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A STUDY OF HIGH SCHOOL BOYS' INTERESTS  
IN PHYSICAL EDUCATION ACTIVITIES  
IN MERCER COUNTY, NORTH DAKOTA

by

FREDRICK ALLEN GOODMAN

B. S. Minot State Teachers College, 1948

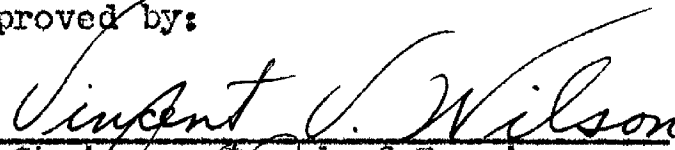
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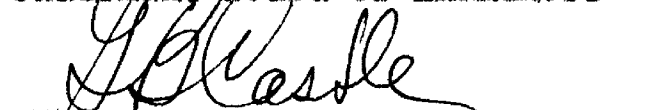
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## CHAPTER I

### PROBLEM AND DEFINITIONS OF TERMS USED

In the majority of schools studied, it was found that the interests of the students in physical education activities have not been given sufficient consideration when establishing physical education programs. Furthermore, a survey of the literature indicates that this is true elsewhere. As Voltmer and Esslinger state, "The characteristics of children are rarely given the consideration they merit by physical educators when they organize and develop their courses of study. Considerable physiological and psychological harm has been done by the selection of activities which are not suited to the capacities and interests of the students. Before any program of activities is provided the demands of those activities on one hand and the interests, desires, urges, strength, endurance, motor ability and skills of the students on the other hand must be known."<sup>1</sup>

#### I. THE PROBLEM

Statement of the problem. This study was carried out in order to evaluate the activities that may be included in

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<sup>1</sup>Edward Voltmer and Arthur Esslinger, The Organization and Administration of Physical Education (New York: Appleton-Century-Crofts, Inc., 1949) p. 73.

a high school boys physical education activity program. It was the purpose of this study to compare (a) the programs of five schools of Mercer County, North Dakota; (b) the interest of the boys in these five schools; and (c) the activities rated most desirable by experts in the field of physical education with the activities rated most interesting by the high school boys of Mercer County, North Dakota. The following questions arose in seeking a solution to this problem. The relationship between: (a) time spent on the various activities with their status on the interest scale; (b) the interest ratings of the four classes in the high schools; (c) the interest ratings of the boys in each of the five high schools surveyed; (d) the method used to gain interest in the physical education activities and the degree of proficiency that the boys desired to attain in the activities in which they indicated interest.

Importance of the study. As far as the author has been able to determine, the following reasons indicate the need for this study: (a) a previous study of student interest in physical education activities has not been made in Mercer County, North Dakota; (b) an evaluation of the importance of considering students' interest in establishing a good program is necessary;<sup>1</sup> and (c) it is important that makers of curricula ascertain by some technique the actual interests of

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<sup>1</sup>Loc. cit., p. 72.

present-day children. Children's interests change due to changing environments.<sup>1</sup>

Limitations of the study. This study was limited to the male students of the high schools in Mercer County, North Dakota, during the school year 1952-1953. Schools participating in this survey were: Beulah, Golden Valley, Hazen, Stanton, and Zap.

The activity questionnaire completed by the physical education instructors did not concern itself with the variety or recreational activities carried on by the school during after-school hours.

## II. DEFINITIONS OF TERMS USED

Physical Education: "Physical Education is considered as that part of all education which proceeds by means of, or predominantly through, physical activity."<sup>2</sup>

Physical Education Activity Program: That part of the physical education program concerned with activities, such as baseball, basketball, marching, free exercise, golf, tumbling, volleyball and tennis.

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<sup>1</sup>E. L. Thorndike, "The Permanence of Interests and Their Relation to Abilities," Popular Science Monthly, August, 1912, p. 456.

<sup>2</sup>Edward Voltner and Arthur Esslinger, The Organization and Administration of Physical Education (New York: Appleton-Century-Crofts, Inc., 1949), p. 28.

Interest: "Interest is that feeling of wanting to know, see, do, own, share in or take part in some activity, or the power of arousing such a feeling."<sup>1</sup>

Carry-over Activities: Activities that are useful after school days are over as well as while the participant is in school. "These children must learn skills and acquire interests in physical activities which they will be disposed to continue after school days are over."<sup>2</sup> Some of the activities which might be included in this category are: golf, volleyball, tennis, bowling, swimming, and hiking.

### III. ORGANIZATION OF REMAINDER OF THE THESIS

Division of the remainder of the thesis. The following material will give the reader a brief description of the remainder of the study.

Chapter II contains a background of related literature. An attempt will be made to show the need for a study of interest in physical education and the research that was completed on this problem.

Chapter III presents the method used in the study, construction of the questionnaire, schools that participated in the survey, information for administering the checklist, and manner of tabulation.

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<sup>1</sup>Thorndike-Barnhart High School Dictionary, (Chicago: Scott, Foresman and Company, 1952), p. 514.

<sup>2</sup>Jesse Feiring Williams, The Principles of Physical Education. (Philadelphia and London: W. B. Saunders Company, 1942), p. 199.

A comparison of time spent on activities, the interest ratings of the activities by the boys, the facilities available, and the degree of proficiency the boys would like to attain is shown in chapter IV.

Chapter V gives a comparison of the interest in activities as indicated by the four high school classes, the interest in activities as shown by the five high schools, the experts' rating of activities with the interest ratings as indicated by the boys.

The sixth and final chapter contains the summary of the findings of this study along with recommendations made as a result of this study.

## CHAPTER II

### REVIEW OF THE LITERATURE

Literature on interest. There appeared to be a definite question in the minds of many educators as to whether or not the programs formulated by the teachers and leaders of physical education would also be the ones which appealed strongly to the participants.<sup>1</sup>

"The main business of curriculum making is two fold; first, to know what interests, native or acquired, lie available in the child's nature; second, to know how these may be stimulated, guided, and directed, so as to bring growing. One main part of our curriculum making is to know and stir interest that might otherwise be dormant."<sup>2</sup>

It seemed that interest was one of the ties between the activity and the participant. As stated by W. H. Kilpatrick,

"This doctrine of interest says that interest so understood, is the guarantee of attention and effort; and that such attention and interested effort best utilizes the laws of learning, particularly the laws of set, readiness and effect. So stated, the doctrine of interest is nothing but the doctrine of mind-set and learning."<sup>3</sup>

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<sup>1</sup>Eugene Nixon and Frederick Cozens, An Introduction to Physical Education. (Philadelphia: W. B. Saunders Company, 1941), p. 92.

<sup>2</sup>W. H. Kilpatrick, Foundation of Method (New York: The MacMillan Company, 1925), p. 148.

<sup>3</sup>Ibid., p. 59.



It appeared that interest in an activity provided the drive to engage in it, insured more rapid learning, and was a factor in satisfying experiences.

Literature on Interest in Physical Education Activities.

In physical education the relationship between the interests of the participant and the activity was one of the important factors which tended to bring about a more united response. There was less chance of having divided attention when interest was present. Also, through interest in any activity may be found the desire to continue in that activity when instruction is over--even into adult life. It would seem that a present day physical education program, the idea of a psychological approach should prevail. This approach considers the child's needs and urges. It continues the instruction with consideration of the child's impulses and individual differences. What the child of one age level likes to do may not interest a child of another age level. Climbing would satisfy one, but may not satisfy the other. In each period of life a child seems to have certain traits which hold for that period alone. This group of traits are among the criteria that should be guides in the selection of activities for a program.

"Interest in an activity promotes retention of the learning acquired; the guarantee of carry-over resides in both the nature of the activity and the interest developed in it."<sup>1</sup>

Interest has been called the keystone to the arch of

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<sup>1</sup>Jesse Feiring Williams, The Principles of Physical Education (Philadelphia and London: W. B. Saunders Company, 1944), p. 327.

learning. Investigators have been able to prove, with accepted demonstrations, that the learning curve will show great increase, and in turn, better learning, in proportion to interest and the activity being performed. The greater the interest, the greater is the rise in the curve. To take advantage of this, it would appear that the instructors who would like to promote a program of lasting value, should check their students to discover the type of activity which will have the greatest interest. Activities that are motivated because of interest tend to bring the best response. It is reasonable to assume that the instructor who has the whole-hearted response of his class may have the best results.<sup>1</sup>

As can be expected, there are many things which enter into the interest factor of students. The physical, social, emotional and mental status of the pupils must be considered as well as the experiences and their environments in trying to determine their interests. If the student cannot enter into an activity because of a physical handicap, or if the pupil has not been too successful in strenuous games, but shows progress in individual activities, he may not be especially interested in a team game such as football or soccer.<sup>2</sup>

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<sup>1</sup>Grenville B. Johnson, The New Physical Education (Minneapolis, Minnesota: Burgess Publishing Company, 1935) p. 45.

<sup>2</sup>Leslie W. Irwin, The Curriculum in Health and Physical Education (St. Louis: The C. V. Mosby Company, 1944) p. 311.

"Because interest means so much in all phases of the development, provisions should be made for the individual differences in interest so far as possible. This is very true of the senior high school and college level."<sup>1</sup>

The term "intrinsic interest" must not be confused with a child's passing fancy or temporary whim. The basic interests of the students must be considered in order to establish the program with the most permanent value. What the child desires one day and will probably disregard the next day should be eliminated from consideration in determining their genuine interest. The best program of activities is the one which will give the greatest promise of meeting the lasting needs of the students who participate.<sup>2</sup> In too many cases, the strenuous and vigorous team activities constitute the most prominent features of the physical education program. It is true that they are probably the basis for the program, as they involve the reactions and urges which the students possess and also find satisfaction in doing because of the organic urges which they satisfy. This is why the interests of the students are not to be taken as the only basis for developing a program. In this case, the instructor's knowledge of the needs and capacities of the students must be put to use. Children will seldom enter into an activity with enthusiasm, just because it is educational or healthful; then

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<sup>1</sup>Ibid., p. 312

<sup>2</sup>E. L. Thorndike, "The Permanence of Interest and Their Relation to Abilities," Popular Science Monthly, August, 1912, p. 45.

the teaching ability of the instructor must be brought into play to make the worth-while things interesting.<sup>1</sup>

As previously mentioned, the best program of activities is the one which gives the greatest promise of meeting the needs of the individual or group being educated.

"In modern education, this problem has been generally recognized. But very commonly physical educators have failed to reach an acceptable solution. The one factor which has stood more than any other in the way of an adequate solution of the problem has been the tendency to proceed entirely from the adult's point of view, without proper regard for the needs from the child's point of view, and with little consideration for the inherent characteristics and interests of children."<sup>2</sup>

With regard to the carry-over values in activities, an important question is how to teach leisure time activities with the most assurance that the activities so taught will actually be used in the later life of the individual.

"The answer to this question centers about the fact that individuals tend to pursue types of activities in which they feel a genuine interest and from which they derive satisfaction or pleasure. Every effective effort to promote the carry-over values of forms of activity from the school-life into adult life must be consistent with these psychological principles--activities inherently interesting."<sup>3</sup>

Literature on previous research. Four studies were

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<sup>1</sup>Wilbur P. Bowen, The Conduct of Physical Activities (New York: A. S. Barnes and Company, 1927), p. 27.

<sup>2</sup>Clark W. Hetherington, School Program in Physical Education (Yonkers, New York: World Book Company, 1922), pp. 54-55.

<sup>3</sup>Eugene W. Nixon and Frederick W. Cozens, An Introduction to Physical Education (Philadelphia and London: W. B. Saunders Company, 1941), p. 191.

used in providing the list of activities for the questionnaires. Some of the studies did not take into consideration the selection of activities on the basis of interest alone, but used other factors in their selection. These four studies are considered in the following paragraphs.

The LaPorte study was based on the value of including the activity in physical education program from the contribution the activity makes to the participant. The activity was judged on the following factors: (1) contribution to the physical and organic growth; (2) the social contribution; (3) the psychological contribution; (4) the development of safety skills; and (5) the development of recreational skills. This study was formulated by the American Association of Health and Physical Education and then administered by instructors in various schools of the United States. Then LaPorte compiled and evaluated the results and made his findings available to the public.<sup>1</sup>

The study made by Curtis was based upon the relative values of physical education activities from the standpoints of safety, development of posture, degree of participation, exercise value, and value in developing loyalty and cooperation. The above values were selected as significant in conference with classes at Washington University and the University of

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<sup>1</sup>William LaPorte, The Physical Education Curriculum, (Los Angeles: The University of Southern California Press, 1945), p. 13.

