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ABSTRACT

TUCKER, MARILYN QUE. The Comparison of Attitudes of Black and White High School Students Toward Physical Education. (1977) Directed by: Dr. Rosemary McGee. Pp. 40.

The purpose of this study was to compare the attitudes of Black and White ninth and tenth grade students in four high schools in Rockingham County, North Carolina, toward physical education. In order to measure and then compare these attitudes, the Edgington Attitude Scale was administered.

The majority of all the 407 students tested had a favorable attitude toward physical education measured by the Edgington Attitude Scale. As a result of this study it was found:

1. There was a significant difference in the attitude of Black and White students toward physical education. White students' attitudes were significantly more positive than Black students' attitudes.
2. There was a significant difference in the attitudes of Black and White girls toward physical education with White girls scoring more positively.
3. There was a significant difference in the attitudes of Black and White boys, with White boys scoring more positively.
4. There was a significant difference in the attitudes of Black boys and White girls, with the White girls' attitudes more positive.
5. There was a significant difference in the attitudes of Black girls and White boys, with the White boys' attitude more positive.

The present study revealed that, overall, Black and White students had a favorable attitude toward physical education. The interaction analysis revealed that the White students demonstrated a more favorable attitude toward physical education than the Black students.

Based upon the findings of this study and a review of the literature, the writer makes the following recommendations:

1. That more research be conducted on Black-White attitudes toward physical education.
2. That an oral attitude scale be administered to a comparable group of Black and White students to determine attitudes toward physical education.
3. That research be conducted among Black students to determine the reasons for favorable and unfavorable attitudes toward physical education.

THE COMPARISON OF ATTITUDES OF BLACK AND WHITE
HIGH SCHOOL STUDENTS TOWARD
PHYSICAL EDUCATION

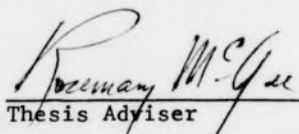
by

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CHAPTER I

INTRODUCTION

Physical education has acquired a broader connotation and greater significance since it has come to be regarded as a method of education rather than just a program designed to serve the physical dimension (Neilson, 1932). More and more educators are using attitudes of one sort or another to assess the desirable outcomes of education. This concept of attitudes and its influence upon individuals has been studied by such researchers as Likert (1932), Thurstone (1929), and Kenyon (1968).

There is still a need in America to extend lines of communication and understanding between different groups of the population. For many years, Blacks have been ignored in the mainstream of life. Consequently misunderstanding has prevailed. In order to understand any individual or group of individuals, common characteristics of all involved must be determined (Bohnke, 1971). If one is to understand the Black culture, he must find common characteristics of people, and then determine if Blacks show varying characteristics. It is the intent of this study to determine if there are common attitudinal elements, with respect to physical education, for Blacks and Whites.

STATEMENT OF THE PROBLEM

This study is designed to determine and compare the attitudes of Black and White high school students toward physical education.

Within the context of this study, an attempt will be made to answer the following questions:

1. Is there a significant difference in the attitudes of Black and White high school students toward physical education as reflected by the Edgington Attitude Scale?
2. Is there a difference in attitudes between Black and White girls?
3. Is there a difference in attitudes between Black and White boys?
4. Is there a difference in attitudes between Black boys and White girls?
5. Is there a difference in attitudes between Black girls and White boys?

DEFINITION OF TERMS

Attitudes are the ideas or feelings one may have about something as a result of past experiences, or as a result of imaginative likes or dislikes (Johnson, 1969, p. 296). An attitude can also be defined as a "tendency to respond positively (favorably) or negatively (unfavorably) to certain persons, objects, or situations" (Morgan, 1961, p. 122).

Physical Education is "education by means of experiences which involve activity and movement and which also have emotional, behavioral, and intellectual components" (Oberteuffer and Ulrich, 1970, p. 31).

ASSUMPTIONS

This study makes the following assumptions:

1. The Edgington Attitude Scale is a valid and reliable measure

of high school student's attitudes toward physical education.

2. The Edgington Scale for high school freshman boys is adaptable for use with all high school boys and girls.
3. The students will respond honestly.

SCOPE

This study is limited to the responses of approximately 400 freshmen and sophomore students from four high schools in Rockingham County, North Carolina: Morehead, Reidsville Senior, Reidsville Junior, and Ruffin high schools.

SIGNIFICANCE OF THE STUDY

In the past, there has been limited research dealing with the attitudes of Black students, especially at the high school level. Consequently, physical educators are sometimes at a loss about certain actions of Black students in comparison to Whites. It is the aim of this study to not only compare the attitudes of White and Black students, but to try to determine some of the attitudes of the two groups. This research is deemed capable of contributing to the knowledge of the attitudes that the two groups possess toward physical education.

CHAPTER II

REVIEW OF LITERATURE

This chapter will be divided into specific topics dealing with relevant literature: (1) meaning and importance of attitudes; (2) measurement of attitudes; (3) attitudes toward physical education; (4) related Black-White attitude studies; and (5) the Edgington Attitude Scale.

