroad which didn't really exist.

7. What was the name of the railroad over which the Crosswhite family traveled from Jackson, Michigan to Canada?

- A. Baltimore and Ohio
- B. Grand Trunk
- C. Michigan Central
- D. New York Central

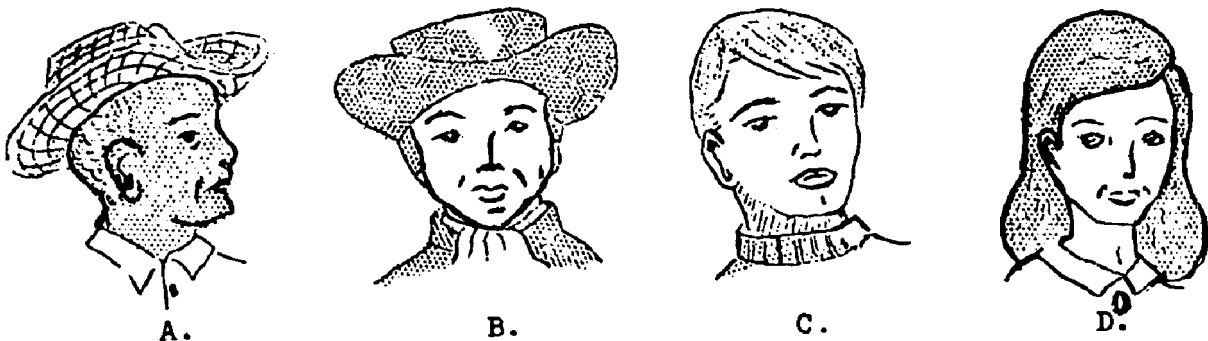
8. Which of the following drawings is meant to be Isaac Jacobs?



9. Which of the following foods was most likely fed to escaping slaves?

- A. spinach
- B. veal cutlets
- C. pork
- D. cake

10. One of the following drawings is meant to be a slave who lived over 100 years ago. Which drawing do you think is meant to be the slave?



True or False

11. Escaping slaves hid during the daytime and traveled over the Underground Railroad at night.
12. Underground Railroad "stations" existed in Oakland County.
13. Often "trains" on the Underground Railroad were really wagons.
14. "Conductors" on the Underground Railroad only worked hard when they knew they were going to get money for their work.
15. Quakers liked using the word "you" when they spoke to others.
16. Erastus Hussey and Samuel Strauther helped escaping slaves who came to Battle Creek.
17. Many escaping slaves went to Canada to live.
18. A person who helped slaves move from one "station" to another was called a slave catcher.
19. "Stations" for the Underground Railroad were barns or houses.
20. Anyone who had enough money to buy a ticket could travel on the Underground Railroad.

UNDERGROUND RAILROAD: "F"

Sample: 100. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐

1. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
2. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
3. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
4. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
5. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
6. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
7. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
8. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
9. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐
10. A. B. C. D. E.
☐ ☐ ☐ ☐ ☐

True or False

11. T F
☐ ☐
12. T F
☐ ☐
13. T F
☐ ☐
14. T F
☐ ☐
15. T F
☐ ☐
16. T F
☐ ☐
17. T F
☐ ☐
18. T F
☐ ☐
19. T F
☐ ☐
20. T F
☐ ☐

Please turn to the next page and continue your work.
 Read the directions carefully. Remember, place
 all of your answers on the map provided.



Let's check the map.

Above is a map which shows part of the United States. This map isn't complete, though! Please complete it by adding the important facts listed below.

- A. Place a large 'C' where Canada appears on the map.
- B. Place a large 'M' where Michigan appears on the map.
- C. Place a large 'I' where Indiana appears on the map.
- D. Place an 'X' on the spot on the map where a slave could stand and see freedom right across the river.
- E. Place a 'Y' on the spot on the map from which a journey on the Underground Railroad started.
- F. Place a 'Z' on the spot where slaves entered the State of Michigan.
- G. Place an 'O' where Oakland County should appear in the picture.
- H. Place an 'E' on the spot where Marshall, Michigan should appear on the map.
- I. Place a 'K' where Kentucky appears on the map.
- J. Draw on the map the route over which escaping slaves traveled to freedom.