Missouri.<sup>1</sup>

Lindwall's study<sup>2</sup> was administered to the Manitowoc Public Schools, Manitowoc, Wisconsin. The activities were selected on the basis of the following guides: (1) physical or organic need; (2) social or citizenship needs; (3) psychological needs; (4) safety skills; (5) Recreation or hobby skills; and (6) corrections of physical defects.

The study made by Williams<sup>3</sup> was developed by his advanced classes in the study of problems of administration of physical education. He used as his basis of evaluation the following factors: (1) physiological; (2) mental; (3) social needs; and (4) the practicability of the activity as an item in a physical education program.

Through gleaning the studies made by the above-mentioned people, the selected activities were incorporated into the questionnaires and were surveyed from the angle of interest to the students.

A comparison of the activities rated desirable by the authors of the four studies with the activities rated

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<sup>1</sup>Henry S. Curtis, "Relative Values of Physical Activities in High School," School Life, 1925, Vol. X, pp. 161-63.

<sup>2</sup>Robert E. Lindwall, Intramural Activities (Manitowoc, Wisconsin: Department of Physical and Health Education, Manitowoc Public Schools, Manitowoc, Wisconsin, 1933), p. 21.

<sup>3</sup>Jesse F. Williams, The Organization and Administration of Physical Education (New York: The MacMillan Company, 1922), p. 63.

by the boys' interests is given in chapter five.

## CHAPTER III

### THE METHOD USED AND GROUPS STUDIED

The questionnaire method was used in this survey due to the numerous activities and the large number of students who were asked to participate in the survey.

Construction of the questionnaire. Through a review of similar studies by (a) LaPorte, (b) Curtis, (c) Lindwall, and (d) Williams, as explained in chapter two, a check list of thirty-five activities was constructed. These included the activities most likely to be included or which could be included in a physical education program. Space was provided to add activities of interest to the students, which were not included in the check list.

There were two questionnaires: (a) an interest questionnaire which was sent to all the male students in the five high schools surveyed; and (b) an activity questionnaire which was sent to all the physical education instructors in the schools. A copy of the interest questionnaire can be found on page 64 of the appendix and a copy of the activity questionnaire can be found on page 62.

Interest questionnaire. To the right of each activity were provided three groups of blanks in which the student could indicate his degree of interest, how he had obtained



that interest, and the degree of proficiency the student would like to attain in each activity in which he had indicated interest. The degree of interest had a numerical value which ran from a low degree of number one to a high degree of number ten. In the survey of how the student attained his interest in the activity there were three blanks which the student could check, namely, whether he gained his interest by participating in the activity, by observing the activity, or by reading about the activity. They could check one, or two, or all three blanks, depending on how their interest was obtained. In the last blank, the students were asked to check the degree of proficiency desired in the activity. This also had a numerical scale which ran from one to three as a spectator, four to seven as an occasional player, and eight to ten as a skilled performer.

Activity questionnaire. This questionnaire was sent to all the high school physical education instructors in Mercer County. It also listed thirty-five activities. In this questionnaire, the instructors were asked to check the activities included in their physical education programs, the amount of time spent on each activity, and the adequacy of the facilities available for that activity. They were instructed to check only the activities and note the time spent on activities which were a part of the regular physical education program. The varsity sports and time spent on varsity sports, not included in the regular physical education program were not considered in this questionnaire.

Participating students and schools. All the male students in the five high schools of Mercer County, North Dakota were asked to take part. The schools involved were: Beulah, Golden Valley, Hazen, Stanton, and Zap. A copy of the letter sent to the superintendent of each school, asking permission to conduct the survey in his respective school, may be found on page 61 of the appendix.

Response to the questionnaire. According to the American Association for Health, Physical Education and Recreation, doubt is attached to findings based on scant returns to a questionnaire. Adequate responses vary with the nature of study, but returns of over 50 per cent are generally considered satisfactory.<sup>1</sup>

In this study, all the schools cooperated, with a student participation and return of 73.20 per cent. The boys who did not participate were out of school due to illness or were engaged in some other activities when the questionnaire was handed out.

All the physical education instructors returned their questionnaires completed.

Tabulation of the responses to the questionnaires. The degree of student interest was indicated by numerical values from one to ten. These numbers for each activity were totaled. From these totals, a rank order of activities was obtained.

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<sup>1</sup>Gladys M. Scott, et. al., of the Steering Committee Research Methods Applied to Health, Physical Education and Recreation. (Washington, D. C.: American Association for Health, Physical Education, and Recreation, 1947) p. 345.

## CHAPTER IV

### COMPARISONS OF INTEREST, TIME, FACILITIES AND DEGREE OF PROFICIENCY DESIRED

#### I. INTEREST AND TIME

Time spent on each activity. The following graphs show the percentage of time spent on each physical education activity in the schools that participated in this survey. Figure I on page 22 show the average percentage of time spent on each activity by all schools. Figures 2 through 6 present the individual school activity programs and the percentage of time allotted to each activity. Figures 7 through 20 indicate the percentage of time spent on the various activities in each school.

As shown in Figure I, page 22, the greatest percentage of time in the school program is allotted to basketball. The boys also rated basketball highest on the interest scale. This would indicate a probable relationship between time and interest. Baseball, which had very little time allotted to it in the school program, rated second in the interest scale. This high interest may have been due to student participation in varsity and Junior American Legion competition.

Swimming, which rated third in interest, was not included in the activity program, due to lack of facilities.

In small schools, construction of swimming pools would not be feasible, without financial aid from outside the school. The high rate of interest in swimming probably can be attributed to the out-of-school participation in the activity in the lakes and rivers in surrounding areas. This fact may also hold true for hockey, which rated number twelve on the interest scale. There are no school facilities for hockey, but the boys used available areas for ice-skating and may engage in modified hockey games after school hours.

A comparison of Figure I and Table IV, page 50, reveals that the boys desire to participate in certain activities not included in the school program. An average of 67.5 per cent of the program time in the five high schools studied was spent on three sports: basketball, softball and touch football. These three activities also rated within the first five activities desired by the boys. However, tennis, table tennis, boxing, track, hiking, hockey, and free exercise, which were included in the first fifteen activities desired by the boys, received very little or no consideration in the school programs. It would appear that too much time is being spent on some activities, and not enough time on other activities which the boys would like to have included in the program. Further comparison would show that some activities rated as desirable by the experts, because of their contribution to the individual, were not included in the school program. The activities neglected were golf, tennis, handball, and bowling.

From a review of the study, it would appear that the activities in which the boys participated most, either in the school program or out of school, rated the highest in the interest of the boys. Also the boys indicated interest in activities which are largely neglected by the school programs. Therefore, with due consideration to time, space, equipment, and personnel, it would appear that there could be a change in the program, to give more consideration to activities desired by the boys and recommended by the experts in the field of physical education.

## II. INTEREST, TIME, AND FACILITIES

Comparison of interest, time, and facilities. Table I on page 23 presents the adequacy of available facilities. The word "facility" is taken to mean the area and the necessary equipment for the activity. Each instructor rated the facilities available for the various activities included in the program. Large team activities could be included in the program as sufficient outdoor areas were available. None of the schools included in this study have facilities for swimming or water polo. There were inadequate facilities for handball, and no courts for tennis or badminton. Heavy apparatus activities such as speedball, archery, marching, golf, and the dances which could have been included since facilities were available, were not included. The reason for this may have been due to an inadequate teaching staff, either in number or training. In some cases, the physical education instructor

was also coach and academic instructor. The time necessary to organize a balanced program was not available to these instructors. Programs may have been inadequate due to a lack of interest in the activities, either on the part of the instructor or the students. In either case, the instructor would be largely responsible for arousing the interest in desirable and recommended activities. There is a tendency to use the physical education program as an "extra" in the school curriculum, and not considered a necessary part of the child's education.

In a comparison of time, facilities, and interest, it would appear that the schools spent the greatest amount of time on the activities which have the most adequate facilities, and the boys are interested in the activities in which they participate to the greatest extent, either in the school program or in out-of-school activities.

### III. INTEREST AND DEGREE OF PROFICIENCY DESIRED

A comparison of interest and degree of proficiency the boys desired to attain in the activity. In most of the cases, there was a marked relationship between the degree of interest and the degree of proficiency the students would like to attain in the activity.

The coefficient of correlation between the interest of the boys surveyed, in the fifteen most popular activities,

and the degree of proficiency the boys desired to attain in each of these activities was found to be .69, with a probable error of .02. The boys who showed a high interest in an activity, in the majority of cases would also show a desire for a high degree of proficiency. The skills in basketball, football, softball, baseball, and swimming were most desired. This could have been due to the interest in team games found during the high school age, and the desire to excel in team sports. The individual activities, such as archery, golf, tennis, and track does not carry the appeal that other activities do. To the average boy, a bull's-eye in archery does not have the glamour that is found in a touch-down pass or the winning goal in a basketball game.

The degree of proficiency could also be related to the time spent on an activity. The students indicated the most interest and desire for proficiency in the activities they knew and participated in to the greatest extent.

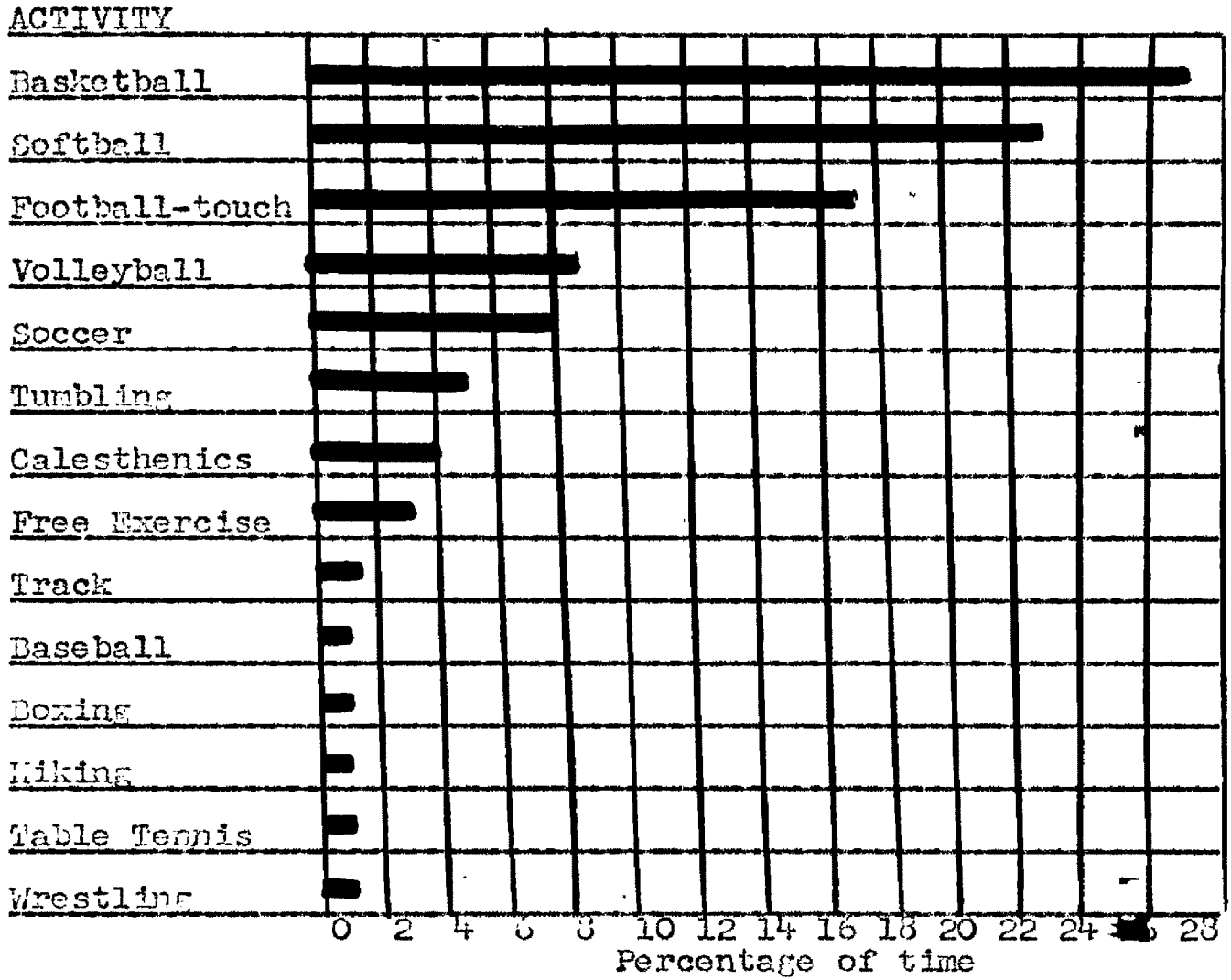


FIGURE 1  
AVERAGE PERCENTAGE OF TIME USED  
FOR EACH ACTIVITY



TABLE I

ADEQUACY OF AVAILABLE FACILITIES AS  
INDICATED BY INSTRUCTORS

ACTIVITY	Beulah	Golden Valley	Hazen	Stanton	Zap
Baseball	X	X	A	X	X
Basketball	A	B	A	C	B
Boxing	X	B	B	X	X
Calisthenics	A	A	A	A	A
Free Exercise	A	B	A	B	B
Football-touch	A	A	A	A	A
Hiking	X	A	X	X	X
Soccer	A	X	A	A	X
Softball	A	A	A	A	A
Table Tennis	X	A	X	X	A
Track	X	A	X	X	X
Tumbling	X	X	X	B	B
Volleyball	A	X	X	A	A
Wrestling	X	X	A	X	X

Legend: A--good    B--adequate    C--inadequate    D--none  
X--not checked

\*Only some activities were checked. It is assumed that inadequate space, time, equipment or personnel prevented the inclusion of the other activities in the school establishment.