MEANING AND IMPORTANCE OF ATTITUDES

Definitions of attitude are varied and numerous; however, they all seem to reflect the term as an abstraction, drawing from a number of related acts, referring to any one specific act or response of an individual. Morgan (1934) defined attitudes as "mental postures, guides for conduct to which each new experience is referred before a response is made" (p. 47). Allport (1935) defined attitude as a "...neuro-psychic state of readiness for mental and physical activity" (pp. 798-799). Thurstone (1929) looked at attitude as "...the intensity of positive or negative affect for or against a psychological object" (pp. 22-23). More recently, attitude was defined as "...the predisposition of the individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner" (Katz, 1960, p. 168). Campbell (1968) defined attitude as "an enduring system of positive or negative evaluation, emotional feelings, and pro or con action tendencies with respect to a social

object" (p. 96), which according to Kenyon (1968), suggested the cognitive, affective, and action tendency components of attitude. Kenyon went further to postulate his own definition of attitude as "a latent or nonobservable, complex, but relatively stable behavioral disposition reflecting both direction and intensity of feeling toward a particular object, whether it be concrete or abstract" (p. 567).

Despite the fact that the term attitude had an early origin, Fliegler and Hebler (1958) pointed out that controversy continues among theorists and practitioners about attitude and its importance. The controversy focuses on the understanding of the dynamics and directions of specific and generalized attitude formation. However, Remmers (1954) has said of the power of attitudes, "attitudes, the way individuals and groups feel about the various aspects of their world, are probably more determinative than more cognitive understanding" (p. 15).

Gordin (1952) revealed the importance of attitudes in social settings when he explored the relationship between a person's private opinions and his definition of the situation and how they affect his expression of public opinion. He found that the significant factor which influences the person's behavior in the group is his subjective feeling with regard to group attitudes. This indicated, according to Gordin, that not only is an individual's behavior influenced by his own attitudes but also by perceived attitudes of the social group with which he is affiliated.

Literature contains many studies dealing with the role attitudes

play in learning. According to Campbell (1968), many of the studies indicate that attitudes are important because they help determine an individual's willingness to learn.

The study of attitudes is important and has the potential to contribute to an understanding of why certain groups of people react as they do in given situations. With this knowledge could come better communication between groups of people.

MEASUREMENT OF ATTITUDES

A variety of techniques has been used to measure attitudes, not only in physical education, but in other disciplines as well. Over the years, attitude studies in physical education have utilized several means of assessing attitude; the Thurstone, Guttman, and Likert methods have been prevalent. More recently, the semantic differential has become a popular technique for the measuring of attitude.

Perhaps one of the earliest attempts to measure attitude was made by Bogardus in 1925. He constructed a seven monotone-form item scale designed to measure expressions of social distance in attitudes toward members of various ethnic groups. The items were stated in such a way to indicate a position along an attitude continuum. Individuals with more negative attitudes would respond in one direction, while more positive attitudes would be reflected in the opposite direction.

Thurstone (1929) devised the scale of "equal appearing intervals" in an attempt to measure attitudes toward general issues and objects.

Thurstone's and Chave's method is one whereby statements are submitted to a panel of judges for classification and sorting into eleven groups. (The individual checks only those items he agrees with.) An individual's position is obtained by averaging the scale values of all items selected.

Guttman (1941) devised a technique of measuring attitudes, referred to as a "cumulative scaling" or scalogram analysis. It contains items that can be arranged in order so that responding affirmatively to one item insures responding affirmatively to all items of lower rank order.

Likert, in 1932, suggested a method of "summated ratings" designed to eliminate Thurstone's time-consuming process of a panel of judges. Likert's method has been and still is a popular technique of physical education researchers. Charles Edgington (1964), whose attitude scale was chosen for use in this study, used the Likert technique in the development of his scale. In the Likert method, a number of statements are presented which require subjects to respond by indicating whether they strongly approve, approve, are undecided, disapprove, or strongly disapprove. An individual's score is the summation of numerical values assigned to each statement, depending upon the favorableness or unfavorableness of the statement. Edgington, however, used the Likert method with some modification. Instead of a one to five scale value, he assigned a six-point scale value to each statement and eliminated the neutral alternative.

Osgood, Suci, and Tannenbaum (1957) developed a procedure which combines a scaling procedure and an association method. This procedure--the semantic differential--requires subjects to respond to a

word or concept by rating it on a series of seven interval rating scales, each scale bounded by a pair of adjectives. The purpose is to measure the meaning of various concepts to various people by having them judge the concepts against a series of descriptive scales. The semantic differential is designed to somewhat obscure the purpose of measurement and to give extra information on the meaning of the concept as well as the respondent's attitude to it.

As has been shown, there are various means of assessing attitude. This variety of methods gives a researcher the opportunity to choose the tool which best fits the uniqueness of his investigation.

ATTITUDES TOWARD PHYSICAL EDUCATION

Studies of attitudes toward physical education have ranged from the questionnaire type to prepared attitude scales. In the questionnaire, subjects check likes and dislikes of certain features and activities in a program. Prepared scales have qualitative responses to statements indicating attitude toward a part of the physical education program. A periodic analysis of student's attitudes and reactions toward various phases of a program offers a valuable aid in evaluation (Bell, Walters, & Staff, 1953, p. 379).

Smith (1933) was one of the first to analyze attitudes toward physical education. He gave a questionnaire to 650 male students at the University of Minnesota to determine feelings about a new program of informal physical education. Over 90% of those surveyed expressed enjoyment in taking the course and believed they were benefiting from it.

Graybeal (1936) found the attitude of students enrolled in a required physical education program to be more favorable than those participating in undirected physical activity. She also found that the attitude of students who did not participate in the required program became less favorable during their first two years at the university.