Semantic Differential - Instructions

The purpose of this part of our study is to find out how each of us feels about someone else.

On the top of your response sheet is printed the name of people about whom you are to express your feelings. Please decide how you feel about the people listed and mark your reply on the proper space.

Here is how it should be done:

Imagine that the person about whom you are to express your feelings is the person giving you these directions. Please write his name on the space provided in Example #1. Below his name are two words that should help you describe how you feel about this man.

If you feel that he is very nice, place an "X" on the space closest to the word "Nice."

Example #1

Nice X : : : : : Awful

If you feel he is slightly nice, place an "X" on the space two spaces to the right of the word "Nice."

Example #2

Nice : X : : : : Awful

If you feel he is very awful, place an "X" on the space right next to the word "Awful."

Example #3

Nice : : : : X : Awful

If you feel he is slightly awful, place an "X" on the space two spaces to the left of the word "Awful."

Example #4

Nice ____: ____: ____: X : ____: Awful

If you are uncertain about whether he is "Nice" or "Awful," place an "X" on the middle space.

Example #5

Nice ____: ____: X : ____: ____: Awful

Please express your feelings about this man by placing an "X" on the proper space below.

Example #6

Nice ____: ____: ____: ____: ____: Awful

On the next page is a name commonly given to a group of Americans. Look at the name. Then, express your feelings carefully by putting an "X" on the space between each pair of words that best expresses your feelings.

WHITE PEOPLE

valuable	_____	:	_____	:	_____	:	_____	:	_____	:	worthless
pleasant	_____	:	_____	:	_____	:	_____	:	_____	:	unpleasant
cruel	_____	:	_____	:	_____	:	_____	:	_____	:	kind
clean	_____	:	_____	:	_____	:	_____	:	_____	:	dirty
beautiful	_____	:	_____	:	_____	:	_____	:	_____	:	ugly
dishonest	_____	:	_____	:	_____	:	_____	:	_____	:	honest
nice	_____	:	_____	:	_____	:	_____	:	_____	:	awful
good	_____	:	_____	:	_____	:	_____	:	_____	:	bad
sad	_____	:	_____	:	_____	:	_____	:	_____	:	happy
fair	_____	:	_____	:	_____	:	_____	:	_____	:	unfair

BLACK PEOPLE

valuable ____: ____: ____: ____: ____: worthless

pleasant ____: ____: ____: ____: ____: unpleasant

cruel ____: ____: ____: ____: ____: kind

clean ____: ____: ____: ____: ____: dirty

beautiful ____: ____: ____: ____: ____: ugly

dishonest ____: ____: ____: ____: ____: honest

nice ____: ____: ____: ____: ____: awful

good ____: ____: ____: ____: ____: bad

sad ____: ____: ____: ____: ____: happy

fair ____: ____: ____: ____: ____: unfair

APPENDIX B
INSTRUCTIONAL MATERIALS

	Page
<u>A Mystery Train Trip</u>	218

PLEASE NOTE:

Pages 218-236, "A Mystery Train Trip", ©1969 by Oakland Schools not microfilmed at request of author. Available for consultation at The University of Michigan Library.

University Microfilms.

APPENDIX C

MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS
AMONG THE STUDY'S FIFTEEN VARIABLES -
BLACK STUDENTS

	Page
Segregated Black Students: Experimental 1	238
Integrated Black Students: Experimental 1	240
Segregated Black Students: Experimental 2	242
Integrated Black Students: Experimental 2	244

TABLE 13

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND
INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR
THE SEGREGATED EXPERIMENTAL 1 GROUP -
BLACK STUDENTS (N = 23)

