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Study of Attitudes of College Students Toward Physical Education at Western Kentucky University

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1970

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STUDY OF ATTITUDES OF COLLEGE STUDENTS TOWARD PHYSICAL
EDUCATION AT WESTERN KENTUCKY UNIVERSITY

A Thesis

Presented to

the Faculty of the Department of Physical
Education and Recreation
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by

Amelia J. Zafra

July, 1970

STUDY OF ATTITUDES OF COLLEGE STUDENTS TOWARD PHYSICAL
EDUCATION AT WESTERN KENTUCKY UNIVERSITY

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CHAPTER I

INTRODUCTION

While the objectives of a good physical education program are somewhat broader than affecting a favorable attitude toward physical education, the latter is generally accepted as being a desirable condition in a good program. Hence this study was undertaken to ascertain, by means of the Wear Physical Education Attitude Inventory Form A¹ and other self-constructed questions, the attitude toward physical education of students who are enrolled in the required physical education program at Western Kentucky University in the spring semester of 1970.

Statement of the Problem

This study was undertaken to determine the attitude of the college students toward required physical education program at Western Kentucky University. More specifically, the study was conducted: (1) to find the total students' attitudes toward required physical education, (2) to find if the attitudes of the out-of-state students are different from the in-state students, (3) to find if there is a significant difference between the attitudes of men and women, (4) to compare the attitudes of students with a good physical education background with those

¹Carlos Wear, "Construction of Equivalent Form of Attitude Scale," Research Quarterly, XXVI (March, 1955), p. 117.

students of a poor physical education background, (5) to find if the attitudes of freshman students is different from the upper-classmen, (6) to examine differences in attitudes of students who play often and those students who do not, and (7) to find the attitude of students toward the activities offered in the required physical education program at Western Kentucky University.

Definition of Terms

Attitude.--Allports' definition of attitude as "a mental and neural state of readiness, organized through experience, exerting a direction or dynamic influence upon the individuals' response to all objects and situation with which it is related,"² is chosen as a basis for the study.

Physical Education.--The term physical education is limited to mean the organized school program in contrast to the term physical activity which has a broader meaning including voluntary, personally organized participation.

Limitation of the Study

This study was limited to students who were enrolled in the required physical education program and who had taken at least one physical education activity at Western Kentucky University in the spring semester of 1970.

²Gordon W. Allport, Attitudes, Handbook of Social Psychology, ed. by Carl Murchison, (Worcester, Mass.: Clark University Press, 1935), p. 810.

Background of the Study

Each student graduating from Western Kentucky University is required to take two semesters or two unit credits of physical education, and a student takes two activities a semester. All the classes meet for one hour, twice a week. The equipment needed in all the activities offered is being supplied by the department: the dressing rooms, showers, lockers for the students to use; and the towels are also provided to the students who want to use them. Students provide their own regulation uniform in classes where it is necessary. A variety of activities offered every semester are classified according to the following categories: (1) team sports, (2) individual sports, (3) combative sports, (4) dance which includes folk, modern, and ballroom, (5) gymnastics, (6) swimming, and (7) indoor and outdoor sports.

The program aim is to provide opportunity for the students to develop the skill needed to participate and to enjoy physical activity, to have the knowledge to understand and appreciate the activity, and to seek further physical activity after completing the required credit.³

Need for the Study

One primary aim of educational programs is to develop self-motivated and self-directed graduates. Thus, one of the most important concerns in physical education required programs

³The information was determined in Private Discussion with Dr. M. G. Karsner, In Charge of the Required Physical Education Program; and Miss Betty Langley, of the Department of Physical Education and Recreation.

is that students develop positive attitudes toward active participation in physical education activity which will lead them to continue participating in physical activity after completing the physical education requirements. Understanding the nature of attitude toward physical education seems essential as a guide in developing them.

In measuring attitudes toward physical education, there are many factors that can be involved. An individual might search for particular types of activities or particular outcomes or express feelings toward particular aspects of a specific physical education program. The opinions on the social, emotional, and physical benefits of participation in physical education must be considered in order to establish a generalized framework or theoretical structure of attitude toward physical education.

In recent years, all levels of education have expressed a concern regarding the development of attitudes and ideals as educational objectives. Attitudes are an important part of an individual's readiness status and have an effect on the individual's reaction to a situation. Because attitudes are learned or acquired they may be influenced by teaching.

As young people graduate from high school and enter college they bring with them established attitudes toward the different areas of the educational curriculum. With the belief that attitudes toward physical education are learned, are influenced by past experiences, and can be changed, it is essential

to know what background factors contribute to the development of the student's attitude toward physical education.

In the study conducted by Danforth on adults' attitudes toward physical education, he reported that seventy-five per cent of the people interviewed acquired their point of view toward physical education primarily from personal experiences they had in school. He suggested that physical educators would do well to center most of their public relations efforts upon the students in their classes rather than upon adults whose opinions are already fixed, or who have no interest in the matter.⁴

In some instances students developed negative attitudes toward physical education because the subject matter of the activity is being taught by instructors without any purpose, and sometimes lack of interest and negative attitudes of the students might be due to the activity not meeting the needs or fulfilling their motives.

Kozman, Cassidy, and Jackson state that a different approach, not through subject matter of physical functioning alone, but one that starts with the student views, his body control, management and use in the light of his motivation, attitudes, and aspiration, would improve the program.⁵

⁴Howard G. Danforth, "As Others See Us," Journal of American Association for Health, Physical Education and Recreation, XX (May, 1949), p. 308.

⁵Hilda C. Kozman, Rosalind Cassidy, and Chester D. Jackson, Methods in Physical Education, (Philadelphia and London: W. B. Saunders Company Incorporated, 1952), p. 244.

Stanley believes that the curriculum, to be practicable, should be adapted to the interest of the specific group and the individual involved, and further adds that learning activities in the program must correlate with the current interest of the group under consideration.⁶

According to Knapp and Hagman, the aim of education is not merely to help pupils secure information and develop skill; it involves the purpose, attitudes, and interest which affect living; it helps or hinders the individuals in laying foundations that lead to a life productive of personal satisfaction and usefulness in society.⁷

Attitudes, defined by Shaffer and Shoeben, are of two kinds, acceptance and rejection which correspond to the drives of adience and avoidance. Adience denotes acceptance or a positive attitude, while avoidance denotes rejection or a negative attitude.⁸

Davis and Lawther state that the attitude studies in the field of physical education indicate that avoidance attitudes are also taught in the field.⁹ Physical educators

⁶Seward C. Stanley, The Curriculum in Sports, (Champaign Stripes Publishing Company, 1940), p. 193.

⁷Clyde Knapp and Patricia Hagman, Teaching Methods for Physical Education, (New York, Toronto, and London: W. B. Saunders Company, 1953), p. 20.

⁸Laurance F. Shaffer and Eduard J. Shoeben, The Psychology of Adjustments, (Boston: Houghton Muffin Company, 1956), p. 93.

⁹Elwood C. Davis and John D. Lawther, Successful Teaching in Physical Education, (New York: Prentice-Hall Incorporated, 1948), p. 484.

who are in the field should be concerned and must do something to correct such attitudes. If our school physical education is to be successful then we must know that it contributes to the development of positive attitudes toward continued active participation. Otherwise, physical education will cease to be recognized as a significant and integral phase of education. The unique contribution of physical education to the total development of an individual should not be overlooked.

Morrison believes that the realization of college education can be induced through participating in a wholesome program of physical education.¹⁰

The numerous studies done in different colleges and universities concerning students attitudes toward required physical education show the importance and the need of the study. A periodic evaluation of any educational program is necessary if the program is to achieve its objectives. To know the strengths and weaknesses of a program is the bases for improvements or changes and this can only be satisfactorily shown through research.

¹⁰W. M. Morrison, "Post War Physical Education for Men at Obeline College," Journal of Health and Physical Education, XVI (May, 1946), p. 300.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Studies of attitudes and interest were first utilized in physical education in the late 1920's and early 1930's. During this period, the formal program of calisthenics, gymnastics, and marching was starting to lose its popularity. As the new informal method of instruction was introduced and applied, sports and games became popular, and the curriculum builders became increasingly interested in the reactions of the students to change.