Baker (1940), in a questionnaire survey study of 1,150 girls and women between the ages fifteen and twenty-five, developed a study on the premise that most behavior is normal and may be ascribed to certain definite causes. In the light of predetermined factors, the participation in physical education of a selected group of girls and women who were of college age, but not necessarily in college, was examined. The author concluded that attitudes concerning participation in physical education do not regulate participation so much as they reflect the influence of other causes which do regulate participation.

In 1964, Wessel and Nelson measured the relationship between strength and attitudes toward physical education activity among college women. They adapted Wear's Attitude Inventory and Self-Rating Scale for their study. The results of their investigation indicated a positive relationship between the subjects' attitude toward physical education and the strength measures. As strength measures improved, there was a reported corresponding improvement in a subjects' attitude toward physical education.

Jordan, in 1965, completed a follow-up of 207 graduating seniors from an original cross sample of 1960. The follow-up was designed to determine the relationship between repeated measures of the attitude of

students toward physical education during four years at the University of Oregon. Jordan found no significant change in attitude between freshman and senior, or between sophomore and senior years; thus, he concluded that the attitude of college students toward physical education was not affected by four years of college.

Moyer, Mitchem, and Bell, in 1966, using the modified Wear Inventory, surveyed the attitude of the freshmen and junior women enrolled in the general physical education program at the University of Northern Illinois. Their investigation indicated a general favorableness toward physical education among both groups.

Brumbeck and Cross (1965) used Wear's Attitude Inventory to study the attitudes of male students entering the University of Oregon toward physical education. As a group, the students indicated a rather favorable attitude toward physical education. In studying subgroups, Brumbeck and Cross found that the more years of physical education a high school student had the better his attitude toward physical education was likely to be.

Moore (1941) studied a group of subjects to determine the favorableness of the attitudes toward physical education. The author felt physical activity was recreational and that the time spent in the activity would influence the attitude of the participants. Moore found college women to have a highly favorable attitude toward physical activity as a means of recreation.

In 1953, Holland administered an attitude questionnaire to women enrolled in physical education courses at the University of Washington to determine the extent the program was meeting their needs and interests.

She found a generally favorable attitude among the women.

Dunn, in 1956, administered the Wear Attitude Inventory to 176 women at East Texas State Teacher's College. The women expressed a favorable attitude toward the contribution of physical education to sound mental, physical and social health.

Drinkwater (1960), Richardson (1960), and Gruber (1960) each studied the attitudes of high school girls, college students, and inservice teachers, respectively, toward physical education and physical fitness. The results of the three studies were similar in that they indicated a positive attitude toward physical education; however, the attitudes of the high school girls proved to be not as strongly positive as the other two groups.

Keogh (1962), using the Wear Attitude Inventory, conducted a study of 166 male and female college students to determine if students differed in their attitudes toward the general benefits or values of physical education and if men and women differed in this respect. Keogh found no significant difference in the stated attitudes of men and women. Both groups endorsed the social, physical, and emotional value of physical education.

Campbell (1968) administered the Wear Inventory to 199 college males to determine their attitudes toward physical education. He classified the students according to size of the high school attended, the area of academic interest, and the physical education class in which they were currently enrolled. Campbell concluded that no variations in attitudes toward physical education could be predicted by the size of the high school attended, the area of academic interest,

or the preference of physical activity.

Obryan and Obryan (1969) used the semantic differential to investigate the attitudes of males toward selected aspects of physical education. They found that the attitude of the group surveyed was favorable to participation in physical education.

Bensch (1969) used a modified Wear Attitude Inventory to determine the attitude of high school students in a required physical education program, in the elected program, and in a study hall during the day. Results indicated a more favorable attitude toward physical education for the students in the required program. The attitude toward physical education showed an improvement from the first to the last week in the elective program, while the other two groups did not show significant improvement.

Zafra (1970) conducted a study to determine the attitude of college students toward physical education at Western Kentucky University. Her results indicated a favorable attitude toward physical education and no difference in attitude between men and women.

RELATED BLACK-WHITE ATTITUDE STUDIES

There has been inadequate physical education research concerning the area of racial attitudes in general, and Black-White attitudes specifically. However, two studies were found that dealt with the comparison of Black and White students' attitude toward physical education and athletics.

In 1969, Mullins conducted an attitude study among students at Tallahassee Junior College. Attitudes were assessed by Kenyon's Attitude

Toward Physical Activity Scales. The study was designed to investigate the function of race, sex, and socio-economic level in students' attitude toward physical activity. Race was the most significant factor accounting for the variance in attitude toward physical activity as a social and aesthetic experience in male and female data. Race was significant in accounting for the variance in attitude toward physical activity as a pursuit of vertigo in male and female analysis. Her overall findings were that Black students had more favorable attitudes toward physical activity than White subjects.

Bohnke, in 1971, investigated the attitudes of selected Black and White intercollegiate athletes concerning their participation in athletics. He found the general attitudes of the subjects to be favorable toward intercollegiate athletics. However, the White athletes had more favorable attitudes toward participation in athletics than the Black athletes.

THE EDGINGTON ATTITUDE SCALE

In 1965, Charles W. Edgington developed an attitude scale designed to measure the attitudes of high school freshman boys toward physical education. Selecting concepts for the statements used in the attitude scale, Edgington used four general physical education objectives: physical development; motor development; mental development; and human relations development.

From these concepts, Edgington constructed a preliminary form of 125 statements which was submitted to a jury to determine the worth of each statement as a measure of attitude. The jury judged each statement favorable or unfavorable to physical education. The Likert technique was

used and the scale was administered three different times in order to ascertain reliability and validity.