A. Summary of Means and Standard Deviations

Variables	Experimental 1 Segregated Black	
	Mean	S. D.
Sex	1.52 ^a	.51
I. Q.	93.22	12.53
Parent Occupation	1.04 ^b	.21
Pre-Semantic	34.04	9.10
Post-Semantic	35.00	8.42
Pre- Form "A"	74.30	7.77
Post- Form "A"	73.57	7.02
Pre- Form "F"	5.22	2.75
Post- Form "F"	9.43	3.24
Per cent Gain Semantic	13.93	38.66
Per cent Gain Form "A"	-1.14	18.07
Per cent Gain Form "F"	12.52	27.42
Mean Gain Semantic (Raw Score)	.96	6.61
Mean Gain Form "A" (Raw Score)	-.74	10.67
Mean Gain Form "F" (Raw Score)	4.22	3.33

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 13

B. Summary of the Intercorrelation of Variables for the Segregated Experimental 1 Group - Black Students (N = 23)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I.Q.	.15	1.00													
3 Parent Occupation	.20	-.04	1.00												
4 Pre-Semantic	.23	.02	.21	1.00											
5 Post-Semantic	.21	-.30	.39	.72 ^c	1.00										
6 Pre-Form "A"	-.12	.05	-.15	.28	-.09	1.00									
7 Post-Form "A"	-.16	.10	-.14	-.41 ^a	-.50 ^a	-.04	1.00								
8 Pre-Form "F"	-.15	.16	-.26	.43 ^a	.08	-.04	-.20	1.00							
9 Post-Form "F"	-.01	.53 ^b	-.16	-.02	-.15	.07	-.12	.39	1.00						
10 % Gain Semantic	.16	-.29	.49 ^a	.10	.69 ^c	-.43 ^a	-.23	-.37	-.15	1.00					
11 % Gain Form "A"	-.05	.02	.01	-.48 ^a	-.32	-.67 ^c	.76 ^c	-.15	-.16	.12	1.00				
12 % Gain Form "F"	.14	.55 ^b	.04	-.22	-.15	.08	-.18	-.20	.74 ^c	.10	-.19	1.00			
13 Mean Gain Semantic (Raw Score)	-.05	-.41 ^a	.20	-.46 ^a	.29	-.49 ^a	-.07	-.48 ^a	-.15	.75 ^c	.26	.11	1.00		
14 Mean Gain Form "A" (Raw Score)	-.02	.03	.02	-.47 ^a	-.27	-.75 ^c	.69 ^c	.10	-.13	.16	.99 ^c	-.18	.31	1.00	
15 Mean Gain Form "F" (Raw Score)	.12	.39	.05	-.37	-.21	.10	.04	-.44 ^a	.65 ^c	.16	-.04	.89 ^c	.25	-.04	1.00

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at .1 per cent level - two-tailed test

TABLE 14

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND
INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR
THE INTEGRATED EXPERIMENTAL 1 GROUP -
BLACK STUDENTS (N = 11)

A. Summary of Means and Standard Deviations

Variables	Experimental 1 Integrated Black	
	Mean	S. D.
Sex	1.45 ^a	.52
I. Q.	96.45	9.51
Parent Occupation	1.09 ^b	.30
Pre-Semantic	37.18	8.20
Post-Semantic	39.18	6.59
Pre-Form "A"	73.00	12.43
Post-Form "A"	71.64	11.02
Pre-Form "F"	6.18	3.68
Post-Form "F"	10.64	4.70
Per cent Gain Semantic	18.93	28.29
Per cent Gain Form "A"	-2.73	20.05
Per cent Gain Form "F"	16.74	23.88
Mean Gain Semantic (Raw Score)	2.00	5.76
Mean Gain Form "A" (Raw Score)	-1.36	11.60
Mean Gain Form "F" (Raw Score)	4.45	3.96