Throughout the 1930's many studies of student attitudes and interests were conducted, and more literature on the subject was available in professional publications of that period. Studies of the attitudes and interests of girls and women, and boys and men, as well as adults have also been made. Since World War II, such studies have again been used quite extensively.

This review will present selected studies of attitudes and interest of both men and women concerning physical education, particularly those directly related to this study.

Basic Methods of Investigation

Most investigators have reservations about using the questionnaire method. However, because of the low cost and

practical impossibility of conducting personal interviews to collect the desired information, the questionnaire technique offered many advantages.

Adams reported that there were two principal methods in developing scales for measuring attitudes. The first was devised by Thurstone and Chave in 1929, and this was followed by Likert's technique in 1932.¹

According to Wear, attitude studies in physical education have been of the questionnaire type and he further stated that the studies that have been reported used a prepared attitude scale, all of which were prepared and presented in the Thurstone manner.²

Johnson stated that there are few studies that have employed projective techniques to study attitude toward health and physical education, and these studies were essentially exploratory in nature. These studies employed variations or adaptations of the so called projective type personality test, which involved presenting the subject with a relatively unstructured stimulus to which he responded in his own way.³

¹R. S. Adams, "Two Scales for Measuring Attitudes Toward Physical Education," Research Quarterly, XXXIV (March, 1963), p. 91.

²Carlos Wear, "The Evaluation of Attitude Toward Physical Education, as an Activity Course," Research Quarterly, XXII (March, 1951), p. 115.

³Warren R. Johnson, "An Approach to Attitude Studies in Health and Physical Education," The Physical Educator, (March, 1961), p. 20.

In 1951, Wear reported a forty-item attitude inventory after an extensive study in establishing the reliability and validity of the instrument.⁴ The attitude inventory was believed effective in placing individuals in rank order regarding intensity of attitudes toward physical education and in indicating the direction and extent of shifts of individual and group attitudes. While the inventory as a whole "measures" whatever the individual item measures, it is assumed that a total score on the inventory is an index of attitudes toward physical education since the key-concept used for selecting responses to items was so defined, and the items were directed toward this common concept. The statements were prepared and presented to the subjects in the same manner presented by Likert, in which the subjects were asked to respond to each statement by selecting one of the five choices: (1) strongly agree, (2) agree, (3) undecided, (4) disagree, and (5) strongly disagree. The above mentioned responses were assigned scale values of five, four, three, two and one respectively. The criteria suggested by Wang were used as a guide in the revision and elimination of statements. The inventory was validated by a questionnaire on previous experiences with physical education activities and self-rating of attitude.⁵ Correlation of this short form with the self-rating gave a coefficient of 0.80 on 272 cases and 0.81 on 200 cases.⁶ The

⁴Wear, "Evaluation of Attitude," XXII, p. 124.

⁵Ibid., p. 115.

⁶Ibid., p. 122.

results of the correlation of the short form with individual questions on the questionnaire showed exactly the same coefficient (0.64 on 272 cases) as the long form.⁷ The short form of the inventory has a high degree of reliability as shown by a coefficient of 0.96 on 200 cases,⁸ while that of the long form was 0.98.⁹

Although the validity of this study was established on figures obtained from college men in required physical education classes, Wear states, "Because of the nature of the individual statement, it was believed that the inventory would be equally suited for use with womens' classes."¹⁰ The difference between the mens' and womens' total program lies in part on the emphasis on interschool athletics for men. However, there is no difference in the final objectives of the physical education required program which are sought by both sexes.

Subsequently, Wear constructed equivalent forms of the inventory, designated as Form A and Form B, each of which was likewise reported to be statistically reliable. Scores of the forms have been shown to correlate highly with other measures of attitudes and to differentiate at high level of confidence

⁷ Ibid., p. 119.

⁸ Ibid., p. 121.

⁹ Ibid., p. 118.

¹⁰ Ibid., p. 123.

between groups of subjects. A high correlation exists between scores of the two forms.¹¹

Related Studies and Findings

Moore studied the participation and attitudes of 179 junior and senior women students at the University of California, Los Angeles, and found them to have a highly favorable attitude toward physical activity as a means of recreation. The average length of time spent in activities was low, however. Approximately fifty per cent of these women spent less than four hours per week in physical activities. The main reasons given were: (1) study, (2) lack of companions to play with, and (3) work.¹²

Broer used the original form of the Wear Attitude Inventory and found it to be a valid and reliable instrument to be used with the college women. Since the validity of the inventory has been established on figures obtained from the college men, the validity and reliability were checked with the freshman college women students at the University of Washington. On 100 cases, the reliability was found to be 0.96, exactly the coefficient reported by Wear. In checking the validity, the total scores were correlated with the same self-rating scale used in the Wear study.¹³ The results of this study indicated that those students of low

¹¹Wear, "Construction of Equivalent Forms," XXVI, p. 113.

¹²Beverly Y. Moore, "The Attitude of College Women Toward Physical Education as a Means of Recreation," Research Quarterly, XII (December, 1941), p. 721.

¹³Wear, "Evaluation of Attitudes," XXII, p. 122.

motor ability who had received instructions in the basic physical education improved their general motor ability and attitudes toward physical education, and in gained skill and knowledge in specific activities.¹⁴

In a study conducted by Bell and Walters,¹⁵ a revised questionnaire consisting of three parts was used to study the attitudes of 684 freshmen and senior male students at the University of Michigan. Part III of this questionnaire was the forty-item Wear Attitude Inventory. They reported that forty-two per cent of the freshman students participated in activities from three to five hours a week, while eighteen per cent of the seniors spent this much time. The reasons for no more play given by both groups were: (1) study, (2) extra-curricular activities, and (3) work. The freshman students who had previous physical education courses in high school were found to have more favorable attitudes toward physical education than those without any background in physical education. Individual sports were found to be most frequently engaged in by both freshman and senior students.

There seemed to be a positive and significant relationship between the following: (1) attitude and the importance of sports and dance as part of their recreational program. This was true

¹⁴ Marion R. Broer, "Evaluation of a Basic Skills Curriculum for Women Students of Low Motor Ability at the University of Washington," Research Quarterly, XXVI (March, 1955), p. 15.

¹⁵ Margaret C. Bell, Etta Walters, et al., "Attitudes of Women at the University of Michigan Toward Physical Education," Research Quarterly, XXIV (December, 1953), pp. 379-391.

in all groups with the exception of those freshmen who had had no physical education in the high school, (2) attitudes and the extent to which they enjoy physical education classes, (3) the extent to which the instructors were interested in them as individuals and the extent to which they enjoy their physical education classes, and (4) the extent to which the instructors are interested in them as individuals and the extent to which they were motivated to continue in physical activities on their own outside of class. This is true for all groups except freshmen who did not have physical education in the high school.

On the Wear attitude inventory, all students rated high on social, physical, and mental health attributes of physical education, with the area of mental health being rated the highest among the three groups.¹⁶

Moyer, Mitchem and Bell used a modified Wear Attitude Inventory to determine the attitudes of freshman and junior women students toward physical education, and to evaluate the physical education program in terms of student needs at Northern Illinois University. Ten statements that specifically applied to the physical education program at Northern Illinois University were added to the forty-item Wear Attitude Inventory. High positive attitudes scores in this study were found for ninety and ninety-one per cent of freshman and senior students respectively, which is above the neutral attitude. Their findings indicated a preference for individual sports in spite

¹⁶Ibid., p. 385.

of greater high school participation in team sports. A highly favorable attitude toward the physical education program was shown by both groups, and a re-evaluation of methodology and interpretation of objectives in teaching the required program was found to be necessary.¹⁷

Campbell administered Form A of the Wear's Inventory to a group of 199 lower division male students who were enrolled in the required physical education program at the University of Texas. The standard procedures for the administration of the inventory were precisely followed except that each subject recorded his response to each of the thirty statements on standardized answer sheets. The responding subjects were classified according to the size of the high school attended, the college of matriculation, and the physical education class in which they were enrolled. The results suggested a favorable attitude toward physical education since over three-fourth of the subjects scored above the neutral value of ninety points. No significant variations in total attitude scores toward physical education were found within the subgroups of the three classification. However, a significant difference in attitude scores was found between the responses to three categories of items of the inventory--physiological and social attitudes, mental-emotional attitudes, and general categories of items of