Once the scale was revised into its final form, a reliability coefficient of .80 was established by the split-halves method. Using the Spearman-Brown Prophecy formula, the reliability coefficient was raised to .92. Thirty ninth-grade physical education students were chosen to establish construct validity of the final form. The physical education instructors chose fifteen boys considered to have the most favorable attitude and fifteen boys who evidenced the most unfavorable attitude toward physical education. Results of their responses to the attitude scale were compared with the judgment of the instructors by using the Chi square formula. The Chi square results were significant at the one per cent level of confidence, indicating that the students responded more favorably or less favorably respectively, on the scale, thus verifying construct validity.

Edgington found his scale to be a reliable and valid tool for measuring the attitude of high school freshman boys toward physical education. His testing also showed that the majority of freshman boys in his study had a favorable attitude toward physical education.

CHAPTER III

PROCEDURE

THE SCALE

The Edgington Attitude Scale was chosen for use in this study for several reasons: (1) its ease of administration; (2) its appropriateness for the grade level; (3) its relatively simple and easy-to-understand directions. Since Edgington had expressed concern over the terminology, the writer consulted with several principals and teachers about some of the terminology used by Edgington. The principals and teachers worked in the same school system where the attitude scales were administered. Because of the day-to-day contact with both Black and White students, these persons were considered able to evaluate the vocabulary of the Edgington scale. After reading the scale, these educators expressed the belief that ninth and tenth grade students should have no "unusual" difficulty interpreting the meanings of the items in the scale.

Edgington's scale contains 66 items--33 positive and 33 negative statements--about physical education. Following are examples of positive items:

Physical education helps students to develop poise.

There is a scientific basis for physical education.

Following are examples of negative statements:

Exercise is of little importance in maintaining good health.

Physical education should be a relaxation period between academic classes.

After reading each statement, each student had to decide how he/she felt about it - agree or disagree; strongly agree or disagree; or very strongly agree or disagree. After making the decision, the student circled the corresponding numbers, such as +3 for very strongly agree (VSA). The numbers were located to the right of each statement (see Appendix).

ADMINISTRATIVE PROCEDURE

During April, 1975, four schools in the Rockingham County School System of North Carolina, were considered by the writer for possible use in the administration of the scale. Familiarity with the school system and the school personnel were reasons for considering the following schools:

Morehead High -----Eden, North Carolina
 Reidsville Junior High -----Reidsville, North Carolina
 Reidsville Senior High -----Reidsville, North Carolina
 Ruffin High -----Ruffin, North Carolina

Several days were spent contacting the principal of each school to obtain permission to administer the Edgington Scale to ninth and tenth grade students enrolled in the physical education classes. Permission was granted by each principal; however, in each case, final permission was reserved for the physical education teachers in question.

Each principal introduced the investigator to the boys' and girls' physical education teachers and briefly described the study to them. They examined the scale and gave their consent. Details were then worked out for administering the scale.

It was agreed that the boys and girls would take the test at the same time, either in the gymnasium or a large classroom. Approximately 100 students at each school were to respond to the scale -- 50 Black and 50 White, with approximately half being male and half being female. The classes were randomly selected using every other ninth and tenth grade physical education class period: Morehead High - first and third periods; Reidsville Junior High - first, third and fifth periods; Reidsville Senior High - first, third and fifth periods; Ruffin High - second and fourth periods.

The physical education teachers of each school agreed to aid in administering the scale by helping to clarify instructions and making any necessary interpretations. The physical education teachers of each school chose a suitable date for the administration of the scale. All dates fell during the first and second week of May, 1975. On the agreed date, the investigator returned to each school and administered the Edgington Attitude Scale. During each class period the boys and girls were assembled into a large room where every student was given an attitude scale, and if necessary, a pencil. The investigator gave a brief purpose of the study. Instructions and directions were then given. Immediately upon completion by all students, the attitude scales were collected by the investigator and the classroom teacher. Thus, with the full cooperation of the principals, teachers, and students, the investigator was able to complete the administration of the Edgington Attitude Scale in one day at each school.

SUBJECTS

Four-hundred and seven students -- Black and White, Male and Female -- were used in this study. The subjects were freshmen and sophomore boys and girls enrolled in the physical education classes of each of the high schools. Approximately 200 of the subjects were male and 200 were female. The Black/White ratio was approximately the same as seen in Table 1.

TABLE 1

NUMBER OF RESPONDENTS AT EACH SCHOOL

SCHOOL	BLACK		WHITE	
	BOYS	GIRLS	BOYS	GIRLS
Morehead High	17	15	25	20
Reidsville Junior High	33	37	32	40
Reidsville Senior High	26	30	29	20
Ruffin High	25	18	20	20
TOTALS	101	100	106	100

In an effort to obtain honest answers, the students were not required to sign their names. The only required information was sex, class, and race. Students were encouraged to ask any necessary questions concerning word meanings and instructions. They were also instructed to return the scale to the physical education teachers or the investigator after all students had completed the scale.

PLANNED ANALYSIS

Edgington's scoring technique of using a six-point scale was employed. The statements were scored as follows:

<u>FAVORABLE STATEMENTS</u>	<u>UNFAVORABLE STATEMENTS</u>
Very Strongly Agree----- +6	Very Strongly Agree----- +1
Strongly Agree----- +5	Strongly Agree----- +2
Agree----- +4	Agree----- +3
Disagree----- +3	Disagree----- +4
Strongly Disagree----- +2	Strongly Disagree----- +5
Very Strongly Disagree----- +1	Very Strongly Disagree----- +6

The highest possible score, indicating a very favorable attitude, was 396. The lowest possible score was 66. Anything above 264 indicated a favorable attitude.