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 14

B. Summary of the Intercorrelation of Variables for the
Integrated Experimental I Group - Black Students
(N = 11)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I.Q.	-.11	1.00													
3 Parent Occupation	-.29	-.40	1.00												
4 Pre-Semantic	-.16	-.27	-.13	1.00											
5 Post-Semantic	-.26	-.43	-.06	.72 ^a	1.00										
6 Pre-Form "A"	.17	-.82 ^b	.48	.16	.10	1.00									
7 Post-Form "A"	.10	-.53	.37	.04	.23	.52	1.00								
8 Pre-Form "F"	-.52	-.09	.34	.33	.43	-.19	.01	1.00							
9 Post-Form "F"	-.33	-.16	.59	.19	.22	.22	.65 ^a	.58	1.00						
10 % Gain Semantic	.05	-.14	.07	-.33	.36	-.09	.06	.11	-.04	1.00					
11 % Gain Form "A"	.01	.22	-.13	-.11	.08	-.39	.58	.10	.43	.05	1.00				
12 % Gain Form "F"	.08	-.14	.39	-.01	-.12	.42	.81 ^b	-.17	.69 ^a	-.25	.49	1.00			
13 Mean Gain Semantic (Raw Score)	-.07	-.12	.12	-.60 ^a	.12	-.12	.21	.02	-.01	.88 ^c	.25	-.12	1.00		
14 Mean Gain Form "A" (Raw Score)	-.08	.37	-.16	-.14	.12	-.58	.40	.21	.38	.16	.97 ^c	.32	.32	1.00	
15 Mean Gain Form "F" (Raw Score)	.08	-.10	.38	-.09	-.14	.44	.77 ^b	-.25	.65 ^a	-.15	.42	.98 ^c	-.03	.26	1.00

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the one per cent level - two-tailed test

^cSignificant at .1 per cent level - two-tailed test

TABLE 15

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR THE SEGREGATED EXPERIMENTAL 2 GROUP - BLACK STUDENTS (N = 22)

A. Summary of Means and Standard Deviations

Variables	Experimental 2 Segregated Black	
	Mean	S. D.
Sex	1.50 ^a	.51
I. Q.	95.86	8.89
Parent Occupation	1.14 ^b	.35
Pre-Semantic	36.41	13.54
Post-Semantic	34.18	12.75
Pre-Form "A"	69.14	5.24
Post-Form "A"	71.73	5.44
Pre-Form "F"	7.86	2.82
Post-Form "F"	9.82	3.54
Per cent Gain Semantic	1.96	45.18
Per cent Gain Form "A"	4.14	10.01
Per cent Gain Form "F"	7.77	13.47
Mean Gain Semantic (Raw Score)	-2.23	13.31
Mean Gain Form "A" (Raw Score)	2.59	5.56
Mean Gain Form "F" (Raw Score)	1.95	2.42

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 15

B. Summary of the Intercorrelation of Variables for the
Segregated Experimental 2 Group - Black Students
(N = 22)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I. Q.	-.08	1.00													
3 Parent Occupation	.40	.13	1.00												
4 Pre-Semantic	.39	-.22	.02	1.00											
5 Post-Semantic	.66 ^c	-.41	.51 ^a	.49 ^a	1.00										
6 Pre-Form "A"	-.22	.26	-.09	.07	-.18	1.00									
7 Post-Form "A"	-.05	.29	.05	.28	.02	.46 ^a	1.00								
8 Pre-Form "F"	-.28	.05	.02	.04	-.18	-.07	.39	1.00							
9 Post-Form "F"	.05	.18	.02	.23	-.01	-.08	.24	.73 ^c	1.00						
10 % Gain Semantic	.31	-.26	.58 ^b	-.38	.54 ^b	-.30	-.30	-.15	-.14	1.00					
11 % Gain Form "A"	.16	.04	.15	.23	.19	-.44 ^a	.59 ^b	.46 ^a	.32	-.02	1.00				
12 % Gain Form "F"	.39	.19	.04	.26	.18	-.06	-.11	-.09	.59 ^b	.01	-.06	1.00			
13 Mean Gain Semantic (Raw Score)	.24	-.17	.47 ^a	-.55 ^b	.46 ^a	-.24	-.26	-.22	-.25	.91 ^c	-.05	-.09	1.00		
14 Mean Gain Form "A"	.16	.04	.13	.20	.19	-.50 ^a	.55 ^b	.45 ^a	.32	-.01	1.00 ^c	-.05	-.03	1.00	
15 Mean Gain Form "F"	.40	.21	.01	.29	.18	-.04	-.10	-.09	.61 ^b	-.02	-.07	.96 ^c	-.12	-.07	1.00
(Raw Score)															