¹⁷Low Jean Moyer, John C. Mitchem and Harry M. Bell, "Womens' Attitudes Toward Physical Education in the General Education Program at Northern Illinois University," Research Quarterly, XXXVII (December, 1966), pp. 515-519.

the Wear Attitude Inventory. More highly favorable responses on the physiological and sociological development section may account for the highly favorable attitudes toward physical education. Campbell concluded that: (1) Wear's attitude inventory is a reliable and valid instrument to determine attitude toward physical education, (2) no significant variations in attitudes concerning physical education can be predicted by the size of high school attended, the area of academic interest or preference of physical activities, and (3) the attainment of attitudes according to expressed objectives of physical education can be measured by the Wear Attitude Inventory.¹⁸

Brumback and Cross measured attitudes of lower division male students at the University of Oregon also using Wear Attitude Inventory, Form A. The data were obtained from the responses of 933 students who were arranged in different categories to identify factors important to students acquiring favorable attitudes toward physical education. In comparing group means, the five per cent level of confidence was accepted as an indication of a statistically significant difference. The results indicated a favorable attitude toward physical education. In comparing various subgroups he concluded that athletes have a better attitude than the non-athletes, and the more years of physical education a student had in high school the better his attitude is likely to be. He also found that the students who

¹⁸ Donald E. Campbell, "Students Attitudes Toward Physical Education," Research Quarterly, XXXIX (October, 1968), pp. 456-462.

attended smaller high schools (enrollment under 300) have better attitudes than those students from larger schools.¹⁹

Keogh administered Form A of the Wear Attitude Inventory to 136 men and 130 women students at the University of California. The results of the study indicated that the men and women were not different in their stated attitudes toward physical education, but were found to have conflicting opinions regarding the relative value of a physical education program in the school curriculum.²⁰ The analysis of data was based on two arrangements: first, an item by item comparison was made between males and females; secondly, response categories four (agree) and five (strongly agree) were combined to determine the percentage of subjects who agreed with a statement. On negatively worded statements, response categories one and two were combined. The per cent of agreement was a "favorable index," which corresponded exactly with the decimal value reported by Wear.²¹ In this particular study of Keogh, if the agreement was less than sixty per cent, the statement was considered to demonstrate a conflict in subject response because a large number of subjects disagreed or were uncertain about particular statements. An agreement of eighty per cent or more was taken as representing a subject agreement.

¹⁹Wayne B. Brumbach and John A. Cross, "Attitudes Toward Physical Education of Male Students Entering the University of Oregon," Research Quarterly, XXXVI (March, 1965), pp. 10-16.

²⁰Jack Keogh, "Analysis of General Attitudes Toward Physical Education," Research Quarterly, XXXIII (May, 1962), pp. 239-244.

²¹Wear, "Construction of Equivalent Forms," XXVI, p. 114.

Subsequently, Keogh²² analyzed the stated attitude responses of two groups of men and women who demonstrated extreme attitudes toward physical education. From the original 266 subjects, sixty-nine men and women were selected whose scores on the Wear Attitude Inventory were extremes of high or low. Additional data were obtained through group interview questionnaires. The results indicated the male-female differences within the groups. The low group offered some minimum support for the outcomes of physical education and strongly questioned the relative value of physical education in the school program. There was no significant evidence found to indicate that the negative attitudes were related to non-participation, which was contrary to the expected relationship of attitude and participation. In addition, the validity of the Wear Inventory as a measure of attitudes toward physical education was supported, because the groups of high and low subjects were consistently positive or negative in their response to the prepared statements.

Summary

Studies of attitudes in physical education have been made since the late 1920's and have been used quite extensively after World War II. The questionnaire method of collecting the desired data has been found to be most convenient, and has been employed by most researchers.

²²Keogh, "Extreme Attitudes Toward Physical Education," XXXIX, pp. 27-33.

The more significant results and conclusions of selected related studies on attitudes and interests, of both men and women, particularly college students, have been presented in this chapter. A majority of the students expressed favorable attitudes toward physical education, and both men and women consistently showed that they had enjoyed their physical education classes. Individual and dual sports with a high carry-over value appeared to be most popular among college students. Both men and women felt that their physical education courses had been beneficial, with a few exceptions. However, they questioned the school physical education program and doubted the values which are proposed for the program.

People may view certain outcomes as being "good for them" but may be unwilling to accept a required school program as the price to pay for the value they received. The possibility also exists that people have positive attitudes toward physical education in spite of rather than because of the programs. There seems to be a conflict in the ideals to which people subscribe and the reality which they observe. This should be a source of both theoretical and practical concern.

Where high school experiences were considered, it was found that an alarmingly high percentage of the students were dissatisfied with the physical experiences they had at this level.

Although there were some differences of opinion, it appeared that the students do use their physical education

experiences in leisure time, spending a good share of their free time in physical education activities for recreation.

In several of the studies concerning attitudes of college students toward physical education, Wear's Attitude Inventory was found to be used most frequently by the investigators. The validity and reliability of the instrument was established in several studies of both men and women to measure attitudes toward physical education. Each statement within the inventory is directed toward attitudes of generally accepted outcomes to be expected from physical education. These may be classified into four categories designated as "physiological-physical," "mental-emotional," "social," and "general." Among the four categories, students seem to rate the physiological-physical and social objectives higher than the two other categories.

CHAPTER III

PROCEDURES

Nature of the Subjects

The respondents of this study were students who were enrolled in the required physical education program at Western Kentucky University. They were students with different physical education backgrounds relative to years of physical education. They ranged from one to six years or more of experience. Thus, there were students who were active and enjoyed physical activities; those who participated moderately; and students who did not participate and disliked physical activities.

Selection of the Subjects

The subjects used in this study were selected at random from the complete list of students enrolled in physical education instructional classes in the spring semester of 1970. A copy of the consolidated list of students was furnished by the Department of Physical Education and Recreation. This list was arranged according to the size of the student's number.

From the list, all the male students were separated from the female students. Since approximately 200 men and 200 women were desired in the final samples, every fourth name on the male's list, and each third and second (alternated) name on the female's list were selected. Thus, 293 male and 285 female names were

chosen. Then these names were checked against the class roll in all the different activity classes scheduled in the second biterm of the second semester. There were twenty-eight males and forty-one females eliminated whose names did not appear in the lists. They either dropped physical education, dropped out from school, or they may have completed their physical education requirements during the first term in the spring semester.

In addition, forty-five males and thirty-six females failed to attend class on the day the attitude scale was administered. These also were eliminated. Finally, 220 males and 209 females were studied.

The Measuring Instrument

For the purpose of this study, a two-part questionnaire-inventory was used to measure the attitudes of the subjects. Part I was a brief informational questionnaire consisting of fifteen questions on which the responding subjects reported information relative to location and school from which they graduated, sex, classification, years of high school physical education, degree of physical activity participation, and questions specific to the physical education required program at Western Kentucky University.¹ Part II was the Wear Physical Education Attitude Inventory Form A² which was selected as the instrument to use in measuring the subjects' attitude toward physical education.

¹See Appendix A for questions asked.

²See Appendix B.

The measurement of personal attitudes is a complex task which can be undertaken by a variety of technique, such as direct questioning and behavior observation, but the prepared attitude scale offers the advantage of presenting a standard set of prepared and selected responses, as well as providing a quantified measure. The Wear Attitude Inventory Form A is a carefully prepared instrument of thirty items which asks the subject to consider "physical education only from the standpoint of its place as an activity course taught during a regular class period."³ A subject indicates the relative strength of his agreement or disagreement on each statement using the following scoring system: 1--strongly disagree; 2--disagree; 3--undecided; 4--agree; 5--strongly agree. Negatively worded items are scored in reverse from five to one, to be consistent with those items which are positively worded. Thus, favorable attitudes is indicated by a high scale value and the unfavorable attitudes by the low scale value, regardless of a positive or negative nature of the statement. The lowest possible score is thirty points if all the items are rated with the scale value of one point, strongly disagree; 150 is the highest possible score if all the items are rated with the scale value of five points, strongly agree; while the completely neutral or undecided position would be reflected by a total score of ninety points, that is all the items are rated three points each.