After the 407 scales had been scored, the score, plus the race and sex of each individual were key-punched on cards for computer analysis. The computer program "Mean" (Russell, 1976) was written especially for use in this study. Mean scores and variances in scores were computed. Two-sample t-tests were used to determine significant differences in attitude between the Black and White students, between the Black and White girls, the Black and White boys, the Black boys and White girls, and the Black girls and White boys.

An attempt was made to determine if there were significant differences in the attitude of Black and White students toward twelve selected statements from the Edgington Attitude Scale. The proportions of agree responses by both groups were compared. No specific procedure was used for selecting

the twelve statements. However, the four general objectives in physical education used by Edgington in scale construction--physical development, motor development, mental development, and human relations--were studied. The writer then used personal judgment and interest in selecting three items for each objective.

Two-sample t-tests, as opposed to ANOVA, was chosen for use in this analysis upon recommendation by the investigator's statistical consultant, Dr. Don Russell (1976). According to Russell, if ANOVA had been employed, "a significant effect (main effect) due to race would have been found since the two-sample t-test showed this and the two-sample t-test is equivalent to the F test for comparing two levels of a main effect. A significant difference due to sex would not have been found since the t-test did not find one." Russell goes further to state that "the interaction (1976) would have been significant and we would then have to apply some mean separation test to determine the nature of the interaction significance. All of the usual tests of this type--Duncan, Tukey, Dunnett, Newman-Keuls--were developed for equal numbers and the practice of applying them to unequal numbers has never been validated." Because of Russell's reasoning, the investigator decided to use two-sample t-tests for the data analysis.

CHAPTER IV

PRESENTATION OF DATA

The Edgington Attitude Scale was administered to 407 ninth and tenth grade students in four schools in Rockingham County, North Carolina. Since there were sixty-six items and the maximum score for each item was six, the maximum test score was 396. According to the author of the test, any score above 264 indicated a favorable attitude toward physical education. A participant who answered each positive item with "agree" and answered each negative item "disagree" scored 264.

BLACK AND WHITE STUDENT ANALYSIS

A primary purpose of this study was to determine if there was a significant difference in attitude toward physical education between Black and White high school students. The two-sample t -test was employed to determine if there was significant difference in attitude toward physical education between Blacks and Whites. The underlying assumptions of the test, normality and equality of variances, were satisfied. Table 2 contains a summary of the statistics for the Black and White students, including the test of significance.

As can be seen in Table 2, the absolute value for the test of significance was 5.98, which is sufficient evidence to conclude a significant difference at the 5% level of confidence. The data indicated that even though there was an over-all favorable attitude toward physical

TABLE 2
SUMMARY OF STATISTICS FOR BLACK AND WHITE STUDENTS

	N	S.D.	MEAN	<u>t</u>
BLACK STUDENTS	201	33.6	284.8	5.98*
WHITE STUDENTS	206	34.3	305.2	

*significant at the 5% level of confidence

education as expressed by both Blacks and Whites, White students scores were relatively higher, indicating a significantly more favorable attitude than Black students toward physical education.

Despite the fact that the investigator consulted with principals and teachers about the terminology, the investigator has speculated that many Black students failed to fully understand many of the statements on Edgington's Attitude Scale. In discussing the scores with some of the same educators who felt the terminology was appropriate for the grade level scaled, they indicated that Black students generally have more difficulty in interpreting and understanding written material such as Edgington's scale. This information could account for the difference in attitude between Black and White students. Another reason for the difference could be the desire of many students to finish quickly; thus, not reading the statements carefully. Of course there might really be a difference in the attitudes of Black and White students.

INTERACTION ANALYSIS

Having looked at the statistics for the Black and White students, a look at the interaction means revealed the true nature of the group differences in attitude toward physical education. Table 3 gives the statistics for the female Black and female White students and shows

TABLE 3
SUMMARY OF STATISTICS FOR FEMALE BLACK AND FEMALE WHITE STUDENTS

	N	S.D.	MEAN	<u>t</u>
FEMALE BLACK	100	34.5	289.6	2.88*
FEMALE WHITE	100	34.1	303.6	

* significant at 5% level of confidence

that there is a significant difference in the attitude of Black and White female students. Eighty-six White females and seventy-four Black females scored above 264, indicating an over-all positive attitude toward physical education (see raw data in Appendix). The data also indicate that White females' attitude toward physical education was more positive than Black females. It is interesting to note that the standard deviation for both groups is almost the same.

Table 4 contains a summary of the statistics for male Blacks and male Whites. A significant difference was found in comparing the attitude of Black and White males toward physical education, as shown in the table. Raw data (see appendix) indicate that sixty-eight Black and ninety-five White males had scores above 264. Both groups had an over-all positive

TABLE 4

SUMMARY OF STATISTICS FOR MALE BLACK AND MALE WHITE STUDENTS

	N	S.D.	MEAN	<u>t</u>
MALE BLACK	101	32.8	279.9	5.72*
MALE WHITE	106	34.6	306.8	

*significant difference at the 5% level of confidence

attitude toward physical education. The data also indicates that the scores for White males were significantly higher than those of the Black males.