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at .1 per cent level - two-tailed test

TABLE 16

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR THE INTEGRATED EXPERIMENTAL 2 GROUP - BLACK STUDENTS (N = 11)

A. Summary of Means and Standard Deviations

Variables	Experimental 2 Integrated Black	
	Mean	S. D.
Sex	1.45 ^a	.52
I. Q.	88.82	15.32
Parent Occupation	1.18 ^b	.40
Pre-Semantic	41.82	7.73
Post-Semantic	39.64	10.53
Pre-Form "A"	66.45	15.37
Post-Form "A"	75.91	10.24
Pre-Form "Form "F"	5.45	2.66
Post-Form "F"	9.00	4.63
Per cent Gain Semantic	15.65	60.30
Per cent Gain Form "A"	13.17	20.70
Per cent Gain Form "F"	2.90	42.85
Mean Gain Semantic (Raw Score)	-2.18	7.37
Mean Gain Form "A" (Raw Score)	9.45	15.09
Mean Gain Form "F" (Raw Score)	3.55	5.63

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 16

B. Summary of the Intercorrelation of Variables for the
Integrated Experimental 2 Group - Black Students
(N = 11)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I. Q.	-.36	1.00													
3 Parent Occupation	-.43	.80	1.00												
4 Pre-Semantic	.27	-.61 ^b	-.72 ^b	1.00											
5 Post-Semantic	.52	-.53	-.78 ^c	.71 ^b	1.00										
6 Pre-Form "A"	.20	-.07	-.03	.09	.12	1.00									
7 Post-Form "A"	.21	-.29	-.07	.55	.35	.36	1.00								
8 Pre-Form "F"	-.09	-.38	-.18	.01	.08	-.62 ^b	-.01	1.00							
9 Post-Form "F"	.04	.50	.21	-.34	.03	.24	-.23	-.13	1.00						
10 % Gain Semantic	.49	-.37	-.50	.33	.84 ^c	.29	.31	.14	.24	1.00					
11 % Gain Form "A"	-.21	-.15	.06	.31	.08	-.61 ^b	.48	.64 ^b	-.37	-.06	1.00				
12 % Gain Form "F"	.13	.59	.25	-.39	.03	.37	-.33	-.39	.90 ^d	.28	-.61 ^a	1.00			
13 Mean Gain Semantic (Raw Score)	.47	-.12	-.36	-.03	.68 ^b	.09	-.08	.10	.40	.86 ^d	-.21	.46	1.00		
14 Mean Gain Form "A"	-.05	-.13	-.02	.29	.11	-.77 ^c	.31	.62 ^b	-.41	-.09	.96 ^d	-.60 ^a	-.14	1.00	
15 Mean Gain Form "F"	.08	.59	.26	-.28	-.01	.49	-.18	-.60 ^b	.88 ^d	.14	-.61 ^a	.92 ^d	.28	-.63 ^a	1.00
(Raw Score)															

^aSignificant at the 5 per cent level - one-tailed test

^bSignificant at the 5 per cent level - two-tailed test

^cSignificant at the 1 per cent level - two-tailed test

^dSignificant at .1 per cent level - two-tailed test

APPENDIX D

MEANS, STANDARD DEVIATIONS, AND INTERCORRELATIONS AMONG THE STUDY'S FIFTEEN VARIABLES - WHITE STUDENTS

	Page
Segregated White Students: Experimental 1	247
Integrated White Students: Experimental 1	249
Segregated White Students: Experimental 2	251
Integrated White Students: Experimental 2	253

TABLE 17

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND
INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR
THE SEGREGATED EXPERIMENTAL 1 GROUP -
WHITE STUDENTS (N = 21)