³Wear, "Construction of Equivalent Form," XXVI, p. 113.

Each statement was defined by Wear⁴ as related to the outcomes or objectives of physical education and classified into four categories designated as: (1) physiological-physical; (2) mental-emotional; (3) social, and (4) general: statements which did not seem related to one of the first three categories. The thirty statements of Form A are divided among the four categories as follows: physiological, 6; mental-emotional, 7; social, 8; and general, 9.

Administering the Questionnaire

The gathering of data were made possible through the cooperation of the head of the required physical education program, members of the faculty, and graduate assistants of the Department of Physical Education and Recreation at Western Kentucky University. The questionnaire was personally administered by the writer with the help of other graduate assistants, during the second term in the spring semester of 1970.

On the first two days each biterm, students scheduled at a given hour meet together for assignment to their respective classes and instructors. The investigator requested those students whose names were selected to report to a designated room where the questionnaire was administered. In the room the names were again checked and the names of those not present were eliminated. The respondents were then briefed on the purpose of the study and were asked to mark the questionnaire inventory

⁴Ibid., p. 115.

sheets, reacting exactly as they felt in response to each statement. The subjects were instructed to omit their names or otherwise make it possible to identify their papers. They were also instructed not to consult anyone concerning any of the statements, except for clarification of questions, and these were directed to the investigator. The administration of the questionnaire was done in the same room, and the same procedure in administering the questionnaire was followed in all the groups measured. There were 100 per cent of the questionnaires returned, though not all items were answered by each individual. All the data collected were examined by the investigator for possible irregularities, but none were found.

Summary

A two-part questionnaire-inventory was used to measure the attitudes of subjects. Part I was a brief informational questionnaire constructed to determine the physical education experiences in high school and questions specific to the required physical education program at Western Kentucky University. Part II was the Wear Attitude Inventory Form A, a carefully prepared instrument of thirty items to measure attitudes toward physical education as an activity course. The subject indicated the relative strength of his agreement or disagreement on each statement using the following scoring system: 1--strongly disagree; 2--disagree; 3--undecided; 4--agree; or 5--strongly agree. The scoring system in the negatively worded statements was reversed to be consistent with the positively worded

statements. The sum of the thirty-item provided an indication of a subjects' attitude toward physical education. Thus, favorable attitudes toward physical education were indicated by a high scale value while unfavorable attitudes by low scale value. A total score of ninety points reflected a neutral or undecided position.

The questionnaire-inventory was administered by the writer with the help of carefully briefed graduate assistants during the first two days in the spring semester of 1970. The data were collected from the responses of 220 male and 209 female subjects selected at random from undergraduates enrolled in instructional classes in the required physical education program at Western Kentucky University.

CHAPTER IV

ANALYSIS AND INTERPRETATION

The attitude responses of the 220 men and 209 women selected for study were analyzed according to the following arrangements: (1) attitude of students toward physical education, (2) attitude of students toward the required physical education program at Western Kentucky University, and (3) attitude of students toward specific activities offered in the required physical education program at Western Kentucky University. Comparison of the students attitude were made on the basis of the following groups: (1) men vs. women, (2) in-state vs. out-of-state, (3) good vs. poor physical education background, (4) freshmen vs. upper classmen, and (5) active vs. passive students.

After examining the completed questionnaire of each subject, all the inventories were scored. A code was developed, based on the questionnaire, and all the data gathered was recorded on a master I.B.M. sheet. Key cards were punched, and analysis of all the data was done by the Western Kentucky University Computer Center. This included the development of frequency tables, and the calculation of chi-square tests to test the consistency of attitudes between the various groups in attitude response.

Wear Attitude Inventory

All the subjects measured responded to the statements in the inventory. In order to interpret the scores to the thirty inventory items, one must understand that Wear¹ used the scoring technique described by Likert. With this technique, the data provided a minimum score of thirty points which would indicate a very unfavorable attitude toward physical education and a maximum score of 150 points which would indicate a very high attitude toward physical education. A completely neutral position would be reflected by a score of ninety points. If one had a favorable reaction rather than highly favorable reaction to each of the thirty statements, the score would be 120 points. On the contrary, an unfavorable rather than highly unfavorable reaction would have a score of sixty points.

Men vs. women.--The total distribution of the Wear Attitude Inventory scores of men and women at Western Kentucky University is presented in Table 1.

The scores ranged from a low of thirty-eight points to a high of 150 points. The results suggest that both male and female subjects had a favorable attitude toward physical education since well over three-fourths of the subjects measured scored above the neutral value of ninety points. In fact, almost seventy-five per cent of the scores were above 110, twenty points higher than the "neutral" value of ninety. In comparing the attitude of men

¹Wear, "Evaluation of Attitude," XXII, p. 126.

and women toward physical education the chi-square obtained was 4.4155, significant at the .22 level of confidence. Based on .05 level of confidence, the null hypothesis was accepted, indicating no significant difference in attitude toward physical education between men and women.

TABLE 1
DISTRIBUTION OF WEAR INVENTORY SCORES OF
MEN AND WOMEN

SCORE	MEN		WOMEN		TOTAL N
	N	%	N	%	
131-150	55	25	45	22	100
121-130	47	21	63	30	110
111-120	59	27	49	23	108
38-110	59	27	52	25	111
TOTALS	220	100	209	100	429

Chi-Square obtained was 4.4155
Significant at .22 level of confidence

In-state vs. out-of-state.--A strikingly similar situation was found in these groups as was observed for men and women. The data presented in Table 2 show both groups have favorable attitude toward physical education since more than three-fourths of the subjects measured scored above the neutral value of ninety points.

A chi-square of 4.6093, significant at the .20 level of confidence, was obtained. The null hypothesis was accepted, implying no significant difference in attitude toward physical education between the in-state and out-of-state students.

TABLE 2
 DISTRIBUTION OF WEAR INVENTORY SCORES RELATIVE TO
 ATTITUDE OF IN-STATE AND OUT-OF-STATE STUDENTS

SCORE	IN-STATE		OUT-OF-STATE		TOTAL N
	N	%	N	%	
131-150	93	25	7	12	100
121-130	95	25	15	27	110
111-120	92	25	16	29	108
38-110	92	25	18	32	110
TOTALS	372	100	56	100	428

Chi-Square obtained was 4.6093
 Significant at the .20 level of confidence

Good vs. poor physical education background.--For the purpose of this study, classification of physical education background was according to the number of years of physical education from seventh to twelfth grades. Classification was as follows: (1) good--five to six years, (2) moderate--three to four years, (3) poor--less than one to two years. An examination of Table 3 reveals that fifty-three per cent had three to four years, thirty-five per cent had less than one to two years, and only twelve per cent had five to six years of physical education in high school.

In comparing good with poor physical education backgrounds, there was a tendency for those with good backgrounds to have higher attitudes, but these tendencies proved to be statistically non-significant. The chi-square obtained was 9.4825, significant at

the .15 level of confidence. The null hypothesis was retained, indicating a strong possibility that differences in attitudes could have occurred by chance. However, the results suggest that those with more years of physical education in high school tend to have more favorable attitudes toward physical education.

TABLE 3
DISTRIBUTION OF WEAR INVENTORY SCORES RELATIVE
TO PHYSICAL EDUCATION BACKGROUND

SCORE	PHYSICAL EDUCATION BACKGROUND						TOTAL N
	GOOD		MODERATE		POOR		
	N	%	N	%	N	%	
131-150	11	21	59	26	30	20	100
121-130	16	31	48	21	46	30	110
111-120	11	21	66	29	31	21	108
38-110	14	27	53	24	44	29	111
TOTALS	52	100	226	100	151	100	429

Chi-Square obtained was 9.4825
Significant at the .15 level of confidence

Freshmen vs. upper classmen.--All freshmen subjects measured composed one group while all the sophomore, junior, and senior subjects composed the upper classmen group. The data presented in Table 4 show the attitude toward physical education by both groups to be favorable.