#### IV. THE SCHOOL PROGRAM

Activities included in program of each school. The following graphs show the percentage of time of the entire activity programs spent on each activity by each school.

Figure 2, page 25, indicates the division of time in the Beulah High School program. Beulah spent the greatest percentage of time on basketball.

Figure 3, page 26, presents the division of time spent by the Golden Valley High School in their school activity program. They also spent the greatest percentage of time on basketball, but they included more activities in their program.

Hazen's activity program is shown in Figure 4, page 27. In this program touch football and softball received equal rating in the division of time spent. Basketball rated third. This was the only school where basketball did not receive the greatest percentage of time.

In Figure 5, page 28, Stanton's activity program is given. Here again, basketball received major consideration.

Zap High School's activity program is shown in Figure 6, page 29. Zap gave probably the most even distribution of time to their activities, with basketball and softball receiving primary consideration. Touch football, tumbling, and volleyball followed in time percentage, and calisthenics and table tennis received the smallest allotment of time.

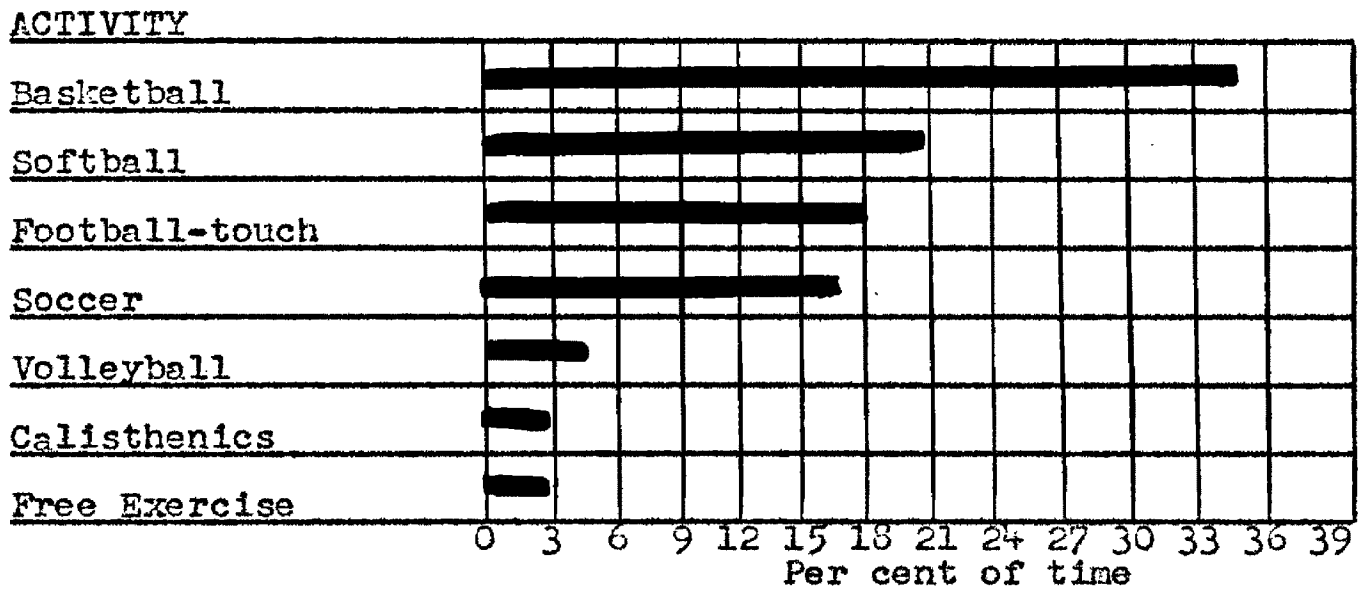


FIGURE 2  
PERCENTAGE OF TIME OF ACTIVITY PROGRAM SPENT ON  
EACH ACTIVITY BY BEULAH HIGH SCHOOL

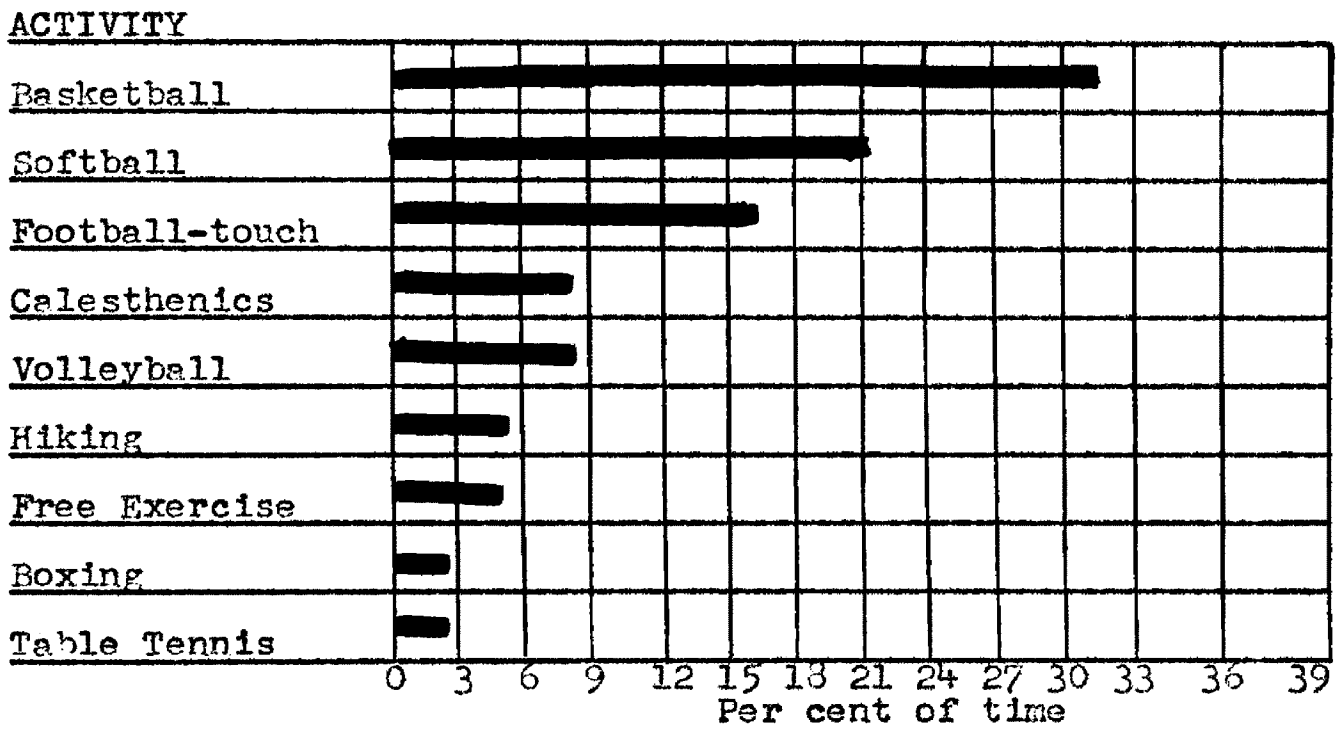


FIGURE 3  
PERCENTAGE OF TIME OF ACTIVITY PROGRAM SPENT ON  
EACH ACTIVITY BY GOLDEN VALLEY HIGH SCHOOL

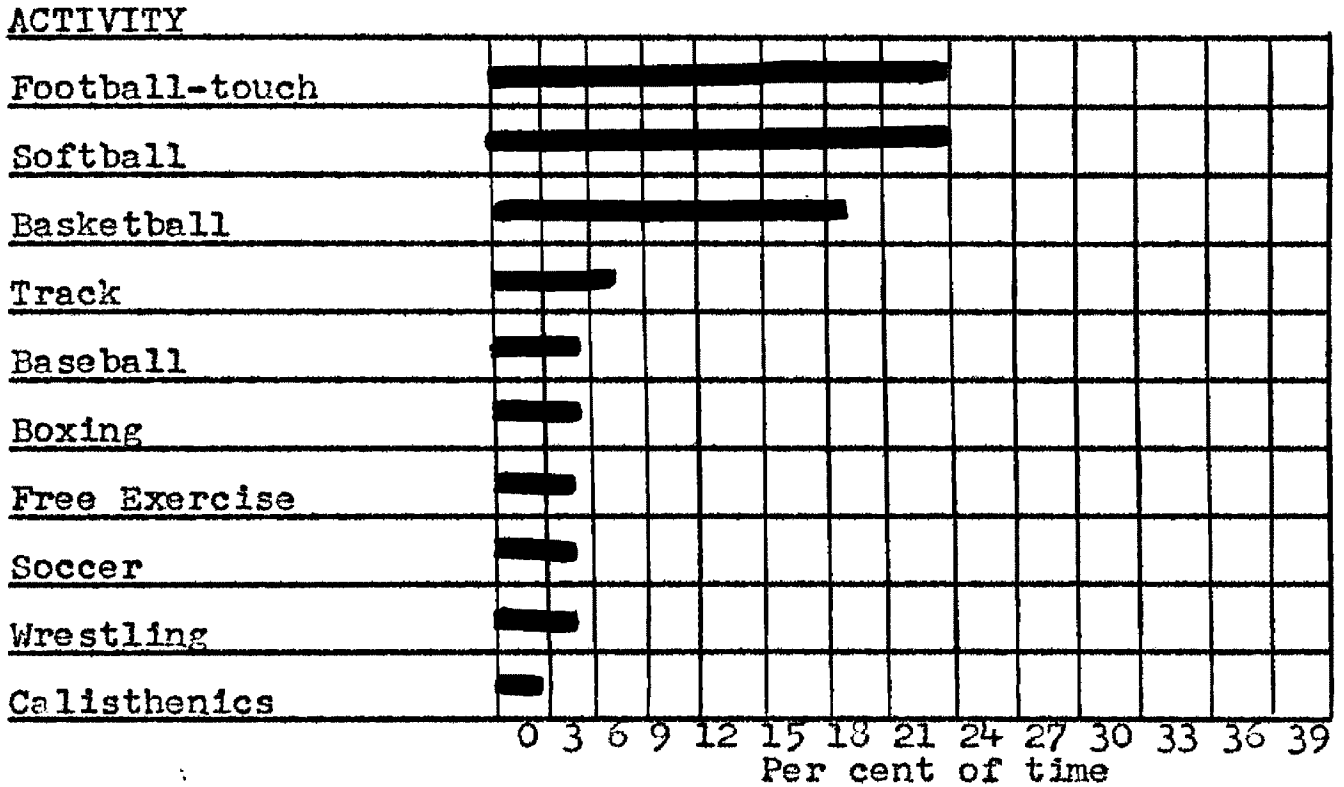