A. Summary of Means and Standard Deviations

Variables	Experimental 1 Segregated White	
	Mean	S. D.
Sex	1.48 ^a	0.51
I. Q.	97.62	12.40
Parent Occupation	1.05 ^b	0.22
Pre-Semantic	32.24	11.03
Post-Semantic	28.86	10.21
Pre-Form "A"	74.86	8.47
Post-Form "A"	75.29	10.02
Pre-Form "F"	5.33	3.67
Post-Form "F"	11.81	5.71
Per cent Gain Semantic	-13.89	39.60
Per cent Gain Form "A"	0.77	20.89
Per cent Gain Form "F"	22.17	30.76
Mean Gain Semantic (Raw Score)	-3.38	10.15
Mean Gain Form "A" (Raw Score)	0.43	11.72
Mean Gain Form "F" (Raw Score)	6.48	6.55

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 17

B. Summary of the Intercorrelation of Variables for the
Segregated Experimental I Group - White Students
(N = 21)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I. Q.	-.06	1.00													
3 Parent Occupation	.24	.25	1.00												
4 Pre-Semantic	-.20	-.20	.12	1.00											
5 Post-Semantic	-.02	-.14	.16	.55 ^b	1.00										
6 Pre-Form "A"	-.06	.11	-.10	-.03	-.16	1.00									
7 Post-Form "A"	.10	.30	.22	-.21	.13	.20	1.00								
8 Pre-Form "F"	.04	.05	.04	-.48 ^a	-.16	.06	.16	1.00							
9 Post-Form "F"	-.26	.83 ^c	.41	.11	.14	.16	.22	.07	1.00						
10 % Gain Semantic	.15	-.03	.04	-.30	.61 ^b	-.14	.32	.24	-.03	1.00					
11 % Gain Form "A"	.16	.17	.28	-.19	.20	-.44 ^a	.78 ^c	.06	.06	.37	1.00				
12 % Gain Form "F"	-.25	.73 ^c	.33	.26	.16	.08	.18	-.45 ^a	.84 ^c	-.15	.10	1.00			
13 Mean Gain Semantic (Raw Score)	.20	.08	.03	-.54 ^a	.41	-.14	.38	.36	.02	.93 ^c	.41	-.12	1.00		
14 Mean Gain Form "A" (Raw Score)	.13	.18	.27	-.16	.23	-.55 ^b	.71 ^c	.09	.07	.37	.99 ^c	.09	.41	1.00	
15 Mean Gain Form "F" (Raw Score)	-.25	.70 ^c	.33	.36	.21	.10	.10	-.50 ^a	.83 ^c	-.16	.13	.98 ^c	-.19	.01	1.00

^aSignificant at the 5 per cent level - two-tailed test

^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at .1 per cent level - two-tailed test

TABLE 18

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND
INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR
THE INTEGRATED EXPERIMENTAL 1 GROUP -
WHITE STUDENTS (N = 11)

A. Summary of Means and Standard Deviations

Variables	Experimental 1 Integrated White	
	Mean	S. D.
Sex	1.64 ^a	0.50
I. Q.	100.27	13.23
Parent Occupation	1.09 ^b	0.30
Pre-Semantic	39.64	6.48
Post-Semantic	38.73	5.59
Pre-Form "A"	68.55	10.14
Post- Form "A"	68.82	8.49
Pre-Form "F"	7.09	3.48
Post-Form "F"	11.45	4.72
Per cent Gain Semantic	-0.35	20.90
Per cent Gain Form "A"	-1.10	16.87
Per cent Gain Form "F"	16.67	23.07
Mean Gain Semantic (Raw Score)	-0.91	4.76
Mean Gain Form "A" (Raw Score)	0.27	9.56
Mean Gain Form "F" (Raw Score)	4.36	3.59