TABLE 4

DISTRIBUTION OF WEAR INVENTORY SCORES RELATIVE
TO ATTITUDE OF FRESHMEN AND UPPER-CLASSMEN

SCORE	FRESHMEN		UPPER-CLASSMEN		TOTAL
	N	%	N	%	N
131-150	82	23	18	26	100
121-130	90	25	20	29	110
111-120	98	27	10	14	108
38-110	89	25	22	31	111
TOTALS	359	100	70	100	429

Chi-Square obtained was 5.4248
Significant at the .14 level of confidence

Again more than seventy-five per cent of the total population scored above the neutral value of ninety points. The chi-square obtained was 5.4248, significant at the .14 level of confidence. Therefore the null hypothesis was retained based on .05 level of confidence, indicating no significant difference of attitude toward physical education between the two groups. It is important to note that the encouragement to take the required physical education during the freshmen year account for the low number of upper classmen subjects measured. It is also of interest to note that the upper classmen tend to choose more extreme responses, both favorable and unfavorable, although not sufficiently to cause a statistically significant difference in attitude scores.

Active vs. passive.--In comparing the attitude toward physical education in relation to degree of participation in physical activities, subjects measured in this study were classified into the following: (1) active and enjoy the activity, (2) moderate participation, (3) passive or do not participate and dislike physical activity.

In analyzing the data presented in Table 5, it can easily be noted that out of 429 subjects studied, only four subjects classified themselves as passive.

TABLE 5
DISTRIBUTION OF WEAR INVENTORY SCORES RELATIVE
TO DEGREE OF PARTICIPATION

SCORE	DEGREE OF PARTICIPATION						TOTAL N
	ACTIVE		MODERATE		PASSIVE		
	N	%	N	%	N	%	
131-150	76	29	24	15	0	0	100
121-130	78	30	32	20	0	0	110
111-120	62	23	45	28	1	25	180
38-110	47	18	61	37	3	25	111
TOTALS	263	100	162	100	4	100	429

Chi-Square obtained was 33.77533
Significant beyond the .01 level of confidence

The data also suggested that there was a relationship between the degree of participation of physical activities and attitude toward physical education, even though a vast majority indicated positive

attitudes. This was born out by the chi-square test. A value of 33.9753 was found, which was significant at beyond the .01 level of confidence. Thus the null hypothesis was rejected, indicating a significant difference of attitude toward physical education between the active and passive students, with the active students having a more positive attitude.

Attitude specific to the required physical education program at Western Kentucky University

In an effort to measure the general attitude toward Western's required physical education program, the students were asked to check whether they considered the program extremely worthwhile, of considerable value, of little value, or useless. The number of students selecting each response were again compared by sex, by residence, by physical education background, by classification, and by degree of activeness.

Men vs. women.--The data presented in Table 6 show that both groups have a similar evaluation of the physical education program at Western Kentucky University.

The chi-square obtained was significant at the .92 level of confidence. The null hypothesis was accepted indicating no significant difference in attitude toward physical education program between men and women based on the .05 level of confidence.

TABLE 6
COMPARISONS OF MEN AND WOMEN ATTITUDE RESPONSES

CATEGORY	MEN		WOMEN		TOTAL N
	N	%	N	%	
Extremely Worthwhile	57	26	47	24	106
Considerable Value	128	59	129	62	257
Little Value	29	13	27	13	56
Useless	3	1	3	1	6
TOTALS	217	100	208	100	425

Chi-Square obtained was .4887
Significant at the .92 level of confidence.

In-state vs. out-of-state.---In examining the data presented in Table 7, both groups have favorable attitude toward the physical education program at Western Kentucky University. In-state students tended to indicate more positive attitude. The chi-square obtained was 4.7204, significant at the .19 level of confidence. There was no significant difference in attitude between the in-state and out-of-state students.

TABLE 7
 COMPARISONS OF IN-STATE AND OUT-OF-STATE
 ATTITUDE RESPONSES

CATEGORY	IN-STATE		OUT-OF-STATE		TOTAL N
	N	%	N	%	
Extremely Worthwhile	96	26	10	18	106
Considerable Value	224	61	33	59	257
Little Value	44	12	12	21	56
Useless	5	1	1	2	6
TOTALS	369	100	56	100	425

Chi-Square obtained was 4.7204
 Significant at the .19 level of confidence

Good vs. poor physical education background.---As in all comparisons made, the data presented in Table 8 reveal that all the three groups have a favorable evaluation toward the physical education program at Western Kentucky University, although the three groups divided according to physical education background showed slight differences in comments about required physical education. The chi-square of 4.4006 indicated that these differences were not statistically significant and could well be attributed to chance.

TABLE 8
ATTITUDE RESPONSE RELATIVE TO PHYSICAL EDUCATION BACKGROUND

CATEGORY	PHYSICAL EDUCATION BACKGROUND						TOTAL N
	GOOD		MODERATE		POOR		
	N	%	N	%	N	%	
Extremely Worthwhile	13	25	56	25	37	25	106
Considerable Value	30	58	135	60	92	62	257
Little Value	9	17	31	14	16	11	56
Useless	0	0	2	1	4	2	6
TOTALS	149	100	224	100	52	100	425

Chi-Square obtained was 4.40006
Significant at the .62 level of confidence

Freshmen vs. upper classmen.--In analyzing the data presented in Table 9, both groups again gave a favorable evaluation of the physical education program at Western.

Upper classmen showed more low attitudes and fewer high positive attitudes toward required physical education. The chi-square obtained was 8.0252, significant at the .05 level of confidence. The null hypothesis was rejected, signifying a true difference in attitude toward the required physical education program at Western between the freshmen and upper classmen.

TABLE 9
ATTITUDE RESPONSE RELATIVE TO FRESHMEN AND UPPER-CLASSMEN

CATEGORY	FRESHMEN		UPPER-CLASSMEN		TOTAL
	N	%	N	%	N
Extremely Worthwhile	94	27	12	18	106
Considerable Value	215	60	42	61	257
Little Value	44	12	12	17	56
Useless	3	1	3	4	6
TOTALS	356	100	69	100	425

Chi-Square obtained was 8.0252
Significant at the .05 level of confidence

Active vs. passive.--A marked difference in attitude toward the required physical education program at Western Kentucky University was shown between groups divided according to their degree of activeness.

Table 10 shows that those who were active had strong, positive attitudes, while the passive had much less regard for required physical education. All the groups' evaluations of the required physical education program at Western Kentucky University were generally favorable. The chi-square of 34.2712 was significant at the .05 level of confidence. Therefore, the null hypothesis was rejected indicating a significant difference in attitude toward the required physical education program at Western Kentucky University.

TABLE 10
ATTITUDE RESPONSE RELATIVE TO DEGREE OF PARTICIPATION

CATEGORY	DEGREE OF PARTICIPATION						TOTAL N
	ACTIVE		MODERATE		PASSIVE		
	N	%	N	%	N	%	
Extremely Worthwhile	80	31	25	16	1	25	106
Considerable Value	162	62	93	58	2	50	256
Little Value	17	6	38	24	1	25	56
Useless	2	1	4	2	0	0	6
TOTALS	261	100	160	100	4	100	425

Chi-Square obtained was 34.2712
Significant at the .05 level of confidence

Attitude toward specific activities offered in the required physical education program at Western Kentucky University

In order to determine the attitude toward the activities offered in the required physical education program, subjects were asked to indicate their feelings toward the specific activity they had taken in Western's required physical education program relative to whether the activity was worthwhile, whether there was good instruction, whether they would recommend them to others, whether the activity should be taken in one semester, and whether the activity was beneficial. Each subject indicated the relative strength of his agreement or disagreement using the same scoring

system as in the Wear Attitude Inventory:² 5--strongly agree; 4--agree; 3--undecided; 2--disagree; and 1--strongly disagree.

To compute the collected data, the total number of attitude responses in each category for each activity were determined and classified, indicating the strength of agreement or disagreement. Furthermore, the total number of subjects indicating each category in all activities was computed. Finally, the average rating for each activity was determined.