FIGURE 4

PERCENTAGE OF TIME OF ACTIVITY PROGRAM SPENT ON  
EACH ACTIVITY BY HAZEN HIGH SCHOOL

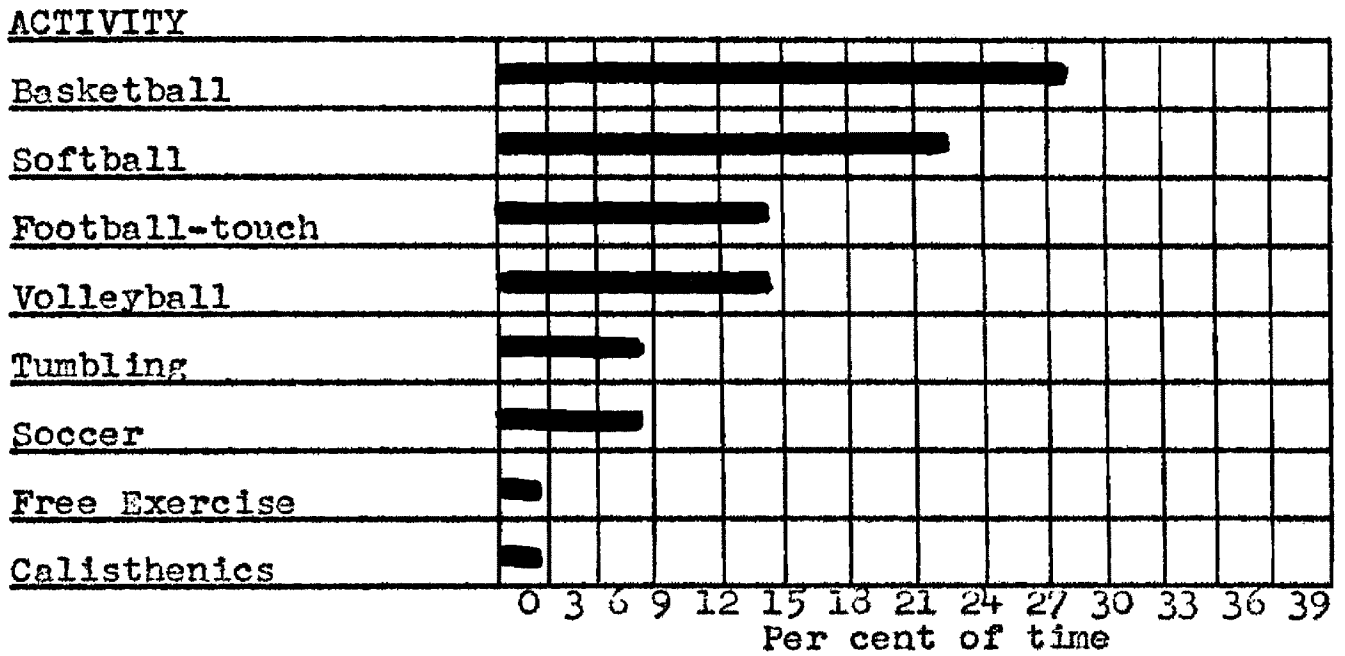


FIGURE 5  
PERCENTAGE OF TIME OF ACTIVITY PROGRAM SPENT ON  
EACH ACTIVITY BY STANTON HIGH SCHOOL

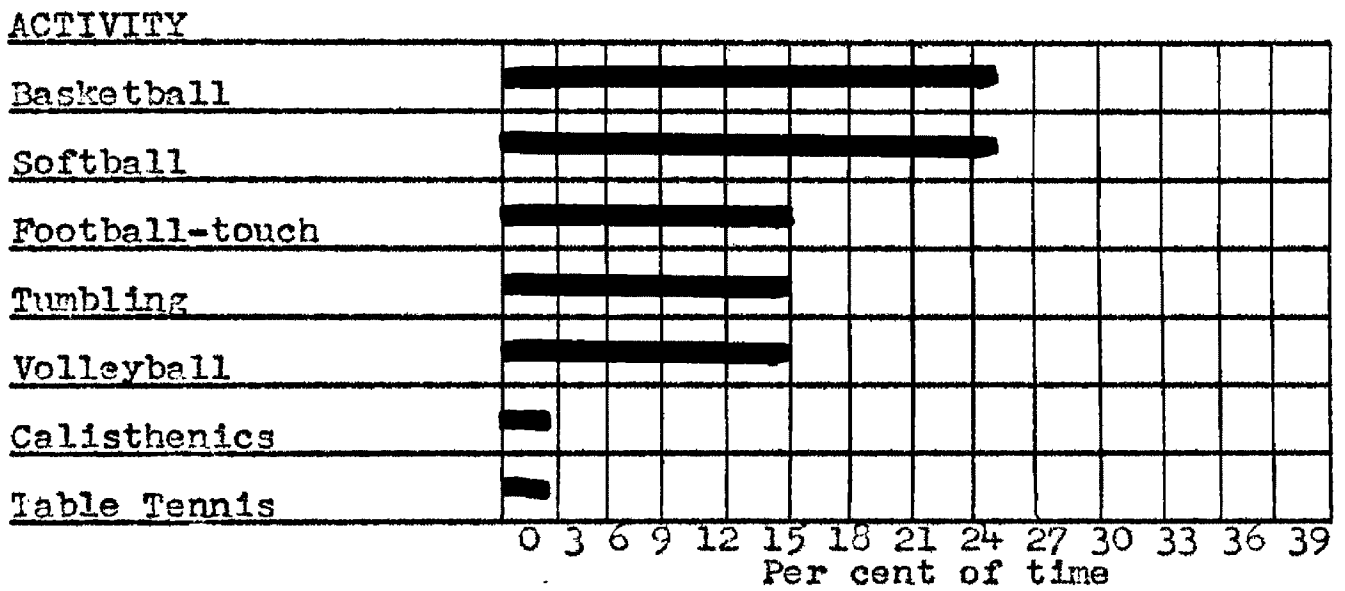


FIGURE 6

PERCENTAGE OF TIME OF ACTIVITY PROGRAM SPENT ON  
EACH ACTIVITY BY ZAP HIGH SCHOOL

V. COMPARISON OF PERCENTAGES OF TOTAL TIME  
SPENT ON EACH ACTIVITY BY SCHOOLS

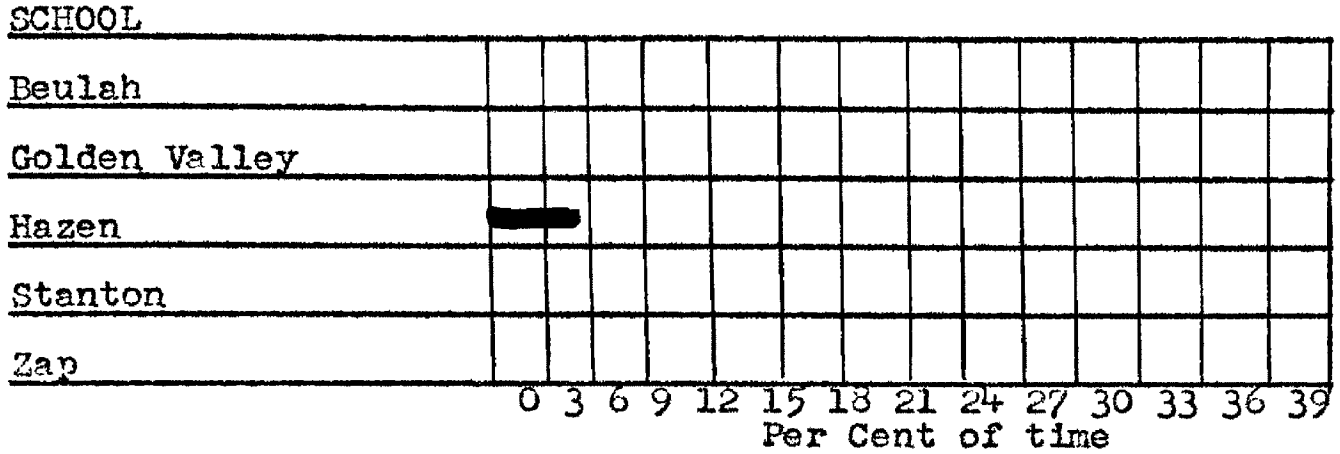
Comparison of percentages. The following graphs, Figures 7 through 20 indicate the percentage of the total time spent on each activity by each school.

The activities are listed in alphabetical order, and the per cent of time spent on that activity by each school is shown on the figure.

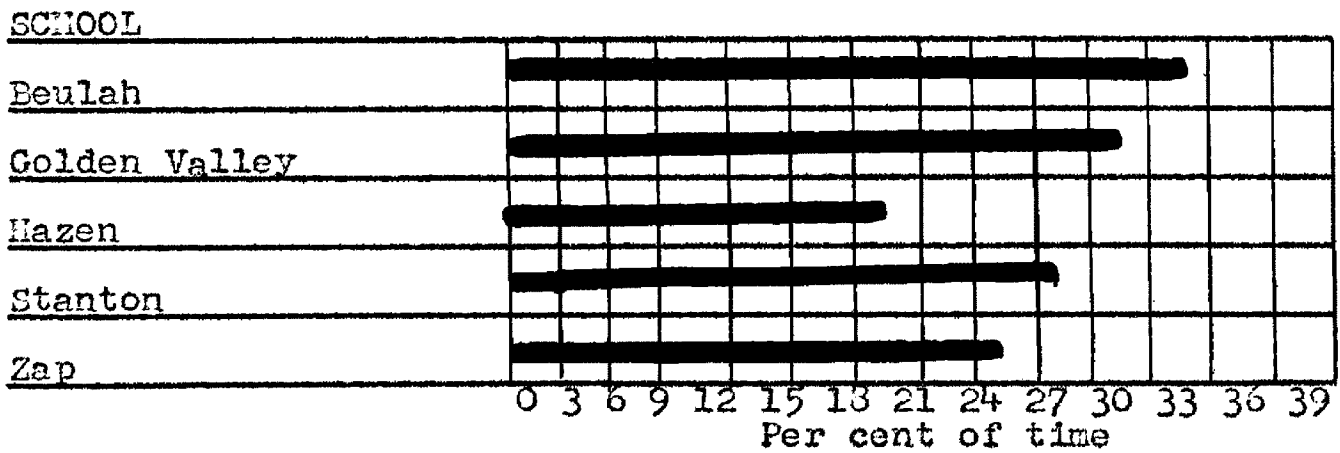
Some of the activities are listed by only one school, such as baseball, Figure VII, page 31. Other figures show two or more schools engaged in that activity.

All the figures are based on the entire time allotment for physical education activities in the school program.





**FIGURE 7**  
**PERCENTAGE OF TIME SPENT ON BASEBALL IN THE HIGH SCHOOLS OF MERCER COUNTY, NORTH DAKOTA**



**FIGURE 8**  
**PERCENTAGE OF TIME SPENT ON BASKETBALL IN THE HIGH SCHOOLS OF MERCER COUNTY, NORTH DAKOTA**

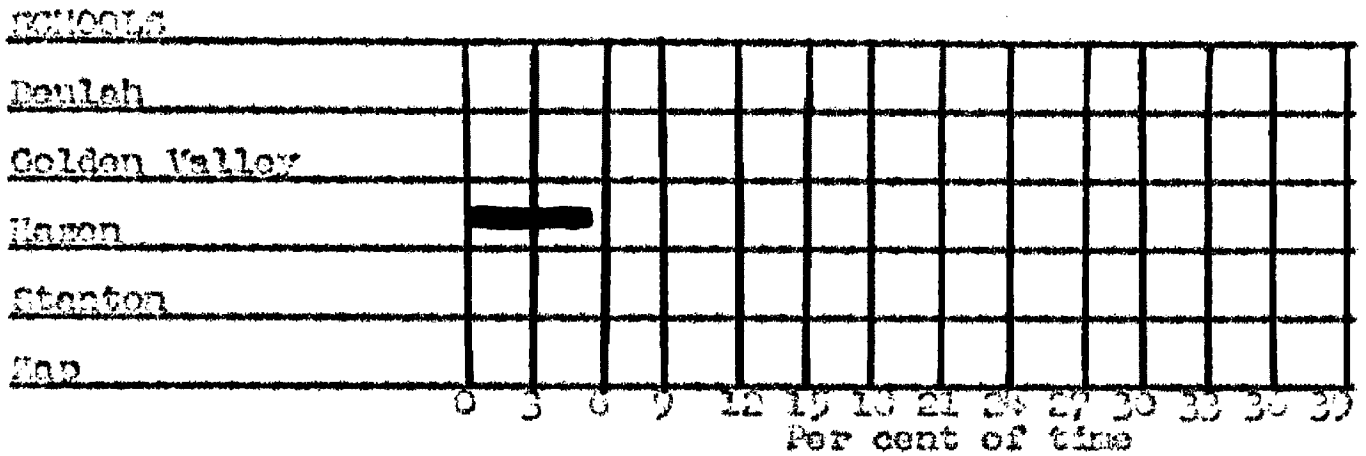


FIGURE 9  
PERCENTAGE OF TIME SPENT ON BOXING IN THE HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

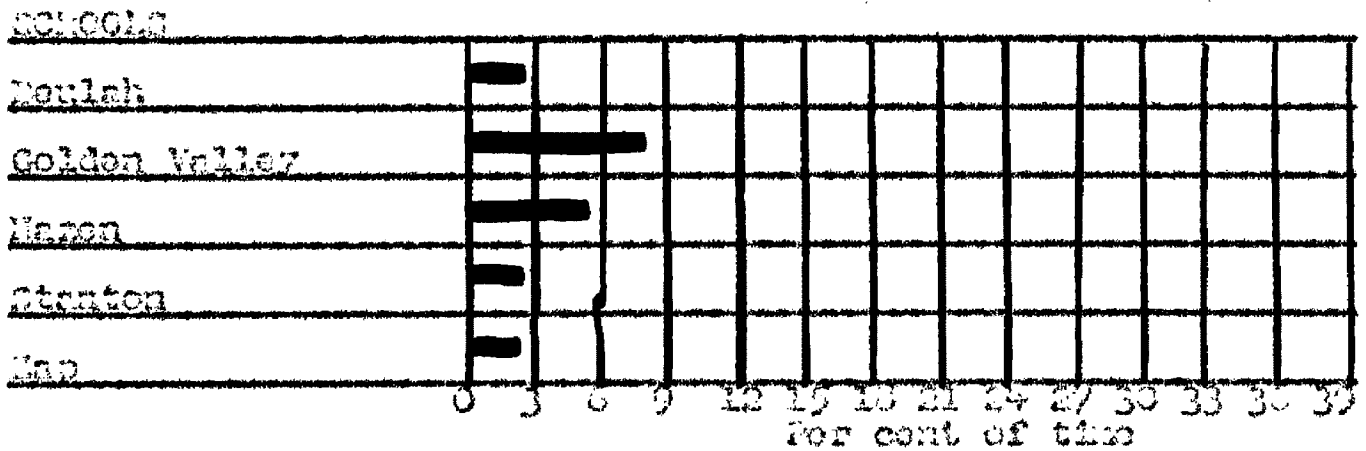


FIGURE 10  
PERCENTAGE OF TIME SPENT ON CALISTHENICS IN THE  
HIGH SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