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 18

B. Summary of the Intercorrelation of Variables for the
Integrated Experimental I Group - White Students
(N = 11)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I.Q.	-.48	1.00													
3 Parent Occupation	.24	.44	1.00												
4 Pre-Semantic	.11	-.26	-.19	1.00											
5 Post-Semantic	.14	-.34	-.16	-.70	1.00										
6 Pre-Form "A"	.47	-.12	.18	-.20	-.59	1.00									
7 Post-Form "A"	.10	.21	.01	-.08	-.29	.49	1.00								
8 Pre-Form "F"	-.09	.28	.09	.59	.45	-.10	.50	1.00							
9 Post-Form "F"	-.09	.55	.39	-.13	-.17	.33	.69 ^a	.66 ^a	1.00						
10 % Gain Semantic	.08	-.14	.01	-.53	.22	-.40	-.21	-.32	-.07	1.00					
11 % Gain Form "A"	-.35	.28	-.18	.15	.35	-.55	.46	.58	.30	.20	1.00				
12 % Gain Form "F"	-.09	.40	.35	-.58	-.56	.54	.65 ^a	.11	.79 ^b	.11	.04	1.00			
13 Mean Gain Semantic (Raw Score)	.02	-.05	.06	-.54	.22	-.43	-.23	-.27	-.02	.97 ^c	.21	.13	1.00		
14 Mean Gain Form "A" (Raw Score)	-.41	.32	-.18	.13	.37	-.63 ^a	.37	.54	.27	.24	.99 ^c	.01	.25	1.00	
15 Mean Gain Form "F" (Raw Score)	-.03	.45	.43	-.74 ^b	.66 ^a	.53	.43	-.11	.68 ^a	.22	-.16	.94 ^c	.23	-.17	1.00

(Raw Score)

^aSignificant at the 5 per cent level - two-tailed test ^bSignificant at the 1 per cent level - two-tailed test

^cSignificant at .1 per cent level - two-tailed test

TABLE 19

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND
INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR
THE SEGREGATED EXPERIMENTAL 2 GROUP -
WHITE STUDENTS (N = 19)

A. Summary of Means and Standard Deviations

Variables	Experimental 2 Segregated White	
	Mean	S. D.
Sex	1.63 ^a	0.50
I. Q.	96.68	12.02
Parent Occupation	1.05 ^b	0.23
Pre-Semantic	32.37	9.46
Post-Semantic	28.63	8.07
Pre-Form "A"	69.89	10.81
Post-Form "A"	70.42	9.51
Pre-Form "F"	4.37	2.54
Post-Form "F"	12.32	4.91
Per cent Gain Semantic	-12.45	38.39
Per cent Gain Form "A"	-0.67	20.80
Per cent Gain Form "F"	26.58	33.83
Mean Gain Form "A" (Raw Score)	-3.74	9.83
Mean Gain Form "A" (Raw Score)	0.53	12.17
Mean Gain Form "F" (Raw Score)	7.95	4.98

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 19

B. Summary of the Intercorrelation of Variables for the
Segregated Experimental 2 Group- White Students
(N = 19)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I.Q.	.05	1.00													
3 Parent Occupation	.18	.07	1.00												
4 Pre-Semantic	.07	.41	-.11	1.00											
5 Post-Semantic	-.54 ^c	-.04	-.08	.38	1.00										
6 Pre-Form "A"	-.15	.02	.14	-.34	-.15	1.00									
7 Post-Form "A"	.47 ^c	.42	.19	.30	-.12	.29	1.00								
8 Pre-Form "F"	.25	.26	.25	.02	.06	.06	.45	1.00							
9 Post-Form "F"	-.02	.46 ^c	.18	.40	-.05	-.11	.36	.23	1.00						
10 % Gain Semantic	-.53 ^c	-.46 ^c	.01	-.47 ^c	.62 ^d	.15	-.32	-.04	-.39	1.00					
11 % Gain Form "A"	.52 ^c	.36	.06	.53 ^c	.03	-.55 ^c	.63 ^d	.31	.41	-.39	1.00				
12 % Gain Form "F"	.13	.25	.09	.49 ^c	-.07	.26	.35	-.10	.85 ^e	-.42 ^a	.49 ^a	1.00			
13 Mean Gain Semantic (Raw Score)	-.50 ^c	-.43	.04	-.65 ^d	.46 ^c	.21	-.39	.03	-.43	.96 ^e	-.49 ^c	-.53 ^b	1.00		
14 Mean Gain Form "A" (Raw Score)	.50 ^c	.31	.03	.53 ^c	.04	.66 ^d	.53 ^c	.30	.38	-.38	.98 ^e	.50 ^a	-.48 ^c	1.00	
15 Mean Gain Form "F" (Raw Score)	-.14	.32	.05	.38	-.08	-.14	.13	-.28	.87 ^e	-.36	.24	.89 ^e	-.44 ^a	.23	1.00