A summary of statistics for male Blacks and female Whites is given in Table 5. The test of significance serves as evidence that there was

TABLE 5

SUMMARY OF STATISTICS FOR MALE BLACKS AND FEMALE WHITES

	N	S.D.	MEAN	<u>t</u>
MALE BLACK	101	32.8	279.9	3.56*
FEMALE WHITE	100	34.1	303.6	

*significant difference at the 5% level of confidence

a significant difference in the attitude of male Black and female White students toward physical education. The difference is influenced by the fact that significantly more White females--86 out of 100--had

positive attitudes toward physical education than the Black males--
78 out of 101.

TABLE 6
SUMMARY OF STATISTICS FOR FEMALE BLACK AND MALE WHITE STUDENTS

	N	S.D.	MEAN	<u>t</u>
FEMALE BLACK	100	34.5	289.6	5.02*
MALE WHITE	106	34.6	306.8	

*significant difference at the 5% level of confidence

As indicated in Table 6, there was a significant difference in the attitude of the female Black and male White students. The male White students' attitude toward physical education was significantly more positive than the female Black students'.

According to the interaction analysis, White males and females scored much higher on the attitude scale than the Black males and females thus accounting for more positive attitudes of the White students toward physical education. Despite the significant difference in attitude, the interaction analysis also indicated an overall positive attitude toward physical education of both the Black and White, male and female students. The significant differences lay in the number and intensity of more positive attitudes among the White students.

ANALYSIS OF TWELVE ITEMS

Twelve selected scale items were compared in an effort to locate some of the significant differences in the attitude of the Black and White students. This selection gave consideration to Edgington's four objectives in item construction: physical development; motor development; mental development; and, human relations development. Because Edgington did not identify his classification of the 66 items on the scale in relation to the four objectives, the investigator used personal judgment to select the twelve items--three for each objective. The responses to each of the items were grouped together in such a way as to make them binomial in nature. The responses "agree", "strongly agree", and "very strongly agree" formed the "agree group", while the responses "disagree", "strongly disagree", and "very strongly disagree" formed the second group, the "disagree group". This was done because the fundamental difference in a response to an item is agree or disagree; whereas, the other responses measure the intensity of agreement or disagreement. For each of the twelve items, the proportions of agree responses from the Black group and from the White group were compared to determine significant differences. The statistic of significance of difference between proportions was used (Ostle, 1963) and the results are summarized in Table 7.

TABLE 7
SUMMARY OF STATISTICS COMPARING TWELVE ITEMS
(Number of Blacks = 201; Number of Whites = 206)

NEGATIVE OR POSITIVE STATEMENT	ITEM #	STATEMENT	PROPORTION OF AGREE RESPONSES	z
PHYSICAL OBJECTIVE				
+	34	Physical conditioning is an important part of the physical education class.	B+ .861 W+ .966	3.75*
+	46	Physical education contributes to physical development.	B .841 W .937	3.07*
-	66	Strength cannot be developed in physical education.	B .169 W .097	2.13*
MOTOR DEVELOPMENT OBJECTIVE				
+	13	Physical education helps students develop poise.	B .876 W .888	.38
-	14	The main purpose of physical education is to cause fatigue in students.	B .348 W .136	4.90*
-	64	Physical education is mainly for the physically gifted.	B .284 W .165	2.98*
MENTAL DEVELOPMENT OBJECTIVE				
-	35	No real learning takes place in a physical education class.	B .194 W .053	4.31*
+	45	Activities in physical education offer students opportunities to make quick decisions and responses.	B .806 W .927	3.56*
-	60	Little intelligence is required for physical education.	B .512 W .548	.73
HUMAN RELATIONS OBJECTIVE				
+	9	Skills learned in physical education are of value in social life.	B .826 W .869	1.21
-	32	Students have little opportunity in physical education to receive recognition and status.	B .458 W .316	2.96*
+	33	Physical education classes provide opportunities to make friends.	B .841 W .961	4.00*

*significant at the 5% level of confidence

+B = Black; W = White

With the exception of item number 60, White students' responses were proportionally higher than Black students' responses. This finding is consistent with the Black and White student analysis, which revealed that White students' scores and attitudes were relatively higher than Black students. The writer has speculated that the word "little" in item 60 may have caused the deviation by White students from this consistent pattern.

It was interesting to note that item number 14--a negative statement--had a greater proportion of Black students agreeing with it than did White students. This seems to suggest that Black students are more aware of the fatigue element in physical education. This may partially account for a more negative attitude toward physical education.

The test of significance revealed that Black and White students differed in their attitude toward all three items under the physical objective; they differed significantly on only two of these items under the other objectives. According to the expected responses, students--both Black and White--were more positive in their attitude toward the physical objective of physical education than the motor development, mental development, and human relations objectives.

The twelve-item comparison revealed that, overall, these Black and White students hold positive attitudes toward Edgington's objectives of physical education. White students' responses were proportionally higher than the Black students', with the difference lying in the direction of positiveness.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this study was to compare the attitudes of Black and White ninth and tenth grade students in four high schools in Rockingham County, North Carolina, toward physical education. In order to measure and then compare these attitudes, the Edgington Attitude Scale was administered. The Edgington Attitude Scale consisted of sixty-six items built around four general physical education objectives; physical development; motor development; mental development; and human relations development.

FINDINGS

The majority of all students tested had a favorable attitude toward physical education measured by the Edgington Attitude Scale. As a result of this study it was found:

1. There was a significant difference in the attitudes of Black and White students toward physical education. White students' attitudes were significantly more positive than Black students' attitudes.
2. There was a significant difference in the attitudes of Black and White girls toward physical education with White girls scoring more positively.
3. There was a significant difference in the attitudes of Black and White boys, with White boys scoring more positively.