Activity was worthwhile.--The attitude responses presented in Table 11 show that all the activities were generally considered worthwhile, since eighty-four per cent of the total responses were favorable. The average ratings ranged from 3.7, wrestling, to 4.7, beginning swimming, gymnastics, and trimnastics. None of the activities were evaluated below the neutral value of three, thus indicating a highly positive attitude regarding the worthwhile-ness of all activities in the program. Field hockey, judo, modern dance, and touch football were also rated above 4.0 point but the information was taken from small sampling.

²Wear, "Construction of Equivalent Form," XXVI, p. 113.

TABLE 11

ATTITUDE RESPONSE TOWARD SPECIFIC ACTIVITIES
RELATIVE TO "ACTIVITY WAS WORTHWHILE"

ACTIVITIES	STRENGTH OF AGREEMENT OR DISAGREEMENT					TOTAL N	AVE. SCORE VALUE
	STRONGLY AGREE 5	AGREE 4	UNDECIDED 3	DISAGREE 2	STRONGLY DISAGREE 1		
1. Archery	48	72	10	4	1	135	4.2
2. Badminton	12	11	3	1	2	29	4.0
3. Ballroom Dance	30	34	12	3	2	81	4.1
4. Beg. Swimming	42	11	1	3	0	57	4.6
5. Bowling	46	41	4	1	1	93	4.4
6. Conditioning	32	25	0	5	0	62	4.4
7. Field Hockey	2	1	1	0	0	4	4.3
8. Folk Dance	18	67	22	10	4	121	3.7
9. Golf	12	20	6	3	1	42	3.9
10. Gymnastics	8	3	1	0	0	12	4.6
11. Handball	29	19	3	2	3	56	4.2
12. Int. Swimming	35	16	1	3	0	55	4.5
13. Judo	2	2	0	0	0	4	4.5
14. Modern Dance	2	6	1	0	0	9	4.1
15. Soccer	7	13	4	1	2	27	3.8
16. Table Tennis	56	67	21	9	1	154	4.1
17. Tennis	17	20	3	1	0	41	4.3
18. Touch Football	3	5	1	0	0	9	4.2
19. Trimmastics	24	11	1	1	0	37	4.6
20. Volleyball	27	39	5	4	1	76	4.1
21. Wrestling	5	11	9	2	0	27	3.7
TOTALS	457	494	109	53	18	1131	
%	40	44	10	.05	.01	100	

Good instruction.--Table 12 shows that all but one of the activities had an average score value of 4.0 or above. Although touch football was the only activity that has an average score below this value this is still above the neutral value of 3.0. Therefore,

the results indicate a very high evaluation of activities in relation to good instruction. The high rating of field hockey and judo should be accepted cautiously because of the small number of students surveyed.

TABLE 12
ATTITUDE RESPONSE TOWARD SPECIFIC ACTIVITIES
RELATIVE TO "GOOD INSTRUCTION"

ACTIVITIES	STRENGTH OF AGREEMENT OR DISAGREEMENT					TOTAL N	AVE. SCALE VALUE
	STRONGLY AGREE 5	AGREE 4	UNDECIDED 3	DISAGREE 2	STRONGLY DISAGREE 1		
1. Archery	60	64	4	3	1	132	4.4
2. Badminton	14	10	1	2	2	29	4.1
3. Ballroom Dance	46	32	1	1	1	81	4.5
4. Beg. Swimming	38	18	1	0	0	57	4.6
5. Bowling	41	36	6	7	1	91	4.2
6. Conditioning	28	31	2	1	0	62	4.4
7. Field Hockey	2	2	0	0	0	4	4.5
8. Folk Dance	51	57	6	5	2	121	4.2
9. Golf	14	21	4	2	1	42	4.1
10. Gymnastics	6	3	0	0	0	9	4.7
11. Handball	25	21	2	5	4	57	4.0
12. Int. Swimming	36	16	1	2	0	55	4.6
13. Judo	3	1	0	0	0	4	4.8
14. Modern Dance	4	5	1	0	0	10	4.3
15. Soccer	12	13	2	0	0	27	4.4
16. Table Tennis	71	66	8	7	2	154	4.3
17. Tennis	19	16	3	2	1	41	4.2
18. Touch Football	0	8	1	0	0	9	3.9
19. Trimmastics	23	13	0	1	0	37	4.6
20. Volleyball	33	36	6	1	0	76	4.3
21. Wrestling	10	11	1	2	0	24	4.2
TOTALS	556	480	50	41	15		
%	48	43	.04	.04	.01	100	

Would recommend to others.---The extent to which the students would recommend each activity to others is shown in Table 13.

TABLE 13

ATTITUDE RESPONSE TOWARD SPECIFIC ACTIVITIES
RELATIVE TO "WOULD RECOMMEND TO OTHERS"

ACTIVITIES	STRENGTH OF AGREEMENT OR DISAGREEMENT					TOTAL N	AVE. SCALE VALUE
	STRONGLY AGREE 5	AGREE 4	UNDECIDED 3	DISAGREE 2	STRONGLY DISAGREE 1		
1. Archery	58	69	5	2	1	135	4.3
2. Badminton	11	10	4	3	1	29	3.9
3. Ballroom Dance	29	32	9	8	4	82	3.9
4. Beg. Swimming	38	14	4	1	0	57	4.6
5. Bowling	42	42	5	1	2	92	4.3
6. Conditioning	26	20	9	4	3	62	4.0
7. Field Hockey	1	2	0	1	0	4	3.8
8. Folk Dance	27	57	23	12	1	120	3.8
9. Golf	14	17	6	4	1	42	3.9
10. Gymnastics	5	5	1	1	0	12	4.2
11. Handball	26	19	5	4	3	57	4.1
12. Int. Swimming	20	22	7	3	3	55	4.0
13. Judo	1	1	2	0	0	4	3.8
14. Modern Dance	2	5	2	1	0	10	3.8
15. Soccer	10	12	1	2	2	27	4.0
16. Table Tennis	53	69	21	11	1	155	4.0
17. Tennis	13	17	9	1	2	42	3.9
18. Touch Football	3	6	0	0	0	9	4.3
19. Trimmastics	22	10	4	1	0	37	4.4
20. Volleyball	25	40	5	5	1	76	4.0
21. Wrestling	4	10	5	3	1	23	3.6
TOTALS	430	479	127	68	26	1130	
%	38	42	12	.06	.02	100	

All activities were evaluated above the neutral value of 3.0 indicating a positive attitude in relation to recommending the activities to others. The ratings ranged from 3.6 for wrestling to 4.6 for beginning swimming. Joining beginning swimming in the most highly recommended groups were trimnastics, archery, bowling and touch football, while field hockey, judo, modern dance, and folk dance were classed with wrestling as least recommended. The rating of touch football is again questionable because there were only nine responses evaluated.

Activity should be taken in one semester.--All activities in required physical education are taught on a bi-term basis; i.e., each activity covers one half a semester. An effort was made to determine whether this time was considered adequate by the student by asking the extent to which the student agreed that the course should be extended to full semester. The data presented in Table 14 shows that there was considerable disagreement among students on this question, and that there was considerable divergence among the various activities in the program.

Archery, badminton, ballroom dance, folk dance, intermediate swimming, modern dance, soccer, table tennis, volleyball, and wrestling were rated below 3.0 indicating that these activities should remain on a bi-term basis. The activities that were rated above 3.0 point were beginning swimming, bowling, conditioning, gymnastics, handball, judo, and trimnastics, indicating that the students would prefer taking them for one semester. But it is important to note that although judo and gymnastics were rated 4.5

and 4.0 respectively, the small sampling in these activities should be taken into consideration. On the other extreme, modern dance had 1.5 points but only four responses were evaluated. Tennis was the only activity rated 3.0, indicating a neutral position.