aSignificant at the 5 per cent level - one-tailed test bSignificant at the 1 per cent level - one-tailed test

cSignificant at the 5 per cent level - two-tailed test dSignificant at the 1 per cent level - two-tailed test

eSignificant at .1 per cent level - two-tailed test

TABLE 20

SUMMARY OF THE MEANS, STANDARD DEVIATIONS, AND
INTERCORRELATIONS AMONG FIFTEEN VARIABLES FOR
THE INTEGRATED EXPERIMENTAL 2 GROUP -
WHITE STUDENTS (N = 10)

A. Summary of Means and Standard Deviations

Variables	Experimental 2 Integrated White	
	Mean	S. D.
Sex	1.50 ^a	0.53
I. Q.	101.20	7.64
Parent Occupation	1.10	0.32
Pre-Semantic	42.20	4.08
Post-Semantic	39.20	8.98
Pre-Form "A"	68.10	9.06
Post-Form "A"	74.90	7.91
Pre-Form "F"	5.70	3.13
Post-Form "F"	11.70	4.64
Per cent Gain Semantic	5.67	51.61
Per cent Gain Form "A"	11.57	8.55
Per cent Gain Form "F"	23.50	20.58
Mean Gain Semantic (Raw Score)	-3.00	6.45
Mean Gain Form "A" (Raw Score)	6.80	5.05
Mean Gain Form "F" (Raw Score)	6.00	4.03

^aIn determining this mean, boys were assigned the number "1" and girls were assigned the number "2."

^bIn determining this mean, blue collar occupations were assigned the number "1" and white collar occupations were assigned the number "2."

TABLE 20

B. Summary of the Intercorrelation of Variables for the
Integrated Experimental 2 Group - White Students
(N = 10)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Sex	1.00														
2 I.Q.	.52	1.00													
3 Parent Occupation	-.33	-.29	1.00												
4 Pre-Semantic	.16	-.30	.16	1.00											
5 Post-Semantic	.07	-.17	.03	.76 ^d	1.00										
6 Pre-Form "A"	.29	.01	.07	.36	.36	1.00									
7 Post-Form "A"	.33	.27	-.13	.29	.39	.83 ^d	1.00								
8 Pre-Form "F"	.30	.65 ^c	-.30	-.10	-.25	-.54	-.16	1.00							
9 Post-Form "F"	.52	.60	-.43	.10	.38	.08	.49	.52	1.00						
10 % Gain Semantic	-.01	-.22	-.12	.30	.80 ^d	.12	.17	-.36	.32	1.00					
11 % Gain Form "A"	.09	.46	-.33	-.15	-.00	-.31	.27	.68 ^c	.69 ^c	.02	1.00				
12 % Gain Form "F"	.44	.23	-.21	.24	.57	.51	.73 ^c	-.04	.81 ^d	.50	.36	1.00			
13 Mean Gain Semantic (Raw Score)	-.00	-.04	-.06	.43	.91 ^e	.28	.36	-.28	.47	.92 ^e	.09	.64 ^a	1.00		
14 Mean Gain Form "A"	.00	.41	-.33	-.19	-.04	-.49	.08	.72 ^c	.62	.04	.98 ^e	.23	.06	1.00	
15 Mean Gain Form "F"	.37	.19	-.26	.19	.63 ^c	.51	.69 ^c	-.18	.75 ^c	.65 ^a	.27	.97 ^e	.76 ^b	.16	1.00

^aSignificant at the 5 per cent level - one-tailed test ^bSignificant at the 1 per cent level - one-tailed test

^cSignificant at the 5 per cent level - two-tailed test ^dSignificant at the 1 per cent level - two-tailed test

^eSignificant at .1 per cent level - two-tailed test

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