4. There was a significant difference in the attitudes of Black boys and White girls, with the White girls' attitude more positive.
5. There was a significant difference in the attitudes of Black girls and White boys, with the White boys' attitude more positive.

CONCLUSIONS

The present study revealed that, overall, Black and White students had a favorable attitude toward physical education. The interaction analysis revealed that the White students demonstrated a more favorable attitude toward physical education than the Black students.

RECOMMENDATIONS

Based upon the findings of this study and a review of the literature, the writer makes the following recommendations:

1. That more research be conducted on Black-White attitudes toward physical education.
2. That an oral attitude scale be administered to a comparable group of Black and White students to determine attitudes toward physical education.
3. That research be conducted among Black students to determine the reasons for favorable and unfavorable attitudes toward physical education.

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APPENDIX A

ATTITUDE SCALE FOR HIGH SCHOOL STUDENTS

Sex _____

Class _____

Race _____

DIRECTIONS:

Attached, you will find a list of statements about physical education. There are no right or wrong answers. Please answer each statement according to your own feelings about physical education.

Please put your answers in the appropriate place. You are to circle the appropriate number--to the right of the statement--to indicate how strongly you agree or disagree with each statement. The numbers stand for the following:

+3 = very strongly agree (VSA)	-3 = very strongly disagree (VSD)
+2 = strongly agree (SA)	-2 = strongly disagree (SD)
+1 = agree (A)	-1 = disagree (D)

PLEASE BE SURE TO ANSWER EVERY STATEMENT

KEY	VSA	SA	A	VSD	SD	D
- 1. Physical education is mainly concerned with muscle building.	+3	+2	+1	-3	-2	-1
- 2. Physical education should be eliminated from the curriculum.	+3	+2	+1	-3	-2	-1
- 3. Physical education is too strenuous for the average student.	+3	+2	+1	-3	-2	-1
+ 4. Knowledge of various sports learned in physical education helps students to become more understanding spectators.	+3	+2	+1	-3	-2	-1
+ 5. Physical education should develop in students an understanding of the importance of exercise to health.	+3	+2	+1	-3	-2	-1
+ 6. Respect for human personality should be one of the qualities sought in a physical education class.	+3	+2	+1	-3	-2	-1
- 7. Credit should not be given for physical education.	+3	+2	+1	-3	-2	-1

KEY

	VSA	SA	A	VSD	SD	D
- 8. Physical education has little value and should be eliminated.	+3	+2	+1	-3	-2	-1
+ 9. Skills learned in physical education are of value in social life.	+3	+2	+1	-3	-2	-1
- 10. Cooperation is not necessary in physical education activities.	+3	+2	+1	-3	-2	-1
- 11. Physical education is not as important as other academic classes.	+3	+2	+1	-3	-2	-1
+ 12. Emotional expressions can be brought under control through participation in games.	+3	+2	+1	-3	-2	-1
+ 13. Physical education helps students to develop poise.	+3	+2	+1	-3	-2	-1
- 14. The main purpose of physical education is to cause fatigue in students.	+3	+2	+1	-3	-2	-1
- 15. Physical education should not be considered a part of general education.	+3	+2	+1	-3	-2	-1
+ 16. The intellectual processes are related to the physical processes of the body.	+3	+2	+1	-3	-2	-1
+ 17. Physical education should be a required subject.	+3	+2	+1	-3	-2	-1
- 18. Physical education should introduce only activities that are useful during teen-age years.	+3	+2	+1	-3	-2	-1
- 19. Grades should not be given in physical education.	+3	+2	+1	-3	-2	-1
+ 20. A student should learn to respect his opponent in physical education.	+3	+2	+1	-3	-2	-1
+ 21. Physical education helps students adapt to group situations.	+3	+2	+1	-3	-2	-1
- 22. Physical education does little in developing desirable standards of conduct.	+3	+2	+1	-3	-2	-1
+ 23. Tolerance, obedience, and respect for the rights of others are learned in physical education.	+3	+2	+1	-3	-2	-1

KEY	VSA	SA	A	VSD	SD	D
- 24. Physical education should be an elective subject after the ninth grade.	+3	+2	+1	-3	-2	-1
- 25. Exercise is of little importance in maintaining good health.	+3	+2	+1	-3	-2	-1
+ 26. There is a scientific basis for physical education.	+3	+2	+1	-3	-2	-1
- 27. To participate in games is undignified.	+3	+2	+1	-3	-2	-1
+ 28. Physical education once or twice a week is inadequate.	+3	+2	+1	-3	-2	-1
+ 29. Written tests should be given in physical education.	+3	+2	+1	-3	-2	-1
- 30. Physical education is mainly concerned with team games.	+3	+2	+1	-3	-2	-1
+ 31. Physical education should be required in every grade.	+3	+2	+1	-3	-2	-1
- 32. Students have little opportunity in physical education to receive recognition and status.	+3	+2	+1	-3	-2	-1
+ 33. Physical education classes provide opportunities to make friends.	+3	+2	+1	-3	-2	-1
+ 34. Physical conditioning is an important part of the physical education class.	+3	+2	+1	-3	-2	-1
- 35. No real learning takes place in a physical education class.	+3	+2	+1	-3	-2	-1
- 36. Physical education is harmful if an individual is physically weak.	+3	+2	+1	-3	-2	-1
+ 37. Credit should be given for physical education.	+3	+2	+1	-3	-2	-1
- 38. Physical education has little to offer for the unskilled individual.	+3	+2	+1	-3	-2	-1
- 39. Varsity athletes should be excused from physical education classes.	+3	+2	+1	-3	-2	-1
+ 40. The program in physical education should be organized so there is progression in the learning of skills.	+3	+2	+1	-3	-2	-1