TABLE 14

ATTITUDE RESPONSE TOWARD SPECIFIC ACTIVITIES RELATIVE
TO "ACTIVITY TO BE TAKEN IN ONE SEMESTER"

ACTIVITIES	STRENGTH OF AGREEMENT OR DISAGREEMENT					TOTAL N	AVE. SCALE VALUE
	STRONGLY AGREE 5	AGREE 4	UNDECIDED 3	DISAGREE 2	STRONGLY DISAGREE 1		
1. Archery	16	10	27	44	8	105	2.8
2. Badminton	1	0	2	5	3	11	2.2
3. Ballroom Dance	13	6	14	22	8	63	2.9
4. Beg. Swimming	4	2	3	1	0	10	3.9
5. Bowling	30	18	16	19	3	86	3.6
6. Conditioning	12	9	7	14	4	46	3.2
7. Field Hockey	0	0	0	0	0	0	-
8. Folk Dance	9	11	16	31	15	82	2.6
9. Golf	0	0	0	0	0	0	-
10. Gymnastics	2	0	4	3	0	9	4.0
11. Handball	12	9	7	15	5	48	3.2
12. Int. Swimming	8	8	12	23	4	55	2.9
13. Judo	1	1	0	0	0	2	4.5
14. Modern Dance	1	0	1	1	1	4	1.5
15. Soccer	0	0	1	2	0	3	2.3
16. Table Tennis	20	10	30	73	22	155	2.6
17. Tennis	1	0	0	0	1	2	3.0
18. Touch Football	0	0	0	0	0	0	-
19. Trimmastics	19	5	5	8	0	37	3.9
20. Volleyball	0	3	5	12	1	21	2.4
21. Wrestling	2	4	3	9	5	23	2.5
TOTALS	151	96	153	282	80	762	
%	20	13	20	37	10	100	

Activity was beneficial.--In this particular category, a majority felt that the activities offered in the required physical education program were beneficial, since sixty-seven per cent of the total responses were favorable (Table 15).

TABLE 15

ATTITUDE RESPONSE TOWARD SPECIFIC ACTIVITIES
RELATIVE TO "ACTIVITY WAS BENEFICIAL"

ACTIVITIES	STRENGTH OF AGREEMENT OR DISAGREEMENT					TOTAL N	AVE. SCALE VALUE
	STRONGLY AGREE 5	AGREE 4	UNDECIDED 3	DISAGREE 2	STRONGLY DISAGREE 1		
1. Archery	23	72	27	12	1	135	3.8
2. Badminton	9	7	7	4	2	29	3.6
3. Ballroom Dance	25	25	18	10	3	81	3.7
4. Beg. Swimming	35	18	3	0	1	57	4.5
5. Bowling	30	42	14	6	0	92	4.0
6. Conditioning	23	28	8	1	2	62	4.1
7. Field Hockey	2	1	0	1	0	4	4.0
8. Folk Dance	10	39	47	22	2	120	3.3
9. Golf	8	14	12	7	1	42	3.5
10. Gymnastics	4	4	3	1	0	12	3.9
11. Handball	17	22	11	4	2	56	3.9
12. Int. Swimming	31	18	3	2	1	55	4.4
13. Judo	0	4	0	0	0	4	4.0
14. Modern Dance	2	4	4	0	0	10	3.8
15. Soccer	4	14	2	5	2	27	3.5
16. Table Tennis	26	64	38	25	2	155	3.6
17. Tennis	5	26	6	3	1	41	3.8
18. Touch Football	2	3	3	1	0	9	3.7
19. Trimmastics	23	9	4	1	0	37	4.5
20. Volleyball	15	32	19	6	4	76	3.6
21. Wrestling	3	8	9	3	1	24	3.4
TOTALS	297	454	238	114	25	1128	
%	27	40	21	10	.02	100	

Beginning swimming and trimnastics which had the highest rating were also the highest in worthwhileness (see Table 11). The lowest was 3.3 for folk dance, but even then this is above the neutral value. Therefore, it also indicated a positive attitude. It was also noted that twenty-one per cent of the total attitude responses were neutral, which was the highest in any attitude category in this study.

Summary

The chi-square test was used to compare the distribution of Wear Inventory scores by sex, residence, physical education background, classification and degree of activeness. No significant difference was found between men and women, in-state and out-of-state students, students with good and poor physical education background, and freshmen and upper classmen. There was a significant difference in attitude toward physical education in groups divided according to their degree of activeness. However, it is important to note that all the various groups compared have a positive attitude toward physical education, since more than seventy-five per cent of the total subjects measured scored above the neutral value of ninety points.

Strikingly similar patterns of evaluation were demonstrated among men and women, in-state and out-of-state students, those with good and poor physical education background, and the freshmen and upper classmen toward the required physical education program at Western Kentucky University. The general evaluation was favorable with most students checking "extremely worthwhile" and "of considerable value" in each group. Again, a marked difference in attitude toward

the required physical education program at Western Kentucky University was only shown between the groups divided according to their degree of activeness, but all the groups evaluation were also generally favorable. The least active showed the least positive attitude.

The evaluation of the activities offered in the required physical education program at Western Kentucky University were generally high. An examination of the tables showed that all the attitude responses evaluated relative to whether the activity was worthwhile, whether there was good instruction, whether the activity should be recommended to others, or whether the activity was beneficial, have an average scale value above 3.0 points, the neutral value, thus indicating a positive attitude.

Specifically, beginning swimming, gymnastics, and trimnastics were rated the highest in worthwhileness, while wrestling was the lowest. Although some of the activities were rated high such as field hockey, judo, modern dance, and touch football were taken from small sampling. As for good instruction, all activities were rated high but again activities like field hockey and judo should be considered at face value because it ~~is~~ taken from few cases. Although all the activities were rated high in the extent to which the students would recommend each activity to others, beginning swimming was rated the highest while at the other extreme was wrestling. Again touch football rated high, although there were only nine responses evaluated. There was considerable disagreement among the students regarding the question whether activity should be taken in one semester or remain in bi-term

basis. The activities that were rated above 3.0 points were beginning swimming, bowling, conditioning, gymnastics, handball, judo and trimnastics, indicating that students would prefer taking them for one semester, while the rest of the activities the students agreed should remain in bi-term basis (tennis was the only activity rated exactly neutral). The evaluation in relation to whether the activity was beneficial was high, and the rating of the activities was consistent with a similar question in the questionnaire regarding worthwhileness. Beginning swimming and trimnastics were the activities rated the highest in both benefit and worthwhileness of activities.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to analyze stated attitude responses of men and women students toward physical education at Western Kentucky University.

The data were obtained through a two-part questionnaire. Part I was a fifteen-item information questionnaire carefully constructed to determine attitude toward the required physical education, and attitude toward the activities offered specifically at Western's required physical education program. Part II was the Wear Attitude Inventory Form A, a thirty-item instrument proven to be valid and reliable to measure attitudes toward physical education as an activity course.

Two hundred and nine women and 220 men were selected by random techniques from all students enrolled in required physical education at Western Kentucky University. The questionnaire-inventory was administered to these students during the first two days in the second bi-term of the spring semester of 1970.

All the data gathered were recorded on a master I.B.M. sheet and individual cards were punched. Analysis of data, which included the frequency tables and calculation of the chi-square test used to determine the consistency of attitude responses of the various groups, were done by the Computer Center.

On the Wear Inventory, scores ranged from a low score of thirty-eight to a high score of 150 points. Approximately seventy-five per cent of the scores were above 110, which was twenty points higher than the neutral value of ninety, indicating a strong favorable attitude toward physical education of Western students.

No significant differences in attitude existed between men and women, in-state and out-of-state, those with good and those with poor physical education background, and between freshmen and upper classmen.

Active students did have a more positive attitude toward physical education than their more passive counterparts.

In an effort to measure the general attitude toward Western's required physical education program, the students were asked to evaluate the program in relation to whether it was extremely worthwhile, whether it was of considerable value, whether it was of little value or whether it was useless. Again the students responses were compared by sex, by residence, by physical education background, by classification, and by degree of activeness. All groups evaluation were generally favorable. Freshmen and upper classmen and active and passive students differed significantly in their ratings, with freshmen and the active students having more favorable attitudes.

To determine the attitude toward specific activities offered in the required physical education program, the subjects were asked to indicate their feelings relative to whether the activity was worthwhile, whether the instruction was good, whether they would

recommend them to others, whether the course should be taken for the whole semester, and whether the course was beneficial. Again, students evaluations of the activities were generally high. It was only in the question of whether or not the activity should be taken in one semester that some of the attitude responses were negative.