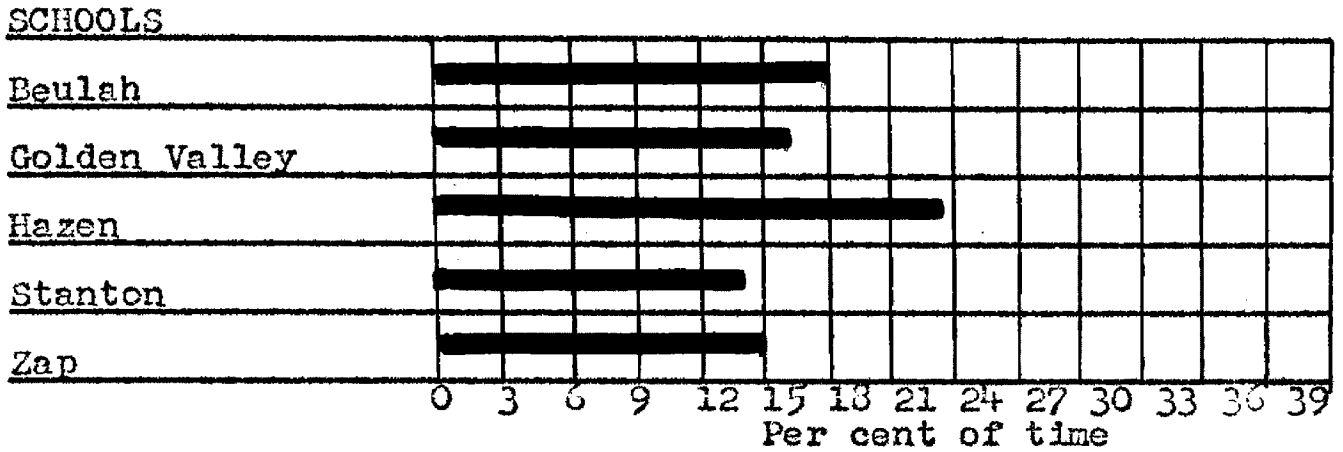


FIGURE 11

PERCENTAGE OF TIME SPENT ON TOUCH FOOTBALL IN THE  
HIGH SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

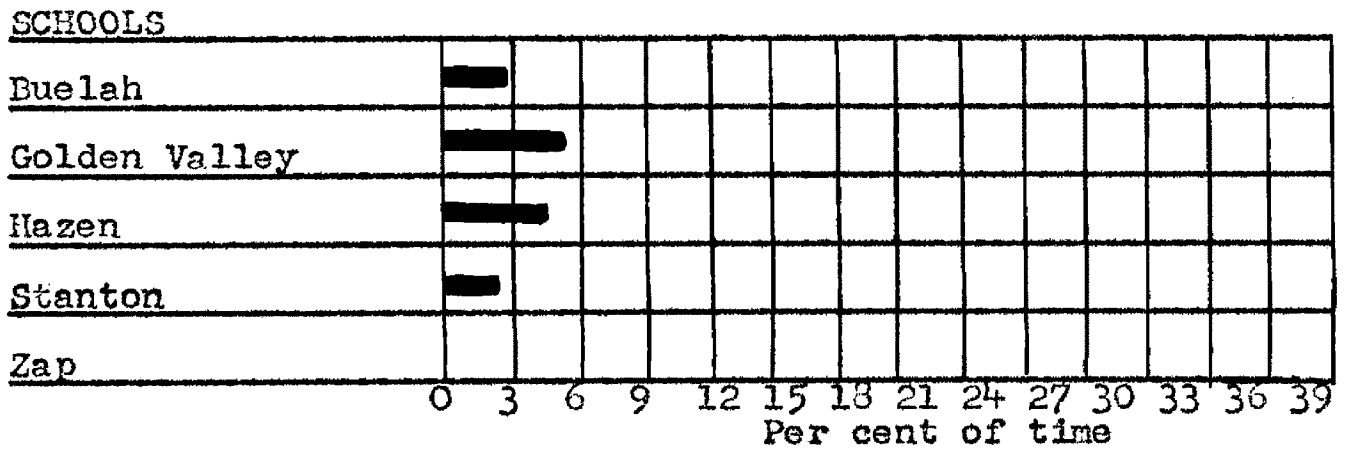


FIGURE 12

PERCENTAGE OF TIME SPENT ON FREE EXERCISE IN THE HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

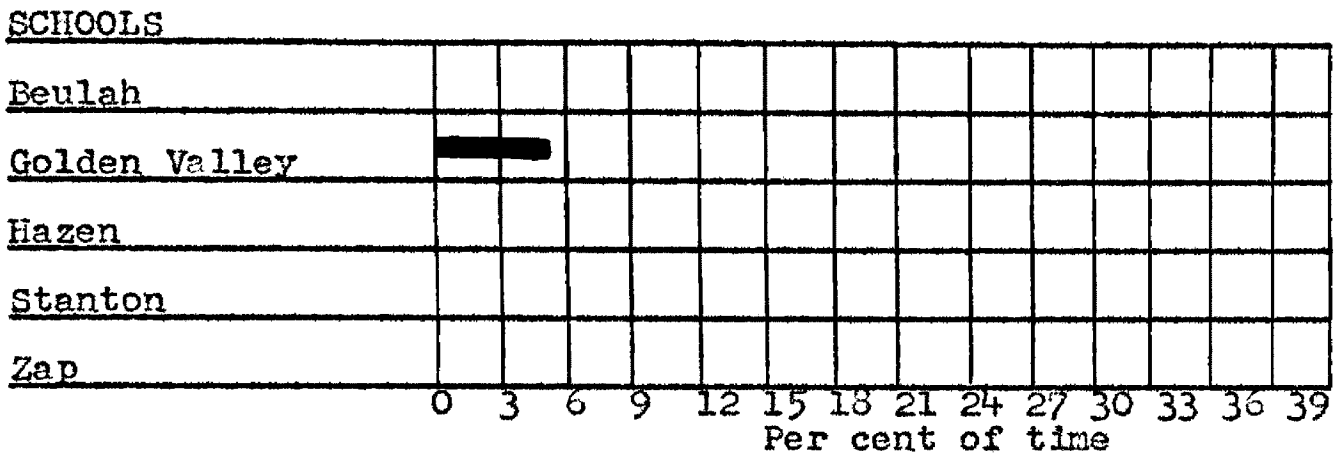


FIGURE 13  
PERCENTAGE OF TIME SPENT ON HIKING IN THE HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

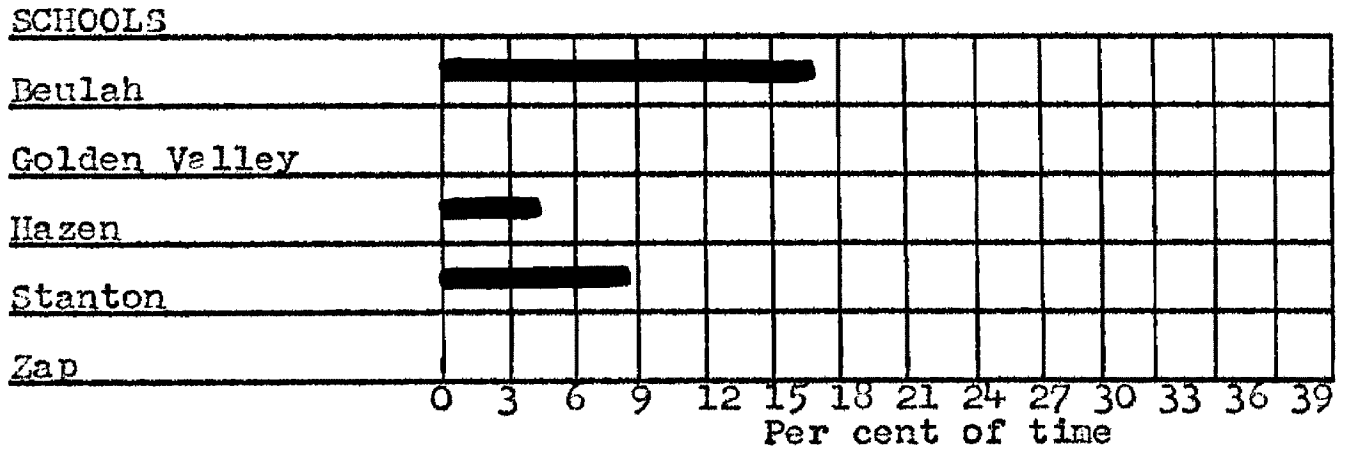


FIGURE 14  
PERCENTAGE OF TIME SPENT ON SOCCER IN THE HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

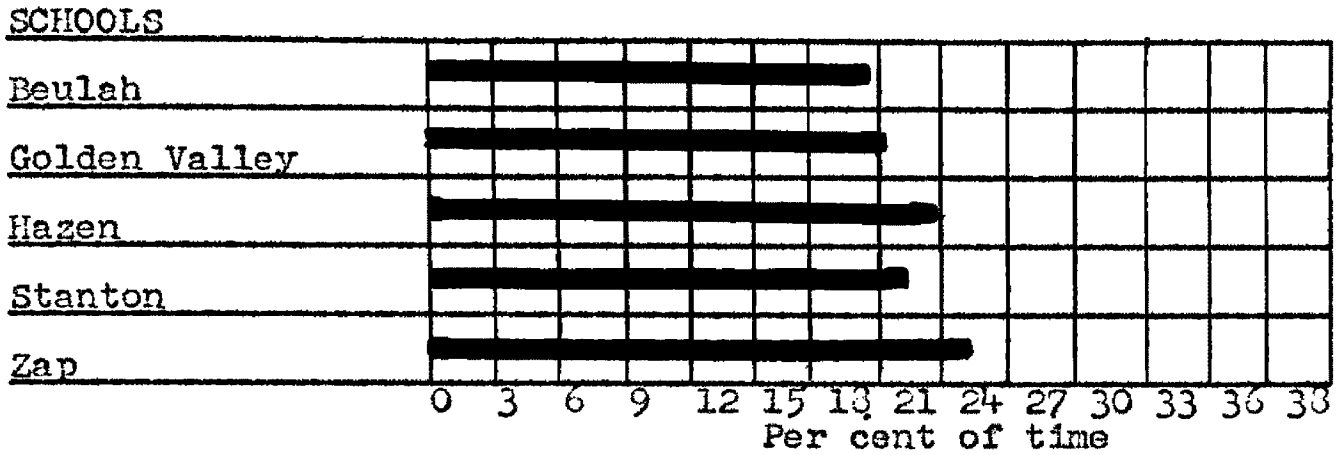


FIGURE 15

PERCENTAGE OF TIME SPENT ON SOFTBALL IN THE HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

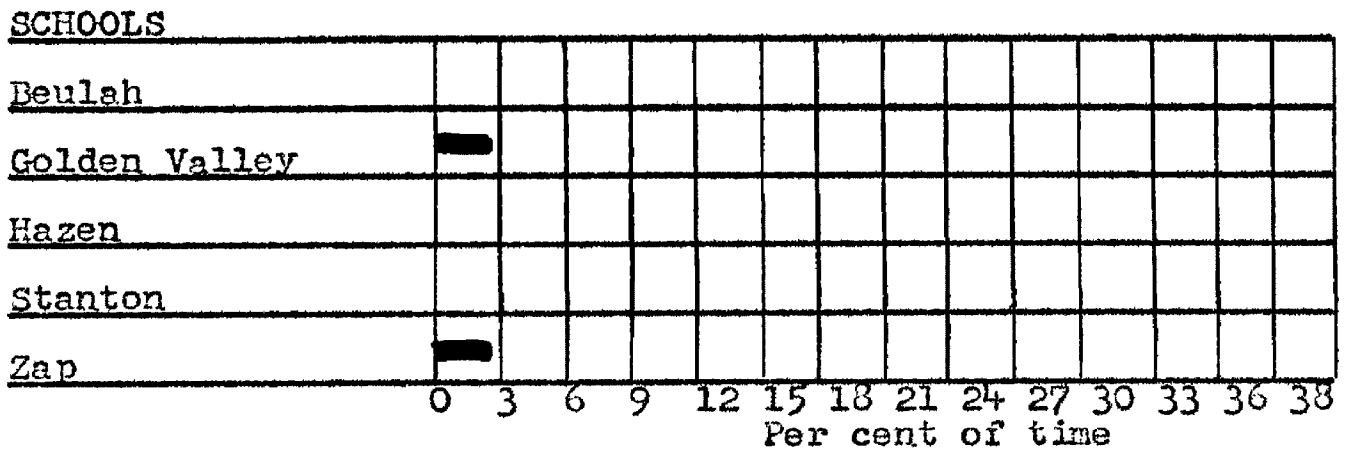


FIGURE 16

PERCENTAGE OF TIME SPENT ON TABLE TENNIS IN THE HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

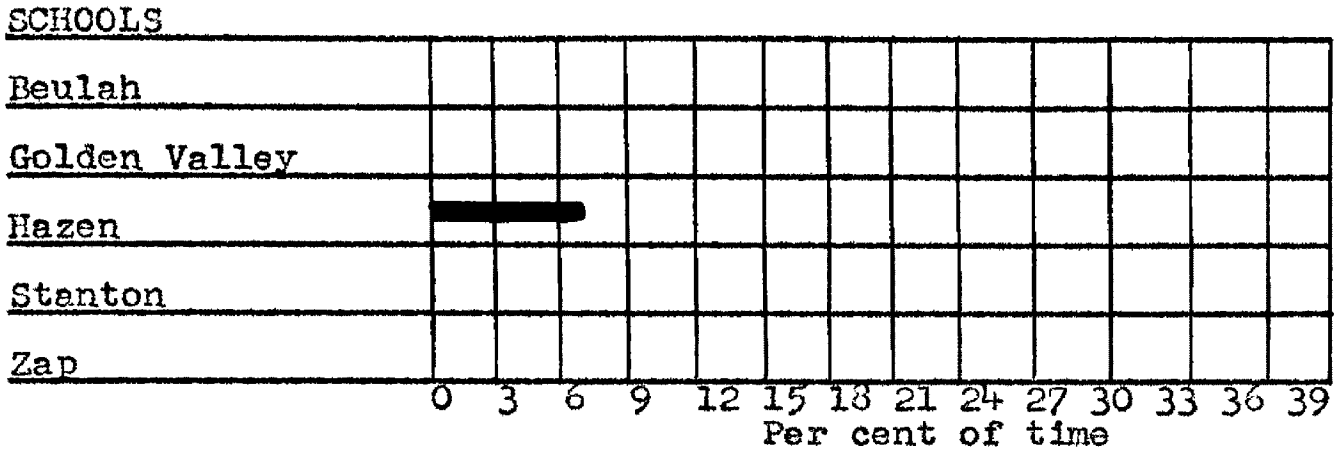


FIGURE 17  
PERCENTAGE OF TIME SPENT ON TRACK IN THE HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

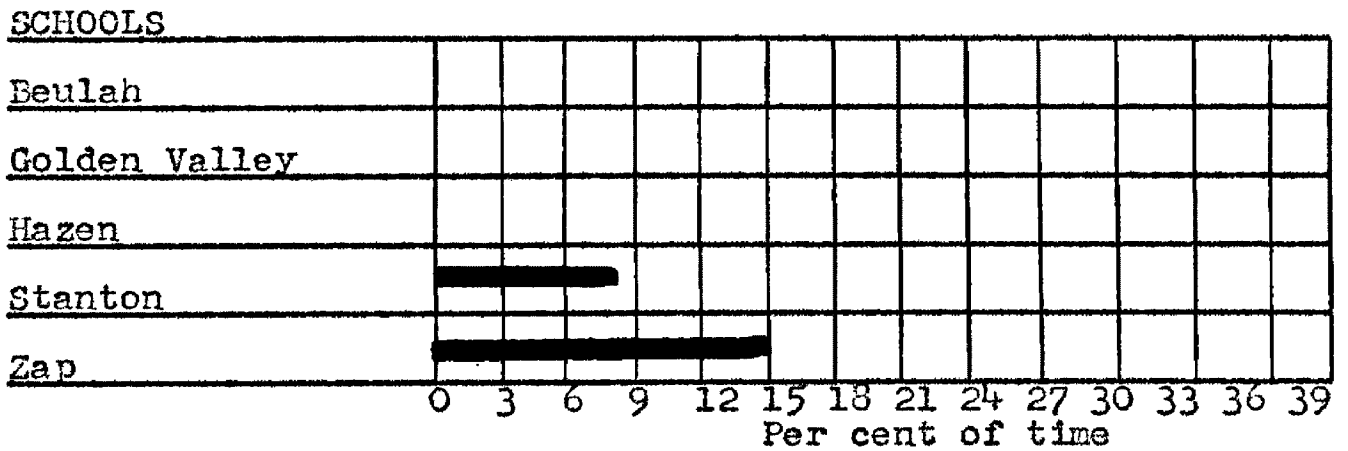


FIGURE 18  
PERCENTAGE OF TIME SPENT ON TUMBLING IN HIGH  
SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

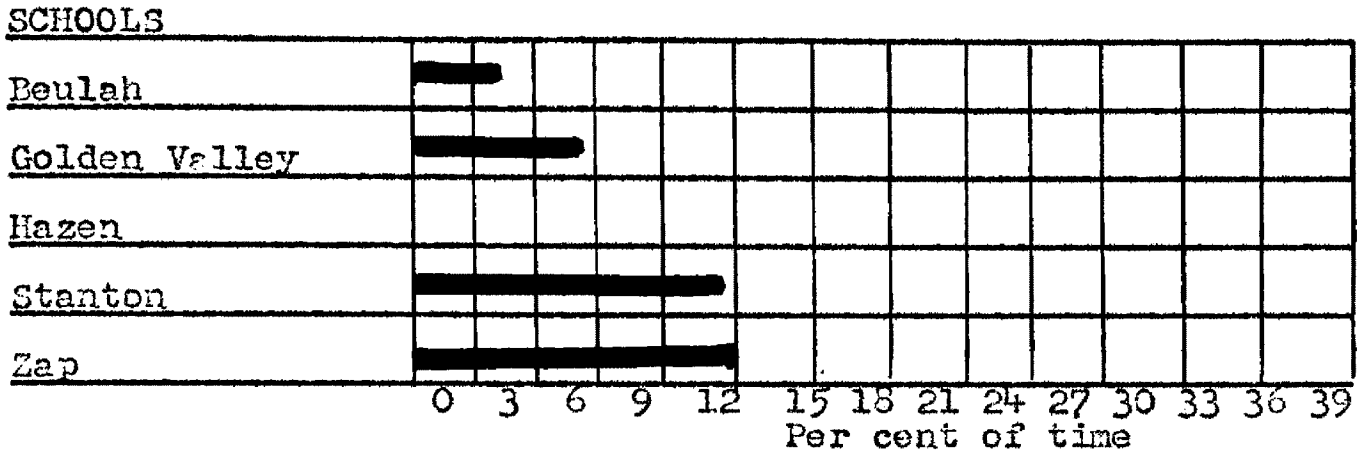


FIGURE 19

PERCENTAGE OF TIME SPENT ON VOLLEYBALL IN THE HIGH SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

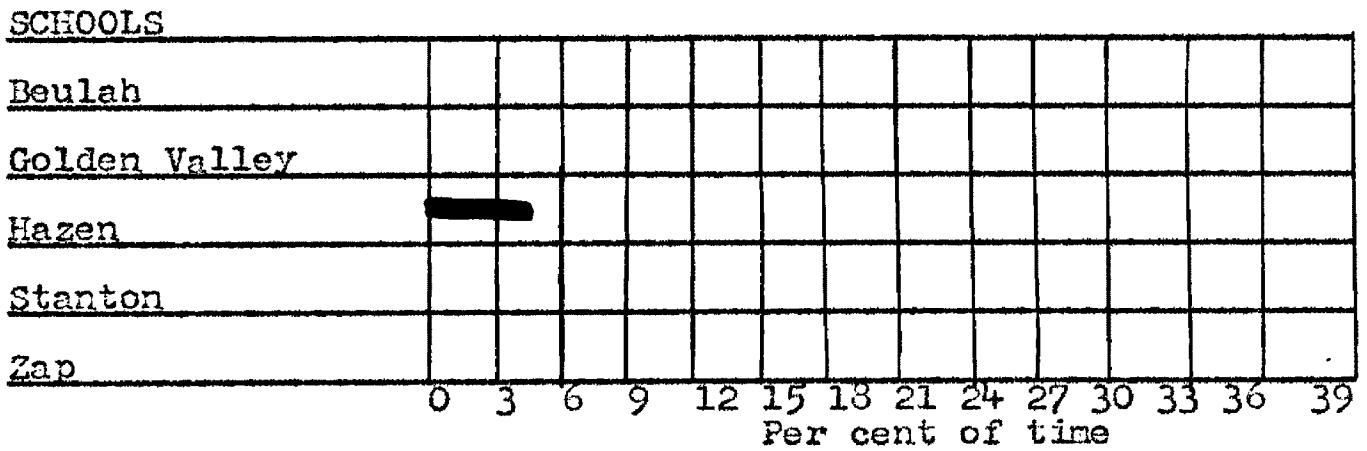


FIGURE 20

PERCENTAGE OF TIME SPENT ON WRESTLING IN THE HIGH SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

## CHAPTER V

### COMPARISON OF INTEREST BY CLASSES, SCHOOLS, AND WITH EXPERT'S RATING OF ACTIVITIES

#### I. INTEREST AND CLASSES

##### Comparison of interest in activities by classes.

In Table II, page 41, it is found that the degree of interest, in various activities, as shown by the four classes in high school is approximately the same, but they vary somewhat in rank order.

Basketball, baseball and softball are listed by all the classes in the first five activities. Swimming is rated in the first five activities by three of the classes, namely freshman, sophomore and junior classes, but it dropped to number seven in the senior list. Table tennis, which was chosen by the freshman, junior and senior classes, and touch football was listed by the sophomores and senior boys completed the top five activities from the standpoint of interest to the boys.