KEY

	VSA	SA	A	VSD	SD	D
- 41. Calisthenics should be eliminated from physical education.	+3	+2	+1	-3	-2	-1
+ 42. Participants in physical education learn to cooperate as members of the group.	+3	+2	+1	-3	-2	-1
+ 43. Physical education is important in the growth and development of students.	+3	+2	+1	-3	-2	-1
+ 44. The physical education program should include activities leading to sports appreciation.	+3	+2	+1	-3	-2	-1
+ 45. Activities in physical education offer students opportunities to make quick decisions and responses.	+3	+2	+1	-3	-2	-1
+ 46. Physical education contributes to physical development.	+3	+2	+1	-3	-2	-1
- 47. Physical education should be a relaxation period between academic classes.	+3	+2	+1	-3	-2	-1
- 48. The activities in the physical education program do little to develop physical fitness.	+3	+2	+1	-3	-2	-1
- 49. The program in physical education is the same year after year.	+3	+2	+1	-3	-2	-1
- 50. Students get all the physical activity they need outside of school.	+3	+2	+1	-3	-2	-1
- 51. Taking a long walk would be a good substitute for physical education.	+3	+2	+1	-3	-2	-1
+ 52. Learning the rules of activities is an important part of physical education.	+3	+2	+1	-3	-2	-1
+ 53. The rules of sportsmanship should be practiced in physical education.	+3	+2	+1	-3	-2	-1
- 54. Physical education is not an important phase of education.	+3	+2	+1	-3	-2	-1
- 55. There is little carry-over value from physical education.	+3	+2	+1	-3	-2	-1
+ 56. Physical education classes should not be free play periods.	+3	+2	+1	-3	-2	-1

KEY	VSA	SA	A	VSD	SD	D
+ 57. Flexibility is important in physical education.	+3	+2	+1	-3	-2	-1
+ 58. Some calisthenics should be included in physical education.	+3	+2	+1	-3	-2	-1
+ 59. Physical education is needed for a completed education.	+3	+2	+1	-3	-2	-1
- 60. Little intelligence is required for physical education.	+3	+2	+1	-3	-2	-1
+ 61. Physical education classes should provide challenging activities.	+3	+2	+1	-3	-2	-1
- 62. Physical education is a waste of time in school.	+3	+2	+1	-3	-2	-1
+ 63. Individual sports learned in physical education can be useful in later life.	+3	+2	+1	-3	-2	-1
- 64. Physical education is mainly for the physically gifted.	+3	+2	+1	-3	-2	-1
+ 65. Coordination can be developed in physical education.	+3	+2	+1	-3	-2	-1
- 66. Strength cannot be developed in physical education.	+3	+2	+1	-3	-2	-1

APPENDIX B

RAW DATA FOR BLACK AND WHITE STUDENTS

(Possible Score = 396)

SCORES FOR 100 BLACK FEMALES

261	292	318	262	320	332	242	333	304	238	311	289	321	339	341
308	296	323	265	272	267	283	325	250	318	329	330	310	317	298
300	234	310	323	320	280	283	265	317	288	273	295	363	297	
245	318	280	290	224	327	326	270	301	225	259	328	286	353	
329	243	337	293	302	274	256	343	223	235	271	225	250	231	
220	228	267	322	283	253	245	323	292	258	269	278	307	341	
291	292	285	349	314	260	298	255	262	287	292	292	331	294	

SCORES FOR 101 BLACK MALES

300	282	287	240	297	178	242	317	226	292	347	295	281	319	302
310	230	328	289	218	317	207	297	305	280	249	286	313	243	280
296	221	292	272	263	300	300	354	278	323	277	279	260	290	274
251	253	252	292	279	306	267	312	249	243	251	238	344	263	
337	286	324	255	299	246	299	272	260	234	245	271	264	298	
335	262	262	277	271	227	281	322	266	315	280	284	323	248	
284	337	284	262	247	244	246	283	246	308	305	276	303	313	

SCORES FOR 100 WHITE FEMALES

292	333	296	274	299	267	355	339	305	323	338	374	337	313	270
262	301	285	297	324	296	347	314	348	285	261	324	331	278	278
280	289	252	291	263	237	236	303	328	343	281	343	341	336	
253	281	334	302	325	347	265	323	273	302	303	308	311	271	
273	324	350	301	328	278	304	318	259	300	340	345	341	293	
381	315	360	276	319	323	346	270	309	349	266	336	283	309	
252	334	268	313	303	253	306	301	284	242	276	317	303	333	

SCORES FOR 101 WHITE MALES

300	296	281	321	317	307	299	344	276	329	370	304	330	288	290
342	273	345	280	263	233	340	289	344	319	265	296	357	290	290
349	370	324	238	345	294	360	227	312	317	234	285	330	280	318
291	300	286	325	323	234	294	294	352	280	227	306	330	301	292
260	346	317	291	315	230	334	227	312	333	264	293	300	303	290
317	316	348	316	248	344	270	348	287	315	290	278	333	303	291
306	272	238	344	302	316	317	292	318	347	303	275	330	283	290