Conclusions

Fully considering the limitation of this study, the following conclusions seem to be justified:

1. Students enrolled at Western Kentucky University during the spring semester of 1970 had a rather favorable attitude toward physical education.
2. Attitudes toward physical education did not differ between men and women, in-state and out-of-state students, with good and poor physical education background, and between freshmen and upperclassmen.
3. There tended to be a relationship, although not significant, between positiveness of attitude and the number of years of physical education a high school student had, the more years the better his attitude toward physical education tends to be.
4. The upperclassmen showed more low attitudes and fewer high positive attitude.
5. Active students have strong positive attitudes while the passive students had less regard for physical education.
6. To the effect concerning attitude toward specific activities in required physical education program, the following were the findings:

- a) beginning swimming, gymnastics, and trimnastics were rated the highest in worthwhileness, and although wrestling was rated the lowest, still it was above the neutral value of 3.0 points.
- b) the students generally agreed that the instruction in the activities of the required physical education program was good in all cases.
- c) together with beginning swimming which had the highest rating, trimnastics, archery, bowling, and touch football were the most highly recommended, while field hockey, judo, modern dance, and folk dance were classed with wrestling as least recommended. Again, it should be kept in mind that even though the latter activities were least recommended they still were rated favorable by the students.
- d) with regards to the activity being beneficial, beginning swimming and trimnastics were rated the highest, as it was also in worthwhifleness.

7. The activities that the students would prefer taking for the entire semester were beginning swimming, bowling, conditioning, gymnastics, handball, judo, and trimnastics. While the rest of the activities the students agreed should remain in a bi-term basis. Tennis was the only activity rated neutral.

APPENDIX A

WESTERN KENTUCKY UNIVERSITY

PHYSICAL EDUCATION ATTITUDE INVENTORY

INSTRUCTIONS: (Read carefully)

In the following questionnaire you are asked to indicate your attitude toward statements concerning your feeling toward the required physical education program. Please do not consult anyone concerning any of the statements; only your opinion is needed.

1. There are no right or wrong answers to the statements.
2. What we want is your honest opinion.
3. Since you are requested not to identify your paper in any way, the attitudes you present will not affect your grade in your present physical education class.
4. Please complete and answer the questionnaire the best you can and return to the person administering the inventory.

It is hoped that through this study, a faculty committee can make recommendations to improve our future program. Thank you for your assistance with this project.

PART I

1. School from which you graduated: _____
 Location: _____

City
State
2. Sex (circle): Male, Female
3. Classification (circle): Freshman, Sophomore, Junior, Senior
4. Indicate the number of years you took Physical Education from grades 7 to 12. Check on the space provided before each year.
 - _____ 1 year or less
 - _____ 2 years
 - _____ 3 years
 - _____ 4 years
 - _____ 5 years
 - _____ 6 years

5. Check one of the following, showing how you classify yourself in terms of physical activity (play).

- a. Active person and enjoy physical activity
 b. Participate moderately
 c. Do not participate and dislike it

6. Indicate your estimate how much you had participated in each of the following type of physical activities in high school years (need not be in school). Check one in each column.

	Team Sports	Indiv. Sports	Gymnastics	Dance	Swimming & Diving
Frequently (3 or more times per week)					
Sometimes (1 or twice per week)					
Seldom or Never (less than 1 time per week)					

7. Indicate below the ACTIVITY you had for the 1st Bi-term of Physical Education at Western:

Activity _____ Time _____ Days _____

8. In the following table, indicate your feelings concerning your 1st Bi-term activity class. Check one in each column.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Course was worthwhile					
Instruction was good					
Would recommend to others					
Course should be taken for the whole semester					
Very beneficial					
Will be useful in the future					
Was the class I wanted to take					
Do not want it at first but like it later					

9. Indicate below the ACTIVITY you had for the 2nd Bi-term of Physical Education at Western.

Activity _____ Time _____ Days _____

10. In the following table, indicate your feelings concerning your 2nd Bi-term activity class. Check one in each column.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Course was worthwhile					
Instruction was good					
Would recommend to others					
Course should be taken for the whole semester					
Very beneficial					
Will be useful in the future					
Was the class I wanted to take					
Do not want it at first but like it later					

11. Indicate below the ACTIVITY you had for the 3rd Bi-term of Physical Education at Western:

Activity _____ Time _____ Days _____

12. In the following table, indicate your feelings concerning your 3rd Bi-term activity class. Check one in each column.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Course was worthwhile					
Instruction was good					
Would recommend to others					
Course should be taken for the whole semester					
Very beneficial					
Will be useful in the future					
Was the class I wanted to take					
Do not want it at first but like it later					

13. Generally speaking, how do you classify Physical Education at Western, based on your Required Physical Education to date. Check one on the space provided before each letter.
- a. Extremely worthwhile
 b. Of considerable value
 c. Of little value
 d. Useless
14. In your opinion, where physical education is NOT REQUIRED, would you take classes of your own choice?
- a. Yes
 b. No
15. If your answer to question 14 was NO, explain why. Be perfectly honest (no way that you can be identified).

APPENDIX B

PART II

DIRECTIONS - Please Read Carefully:

Below you will find some statements about physical education. We would like to know how you feel about each statement. You are asked to consider physical education only from the standpoint of its place as an activity course taught during a regular class period. No reference is intended in any statement to interscholastic or intramural athletics. People differ widely in the way they feel about each statement. There are no right or wrong answers. Indicate your opinion by circling the number before each statement which best expresses your feeling about each statement. Try to avoid circling number 4 "undecided" in many instances.

STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE
5	4	3	2	1

- 5 4 3 2 1 1. If for any reason a few subjects have to be dropped from the school program, physical education should be one of the subjects dropped.
- 5 4 3 2 1 2. Physical education activities provide no opportunities for learning to control the emotions.
- 5 4 3 2 1 3. Physical education is one of the more important subjects in helping to establish and maintain desirable social standards.
- 5 4 3 2 1 4. Vigorous physical activity works off harmful emotional tensions.
- 5 4 3 2 1 5. I would take physical education only if it were required.
- 5 4 3 2 1 6. Participation in physical education makes no contribution to the development of poise.
- 5 4 3 2 1 7. Because physical skills loom large in importance in youth, it is essential that a person be helped to acquire and improve such skills.
- 5 4 3 2 1 8. Calisthenics taken regularly are good for one's general health.
- 5 4 3 2 1 9. Skill in active games or sports is not necessary for leading the fullest kind of life.

- 5 4 3 2 1 10. Physical education does more harm physically than it does good.
- 5 4 3 2 1 11. Associating with others in some physical education activity is fun.
- 5 4 3 2 1 12. Physical education classes provide situations for the formation of attitudes which will make one a better citizen.
- 5 4 3 2 1 13. Physical education situations are among the poorest for making friends.
- 5 4 3 2 1 14. There is not enough value coming from physical education to justify the time consumed.
- 5 4 3 2 1 15. Physical education skills make worthwhile contributions to the enrichment of living.
- 5 4 3 2 1 16. People get all the physical exercise they need in just taking care of their daily work.
- 5 4 3 2 1 17. All who are physically able will profit from an hour of physical education each day.
- 5 4 3 2 1 18. Physical education makes a valuable contribution toward building up an adequate reserve of strength and endurance for everyday living.
- 5 4 3 2 1 19. Physical education tears down sociability by encouraging people to attempt to pass each other in many of the activities.
- 5 4 3 2 1 20. Participation in physical education activities makes for a more wholesome outlook on life.
- 5 4 3 2 1 21. Physical education adds nothing to the improvement of social behavior.
- 5 4 3 2 1 22. Physical education class activities will help to relieve and relax physical tensions.
- 5 4 3 2 1 23. Participation in physical education activities helps a person to maintain a healthful emotional life.
- 5 4 3 2 1 24. Physical education is one of the more important subjects in the school program.
- 5 4 3 2 1 25. There is little value in physical education as far as physical well-being is concerned.

- 5 4 3 2 1 26. Physical education should be included in the program of every school.
- 5 4 3 2 1 27. Skills learned in a physical education class do not benefit a person.
- 5 4 3 2 1 28. Physical education provides situations for developing desirable character qualities.
- 5 4 3 2 1 29. Physical education makes for more enjoyable living.
- 5 4 3 2 1 30. Physical education has no place in modern education.

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