The first fifteen activities as selected by the boys, are much the same, with different positions in rank order as indicated by the boys interest.



The dance activities generally rated quite low. The junior classes indicated the highest degree of interest in the dance activities by listing square dance as number six. The other dances received a rank order of number fourteen for the square dance, indicated by the sophomores, with the other dance activities receiving still lower ratings.

The activities receiving the lowest interest ratings were also fairly consistent as indicated by the four classes. Clog and tap, fencing, marching, handball, badminton, heavy apparatus work, round dance and water polo were the activities listed most frequently below number thirty. Clog and tap were rated least interesting by the freshman, sophomore and senior classes, and received next to the lowest rating by the junior groups. The junior classes rated badminton as the least interesting activity.

The rank order of activities as established by the four classes showed a smaller degree of difference than might be found in larger schools. Larger schools would, in all probability, offer a greater choice of activities and would also have a more varied program for each of the four years in high school. The larger schools would have greater space, equipment, time and personnell. The schools surveyed had all their classes participate in one physical education class. Therefore, all classes participate in similar activities throughout the school year. This is not considered a desirable situation, but due to the small number of students in the classes, the

lack of personnel, and the restricted time allotted to the physical education program, it was difficult to establish a more suitable arrangement. The larger schools would, in all probability, offer a progressive type of program. The freshman class would be taught one group of activities, then get additional activities in each succeeding year of school. Therefore the experiences of the freshman would be much different than the experiences of the senior, and consequently, the interest of the classes would differ. It was found that this situation did not hold true for the boys in the high schools of Mercer County, North Dakota.

TABLE II  
 COMPARISON OF THE INTEREST IN ACTIVITIES  
 AS RATED BY THE HIGH SCHOOL CLASSES

Freshman	Sophomore	Junior	Senior
1. Basketball	Basketball	Swimming	Football--11 man
2. Baseball	Swimming	Basketball	Base ball
3. Softball	Football--11 man	Baseball	Softball
4. Swimming	Baseball	Table Tennis	Basketball
5. Table Tennis	Softball	Softball	Table Tennis
6. Football--11 man	Table Tennis	Football--11 man	Boxing
7. Football--touch	Football--touch	Square Dance	Swimming
8. Football--6 man	Football--6 man	Hiking	Volleyball
9. Track	Tennis	Football--6 man	Football--6 man
10. Hockey	Track	Boxing	Life Saving
11. Boxing	Hockey	Track	Wrestling
12. Volleyball	Volleyball	Free Exercises	Football--touch

TABLE II (continued)  
 COMPARISON OF THE INTEREST IN ACTIVITIES  
 AS RATED BY THE HIGH SCHOOL CLASSES

Freshman	Sophomore	Junior	Senior
13. Horseshoes.	Free Exercise	Football--touch	Tennis
14. Hiking	Square Dance	Volleyball	Soccer
15. Tennis	Boxing	Life Saving	Free Exercise
16. Calisthenics	Wrestling	Folk Dance	Hockey
17. Free Exercise	Life Saving	Soccer	Folk Dance
18. Soccer	Horseshoes	Tennis	Golf
19. Tumbling	Soccer	Horseshoes	Square Dance
20. Life Saving	Hiking	Hockey	Horseshoes
21. Wrestling	Calisthenics	Golf	Track
22. Square Dance	Archery	Wrestling	Marching
23. Golf	Folk Dance	Tumbling	Calisthenics
24. Modified Games	Speedball	Archery	Hiking

TABLE II (continued)  
 COMPARISON OF THE INTEREST IN ACTIVITIES  
 AS RATED BY THE HIGH SCHOOL CLASSES

Freshman	Sophomore	Junior	Senior
25. Archery	Tumbling	Calisthenics	Archery
26. Marching	Fencing	Marching	Handball
27. Round Dance	Heavy Apparatus	Modified Games	Tumbling
28. Folk Dance	Modified Games	Fencing	Heavy Apparatus
29. Handball	Badminton	Heavy Apparatus	Fencing
30. Speedball	Water Polo	Water Polo	Speedball
31. Water Polo	Round Dance	Speedball	Round Dance
32. Heavy Apparatus	Golf	Round Dance	Water Polo
33. Badminton	Handball	Handball	Modified Games
34. Fencing	Marching	Clog and Tap	Badminton
35. Clog and Tap	Clog and Tap	Badminton	Clog and Tap

## II. INTEREST AND SCHOOLS

### Comparison of interest in activities by schools.

Table III, page 46, shows a comparison of the degree of interest in activities as shown by all the male students who participated in the survey, in the five high schools of Mercer County, North Dakota. It was found that the same activities are included in the first ten activities, but with a different rank order. Here, as in Table II, page 41, which listed the desired activities by classes, it is found that team activities ranked at the top of the list. Basketball ranked highest on the interest scale by classes and by schools.

The least interesting activities selected were consistently rated low by the male students, with clog and tap, fencing, round dance, speedball and badminton being rated low by the boys participating in this survey.

The enrollment of boys in the schools ranges from a high of 80 boys at Beulah to a low of 17 boys at Golden Valley. This difference in enrollment seems to have little effect on the interest scale as established by the boys.

Two factors that probably account for the similarity in interests are the small geographical area containing these schools and the school program offered by the schools. With Beulah as a center of a circle, all the schools are within a radius of 25 miles. In regard to the school program, the activities offered were much the same in all the schools.

Therefore the boys were familiar with similar activities and, conversely, not well acquainted with others.

Here again, a comparison with larger schools might show considerable difference, as the program might include a larger number of activities. Participation in a greater number of activities may have considerable effect on the rank order of activities.

TABLE III  
 COMPARISON OF THE INTEREST IN ACTIVITIES  
 AS RATED BY THE BOYS IN EACH HIGH SCHOOL

	Beulah	Golden Valley	Hazen	Stanton	Zap
1.	Basketball	Swimming	Basketball	Basketball	Basketball
2.	Softball	Basketball	Baseball	Baseball	Baseball
3.	Swimming	Softball	Football--11 man	Football--6 man	Softball
4.	Table Tennis	Hiking	Swimming	Swimming	Table Tennis
5.	Baseball	Football--11 man	Softball	Football--11 man	Swimming
6.	Football--11 man	Table Tennis	Table Tennis	Softball	Volleyball
7.	Tennis	Baseball	Boxing	Volleyball	Football--touch
8.	Football--6 man	Speedball	Square Dance	Track	Football--11 man
9.	Golf	Free Exercise	Football--touch	Football--touch	Hiking
10.	Football--touch	Horseshoes	Free Exercise	Table Tennis	Horseshoes
11.	Hockey	Football--6 man	Hockey	Tennis	Track
12.	Track	Football--touch	Football--6 man	Tumbling	Hockey



TABLE III (continued)

COMPARISON OF THE INTEREST IN ACTIVITIES  
AS RATED BY THE BOYS IN EACH HIGH SCHOOL

	Beulah	Golden Valley	Hazen	Stanton	Zap
13.	Soccer	Tennis	Track	Hockey	Tennis
14.	Boxing	Wrestling	Wrestling	Calisthenics	Football--6 man
15.	Volleyball	Track	Folk Dance	Boxing	Free Exercise
16.	Horseshoes	Volleyball	Soccer	Life Saving	Calisthenics
17.	Hiking	Life Saving	Horseshoes	Hiking	Boxing
18.	Free Exercise	Boxing	Volleyball	Soccer	Tumbling
19.	Square Dance	Square Dance	Life Saving	Modified Games	Golf
20.	Tumbling	Hockey	Calisthenics	Round Dance	Archery
21.	Archery	Archery	Tennis	Wrestling	Life Saving
22.	Life Saving	Fencing	Hiking	Free Exercise	Wrestling
23.	Calisthenics	Water Polo	Modified Games	Heavy Apparatus	Marching
24.	Folk Dance	Heavy Apparatus	Archery	Water Polo	Square Dance

TABLE III (continued)

COMPARISON OF THE INTEREST IN ACTIVITIES  
AS RATED BY THE BOYS IN EACH HIGH SCHOOL

	Beulah	Golden Valley	Hazen	Stanton	Zap
25.	Wrestling	Handball	Round Dance	Marching	Water Polo
26.	Fencing	Marching	Golf	Horseshoes	Soccer
27.	Speedball	Soccer	Tumbling	Square Dance	Speedball
28.	Handball	Tumbling	Marching	Golf	Folk Dance
29.	Marching	Folk Dance	Heavy Apparatus	Handball	Heavy Apparatus
30.	Modified Games	Calisthenics	Badminton	Archery	Badminton
31.	Heavy Apparatus	Calisthenics	Badminton	Archery	Badminton
32.	Water Polo	Modified Games	Handball	Clog and Tap	Handball
33.	Clog and Tap	Golf	Water Polo	Badminton	Modified Games
34.	Badminton	Round Dance	Clog and Tap	Speedball	Round Dance
35.	Round Dance	Clog and Tap	Speedball	Fencing	Clog and Tap

### III. STUDENT AND EXPERT'S SELECTION OF ACTIVITIES

Comparison of student's interest in activities with the expert's rating of activities. The comparison of the boys' rating of activities according to their interest, and the rating of activities by authorities in physical education according to the contribution that activity makes to the individual is found in Table V, page 51. Here we find considerable disagreement, not only between the students and the experts, but also between the experts in their choice of desirable activities. One major difference between students and authorities is that the authorities give greater consideration to the individual and dual sports, while the boys' interest was in the team activities. The authorities placed greater emphasis upon activities such as soccer, handball, tennis, golf, and volleyball, while the boys' choices were basketball, baseball and other active team games. The experts placed greater importance upon the sports which have greater carry-over values. The boys placed their interest in the activities which gave satisfaction to the urge for team play and competition found during high school age level.

TABLE IV

RANK ORDER OF ACTIVITIES AS CHOSEN BY THE BOYS IN THE  
HIGH SCHOOLS OF MERCER COUNTY, NORTH DAKOTA

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1. Basketball	19. Square Dance
2. Baseball	20. Wrestling
3. Swimming	21. Calisthenics
4. Softball	22. Tumbling
5. Football--11 man	23. Folk Dance
6. Table Tennis	24. Golf
7. Football--touch	25. Archery
8. Football--6 man	26. Modified Games
9. Boxing	27. Marching
10. Track	28. Heavy Apparatus
11. Volleyball	29. Speedball
12. Hockey	30. Fencing
13. Tennis	31. Water Polo
14. Free Exercise	32. Round Dance
15. Hiking	33. Handball
16. Horseshoes	34. Badminton
17. Life Saving	35. Clog and Tap
18. Soccer	

TABLE V

INTEREST RATING OF ACTIVITIES BY THE MERCER COUNTY HIGH  
SCHOOL BOYS AS COMPARED TO THE VALUE RATING OF ACTIVITIES  
BY EXPERTS IN THE FIELD OF PHYSICAL EDUCATION

Boys in Mercer County	LaPorte's study	Curtis' study	Williams' study	Lindwall's study
1. Basketball	Swimming	Walking	Hiking	Swimming
2. Baseball	Football--11 & 6	Swimming	Swimming	Tennis
3. Swimming	Basketball	Volleyball	Baseball	Football
4. Softball	Tennis	Tennis	Tennis	Basketball
5. Football--11 man	Softball	Soccer	Handball	Soccer
6. Table Tennis	Soccer	Softball	Boxing	Baseball
7. Football--touch	Speedball	Hockey	Bowling	Life Saving
8. Football--6 man	Volleyball	Dancing	Golf	Speedball
9. Boxing	Baseball	Track--under 220	Basketball	Softball
10. Track	Football--touch	Baseball	Track	Golf
11. Volleyball	Life Saving	Field Events	Hockey	Boxing
12. Hockey	Boxing	Basketball	Football	Handball
13. Tennis	Gym Games	Football	Soccer	Water Polo
14. Free Exercise	Track	Jumping	Field Hockey	Volleyball
15. Hiking	Water Polo	Gymnastics	Squash	Football--touch

## CHAPTER VI

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### I. SUMMARY

Throughout this study, an effort was made to determine the interests the high school boys in Mercer County, North Dakota have in various physical education activities as one factor in establishing a better physical education activity program.

The instrument used to determine the student's interest was a questionnaire composed of thirty-five activities which authorities denote as activities that could be included in a physical education activity program. On this questionnaire the student could indicate his degree of interest, how he obtained that interest, and the degree of proficiency desired in each activity. The student assigned a numerical value to each activity, which indicated his degree of interest in that activity. These numbers were totaled, and from the totals, a rank order of activities was derived.

In an attempt to find a partial basis for the student's interest, a questionnaire was sent to all physical education instructors in the schools surveyed. In this questionnaire, the instructors were asked to indicate the activities included in the school program, the amount of time spent on each activ-

ity, and their opinion of the adequacy of the facilities available for the activities.

Results were presented in part by tables, showing rank order of activities, and by graphs, showing percentages of time spent on activities.

The rank order of the activities as selected by the boys was compared to the rank order of activities as selected by the experts in the field of physical education.

Comparisons between time spent on the activities, facilities available, and interest were made. The rank order of activities by classes and schools were also compared.

## II. CONCLUSIONS

There appears to be a strong relationship between the amount of participation of the student in the activity, and the student's interest in that activity. The students were interested in the activity they were most familiar with, and showed a lesser degree of interest in activities with which they were unfamiliar.

The comparison of time and interest indicated that the schools were not giving as diversified a program as the boys would desire. It is true that the activities that were allotted the greatest percentage of time were also among the most interesting to the boys. On the other hand, the boys indicated a high degree of interest in activities that had only a small allotment of time, or were not included in the school program.

The study would also indicate an inadequacy in the facilities available, a restricted time allotment to the physical education program, and possibly, an inadequate number of teaching personnel.

The degree of proficiency desired by the students was closely related to the degree of interest they indicated in the activity. The comparison also showed the students indicated a desire for a greater degree of proficiency in the various team games, such as basketball or softball, than they desired in the individual or dual activities such as golf, tennis and archery.

The four high school classes indicated an interest in approximately the same activities, with some difference in the rank order. This similarity might be due in part to a small geographical area, and similar programs in regard to time and selection of activities. All high school boys, within each school, had their physical education class in the same class period.

The comparison of student selection of activities desired and the expert's rating of activities showed considerable disagreement. There was also disagreement among the experts in their choices of activities. The experts seemed to place a greater importance on individual and dual activities which have greater carry-over values, while the boys selected team games, many of which may not have had desired carry-over values. The students were interested in the activities which satisfied the impulses for team play and competition. Thus it would



appear that both the student's interest in an activity and the expert's rating of an activity should be given some consideration when establishing a physical education activity program.

### III. RECOMMENDATIONS

In view of the findings of this study, the following recommendations are hereby submitted.

1. That students' interests in activities be given more consideration when establishing the school physical education activity program. This does not mean that the interest factor should be the single or main factor, but it is important. The program would also be influenced by space, time, equipment and personnel.

2. The schools are spending too much time on some team activities, such as basketball and football. The time allotment for activities should be adjusted.

3. An insufficient amount of time, both from the students' and experts' standpoint, is being spent on the individual and dual sports, such as tennis, table tennis, boxing, hiking, and track. The activities judged to have the most carry-over values do not seem to be emphasized as they should. Here again, adjustment of time allotment appears to be desirable.

4. With the desired addition of time to the program a division of the boys within the schools, might be desirable. Having all the classes meet during one class period is not

desirable.

5. The author would like to recommend that all schools survey their students, in an effort to determine which activities the boys are interested in and would like to have included in the activity program. By giving consideration to the student's interest and experts' recommendations as to selection of activities, and the efficient use of time, space, personnel, and equipment; a better physical education activity program might be established.

## BIBLIOGRAPHY

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### A. BOOKS

- Bowen, Wilbur P., The Conduct of Physical Education. New York: A. S. Barnes and Company, 1927. 173 pp.
- Hetherington, Clark W., School Program in Physical Education. Yonkers, New York: World Book Company, 1922. 132 pp.
- Irwin, Leslie W., The Curriculum in Health and Physical Education. St. Louis: The C. V. Mosby Company, 1944. 391 pp.
- Johnson, Granville B., The New Physical Education. Minneapolis, Minnesota: Burgess Publishing Company, 1935. 125 pp.
- Kilpatrick, W. H., Foundation of Method. New York: The Macmillan Company, 1925. 383 pp.
- LaPorte, William, The Physical Education Curriculum. Los Angeles: The University of Southern California Press, 1945. 98 pp.
- Lindwall, Robert E., Intramural Activities. Manitowoc, Wisconsin: Department of Physical and Health Education, Manitowoc Public Schools, 1933. 83 pp.
- Nixon, Eugene, and Fredrick Cozens, An Introduction to Physical Education. Philadelphia and London: W. B. Saunders and Company, 1941. 293 pp.
- Scott, Gladys M., et. al., of the Steering Committee, Research Methods Applied to Health, Physical Education, and Recreation. Washington, D. C.: American Association for Health, Physical Education and Recreation, 1947. 535 pp.
- Thorndike-Barnhardt, High School Dictionary. Chicago: Scott Foresman and Company, 1952. 514 pp.
- Voltmer, Edward F. and Arthur A. Esslinger, The Organization And Administration of Physical Education. New York: Appleton-Century-Crofts, Inc., 1949. 419 pp.
- Williams, Jesse Feiring, The Organization and Administration of Physical Education. New York: The Macmillan Company, 1922. 325 pp.

Williams, Jesse Feiring, The Principles of Physical Education. Philadelphia and London: W. B. Saunders Company, 1942. 392 pp.

B. PERIODICAL ARTICLES

Curtis, Henry S., "Relative Values of Physical Education Activities in High Schools." School Life. Volume X, 1925.

Thorndike, W. L., "The Permanence of Interests and Their Relation to Abilities." Popular Science Monthly. August, 1912.

## APPENDIX

Appendix A

Dear Superintendent:

In partial fulfillment of a Masters Degree, and under the supervision of the Physical Education Department of Montana State University, I am conducting a study in boys' interest in physical education activities. This study is being made of all boys in Mercer County High Schools.

The purpose of the study is to determine the activities in the boys P. E. program which seems to have the greatest appeal. Further purpose is to get responses as to whether certain factors have any influence on this interest. These factors include age, experience, knowledge, participation, size of school and facilities, and degree of proficiency desired.

I am enclosing a copy for you of the questionnaire which I would like to give to the boys in your high school. I, personally, would like to administer the questionnaire. If this meets with your approval, would you suggest a date when I could meet the boys in your school, or if that is impossible, perhaps I could get the boys in groups which might make it more convenient for you and your school schedule. Or, if you desire, I will send you the blanks and you can give them at any convenient time.

If you have any questions regarding this study, please feel free to call--collect--and I will try to answer them.

Your cooperation in this study will be deeply appreciated.

Yours truly,

Fredrick A. Goodman

Appendix B

ACTIVITY QUESTIONNAIRE

School \_\_\_\_\_ Date \_\_\_\_\_

Total enrollment in high school \_\_\_\_\_ Number of boys \_\_\_\_\_

\_\_\_\_\_ Number of physical education periods per week \_\_\_\_\_

Length of physical education period \_\_\_\_\_ minutes.

Will you please check the activities you have in your physical education program, the amount for each activity, and the type of facilities you have for each activity. List only physical education activities--do not count time spent for teams in varsity sports.

Please use the following scale for your facilities: A--Good B--Adequate C--Inadequate D--None

ACTIVITY	No. of periods spent on activity	Minutes per period spent on activity	Scale			
			A	B	C	D
1. Archery	_____	_____	_____	_____	_____	_____
2. Badminton	_____	_____	_____	_____	_____	_____
3. Baseball	_____	_____	_____	_____	_____	_____
4. Basketball	_____	_____	_____	_____	_____	_____
5. Boxing	_____	_____	_____	_____	_____	_____
6. Calisthenics	_____	_____	_____	_____	_____	_____
7. Clog and tap dance	_____	_____	_____	_____	_____	_____
8. Fencing	_____	_____	_____	_____	_____	_____
9. Folk Dancing	_____	_____	_____	_____	_____	_____
10. Free Exercise	_____	_____	_____	_____	_____	_____
11. Football--6 man	_____	_____	_____	_____	_____	_____
12. Football--11 man	_____	_____	_____	_____	_____	_____



ACTIVITY	No. of periods spent on activity	Minutes per period spent on activity	Facilities			
			A	B	C	D
13. Football--touch	_____	_____	_____	_____	_____	_____
14. Golf	_____	_____	_____	_____	_____	_____
15. Handball	_____	_____	_____	_____	_____	_____
16. Heavy Apparatus	_____	_____	_____	_____	_____	_____
17. Hiking	_____	_____	_____	_____	_____	_____
18. Hockey	_____	_____	_____	_____	_____	_____
19. Horseshoes	_____	_____	_____	_____	_____	_____
20. Life Saving	_____	_____	_____	_____	_____	_____
21. Marching	_____	_____	_____	_____	_____	_____
22. Modified Games	_____	_____	_____	_____	_____	_____
23. Round Dance	_____	_____	_____	_____	_____	_____
24. Soccer	_____	_____	_____	_____	_____	_____
25. Softball	_____	_____	_____	_____	_____	_____
26. Speedball	_____	_____	_____	_____	_____	_____
27. Square Dance	_____	_____	_____	_____	_____	_____
28. Swimming	_____	_____	_____	_____	_____	_____
29. Table Tennis	_____	_____	_____	_____	_____	_____
30. Tennis	_____	_____	_____	_____	_____	_____
31. Track	_____	_____	_____	_____	_____	_____
32. Tumbling	_____	_____	_____	_____	_____	_____
33. Volleyball	_____	_____	_____	_____	_____	_____
34. Water Polo	_____	_____	_____	_____	_____	_____
35. Wrestling	_____	_____	_____	_____	_____	_____
36. _____	_____	_____	_____	_____	_____	_____
37. _____	_____	_____	_____	_____	_____	_____

Appendix C

I N T E R E S T   Q U E S T I O N N A I R E

This questionnaire is being sent out under the supervision of the Physical Education Department of the Montana State University.

The purpose is to try to determine the activities in which you are interested, how you gained that interest, and the degree of proficiency you would like to gain in that activity. All the boys in the high schools of Mercer County are taking part in this survey.

In Column I, you will find a list of activities for you to consider. At the end of the list you will find some blank spaces where you will fill in some activity you like that we have omitted.

In Column II, you will indicate your degree of interest.

Perhaps some activity does not interest you very much-- you could rate it 2 or 3. An activity in which you have an average interest, you could vary from 4 to 7. An activity with a moderate degree of interest would be 7 or 8, and one with a very high degree of interest would be 9 or 10. Remember--THE LOWER THE NUMBER--THE LOWER YOUR INTEREST--THE HIGHER THE NUMBER THE HIGHER YOUR INTEREST.

Please use the following Scale:

0	.	none
1-3	.	low
4-7	.	moderate
8-10	.	high

In Column III, check how you gained your interest. Indicate whether your interest was developed through 1. participation in the game or activity, 2. seeing the activity or pictures of the activity, 3. reading about the

activity. (1) participation, (2) observation, (3) reading.

In Column IV, check the degree of proficiency you desire. (How much would you like to learn about the activity?)

**SPECTATOR:** Would you like to learn enough about the activity so you would understand it and enjoy it?

**OCCASIONAL PLAYER:** Would you like to learn a little more than being a spectator, and be able to play it fairly well?

**HIGHLY SKILLED PLAYER:** Would you like to learn all the fundamentals and become a very good player?

Please use this Scale: 1-3 . Spectator  
4-7 . Occasional player  
8-10 . Highly skilled performer

Please answer this according to your interest, regardless of whether you mark it high or low. We would like to get an honest, reliable survey of boys' interest in the activities.

**NO NAMES WILL BE REQUIRED ON THE SHEETS.**

Thank you.

Appendix D

INTEREST QUESTIONNAIRE

School \_\_\_\_\_ Age \_\_\_\_\_ Date \_\_\_\_\_

Year in school: Freshman \_\_\_\_\_ Sophomore \_\_\_\_\_ Junior \_\_\_\_\_

Senior \_\_\_\_\_ Do you live in a city home \_\_\_\_\_ rural home \_\_\_\_\_

ACTIVITY (Column I)	INTEREST (Column II)			PROFICIENCY (Column IV)		
	1-3 4-7 8-10			1-3 Spect. 4-7 Player 8-10 Skilled		
0. Golf (Example)	<u>6</u>			X	X	<u>7</u>
1. Archery	_____	_____	_____	_____	_____	_____
2. Badminton	_____	_____	_____	_____	_____	_____
3. Baseball	_____	_____	_____	_____	_____	_____
4. Basketball	_____	_____	_____	_____	_____	_____
5. Boxing	_____	_____	_____	_____	_____	_____
6. Calisthenics	_____	_____	_____	_____	_____	_____
7. Clog and Tap Dance	_____	_____	_____	_____	_____	_____
8. Fencing	_____	_____	_____	_____	_____	_____
9. Folk Dancing	_____	_____	_____	_____	_____	_____
10. Free Exercise	_____	_____	_____	_____	_____	_____
11. Football--6 man	_____	_____	_____	_____	_____	_____
12. Football--11 man	_____	_____	_____	_____	_____	_____
13. Football--touch	_____	_____	_____	_____	_____	_____
14. Golf	_____	_____	_____	_____	_____	_____
15. Handball	_____	_____	_____	_____	_____	_____
16. Heavy Apparatus	_____	_____	_____	_____	_____	_____

*Participation*  
*Observation*  
*Reading*

ACTIVITY	<u>INTEREST</u> 1-3 4-7 8-10	Participation Observation Reading			<u>PROFICIENCY</u> 1-3 Spect. 4-7 Player 8-10 Skilled
(Column I)	(Column II)	(Column III)			(Column IV)
17. Hiking	_____	_____	_____	_____	_____
18. Horseshoes	_____	_____	_____	_____	_____
19. Hockey	_____	_____	_____	_____	_____
20. Life Saving	_____	_____	_____	_____	_____
21. Marching	_____	_____	_____	_____	_____
22. Modified Games	_____	_____	_____	_____	_____
23. Round Dance	_____	_____	_____	_____	_____
24. Soccer	_____	_____	_____	_____	_____
25. Softball	_____	_____	_____	_____	_____
26. Speedball	_____	_____	_____	_____	_____
27. Square Dance	_____	_____	_____	_____	_____
28. Swimming	_____	_____	_____	_____	_____
29. Table Tennis	_____	_____	_____	_____	_____
30. Tennis	_____	_____	_____	_____	_____
31. Track	_____	_____	_____	_____	_____
32. Tumbling	_____	_____	_____	_____	_____
33. Volleyball	_____	_____	_____	_____	_____
34. Water Polo	_____	_____	_____	_____	_____
35. Wrestling	_____	_____	_____	_____	_____
36. _____	_____	_____	_____	_____	_____
37. _____	_____	_____	_____	_____	_____