

THE STATUS OF PHYSICAL EDUCATION FOR BOYS IN THE
CLASS B HIGH SCHOOLS IN KANSAS IN 1946-1947

by

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TABLE OF CONTENTS

	<u>Page</u>
PREFACE	1v
INTRODUCTION	1
PROCEDURE	4
DISCUSSION	15
SECTION I. INFORMATION OBTAINED FROM THE ADMINIS- TRATORS OF CLASS "B" HIGH SCHOOLS IN KANSAS	15
SECTION II. INFORMATION CONTRIBUTED BY THE PHYSICAL EDUCATION INSTRUCTORS OF CLASS "B" HIGH SCHOOLS IN KANSAS	44
CONCLUSIONS	51
ACKNOWLEDGMENT	54
BIBLIOGRAPHY	55

List of Tables

	<u>Page</u>
Table 1. Physical education data in high schools ..	17
Table 2. Activities for which school has adequate equipment	21
Table 3. Data concerning high school gymnasiums ...	22
Table 4. Service facilities, locker, and dressing room	28
Table 5. Instructor's office and storage room	37
Table 6. Outdoor play facilities	39
Table 7. Swimming pool facilities	43
Table 8. Qualifications of instructors	44
Table 9. High school participation of physical edu- cation instructors	46
Table 10. College participation of physical edu- cation instructors	48
Table 11. Distribution of time among activities in physical education classes	49

PREFACE

This study of the status of physical education for boys in the Class B high schools in the State of Kansas during the school year 1946-1947 was based upon the recorded data from 68 high schools. The study is concerned with physical activities of the recreational type in which the physical education instructors participated while in high school and in college, and those activities in which they earned a school letter while in high school and in college; the activities that were offered in the physical education program in school during school term 1946-1947 and the physical, permanent and temporary equipment of the schools.

Due to the large number of schools from which information was sought, the questionnaire method of survey was used, since this was the most appropriate method by which the desired information could be secured.

INTRODUCTION

The United States has just passed through a world strife; a period in which Americans have come to realize more than ever our need for education of the body as well as the mind. During the recent war, a lack of physical education in many of our schools was made evident from the large number disqualified for military service.

Military officials pointed out the long hours of leisure which for some men are well spent in recreational activities, but for which many men, who during their earlier life, are given no opportunity to develop healthful activities.

Many were rejected from the military service as unfit either mentally or physically. It was reasoned that the "weaklings were a direct result of the failure of health and physical education."¹ It is believed that a portion of these men could have been prepared physically for duty, and that the time required to condition those that were inducted with physical defects could have been reduced. Also these men could have been taught to participate in activities with constructive recreational value.

Educators have learned to realize the importance and the need of physical education in our school systems. It is true that there have been athletics and sports activities long before the

¹Leslie W. Irwin, "New Directions in Physical Education", Journal of Health and Physical Education. Vol. 17, No. 4, (May, 1946), p. 265.

time that our country was discovered. Physical exercises and physical education were being developed in this country as early as 1850. It is evident in the work of "Bishop in Boston in 1852, Tice in St. Louis in 1855, Rickoff in Cincinnati in 1857,"² that they and many other men of this time were realizing the need for training of the body as well as the mind.

Today as in the past, the United States faces a condition which has existed in schools of all sizes and which was militated against successful programs of physical education. This condition has been the assigning of physical education classes to the coach of interscholastic athletics, regardless of his insufficient amount of proper training. Many times the athletic coaches have taught physical education classes and have "permitted the stress to fall on interscholastic sports, therefore stifling the spirit and enthusiasm of the mediocre performers in the classes."³ Many times the physical education classes are conducted so that the pupils are allowed to play any game they wish, any way they wish, with no teaching, and very little supervision.

The youth of the United States are in need of physical education that will teach the fundamentals of various activities which have excellent carry-over values. There is need for physical education instructors who are capable of and will offer physical education programs so successfully planned and taught

²Emmett A. Rice, A Brief History of Physical Education, p. 224-225. A. S. Barnes and Co. 1939.

³Leslie W. Irwin, The Curriculum in Health and Physical Education, C. V. Mosby and Co. p. 166. 1944.

that they will instill in the minds of students and help the students to form such desirable traits as self control, sportsmanship, cooperation, teamwork, and desirable social traits. The teaching outcomes should be:

1. Skills in those forms of play that give pleasure and satisfaction to participation.
2. Knowledge and interest in sports that can be played after school and college days are past.
3. Appreciation of fine ways of play that give pleasure and a generous attitude toward opponents.⁴

In preparing and administering a good physical education program in the high school, the instructor should be vitally concerned with the interests of the individual students and plan activities in which they are interested or will become interested.

"Introductory work in preparing lesson plans is advisable. This is planning in the general order of events in which they are to come. Thus the time, activity and method can be accurately kept."⁵

Irwin (1944) points out that the

failure to offer a program in physical education or teach recreational sports is condoned by offering the excuse that they are lacking in facilities. It is possible to give a comprehensive knowledge of sports with some practice in the fundamentals regardless of whether ideal conditions exist.⁶

⁴Jesse F. Williams and Wm. L. Hughes, Athletics in Education, p. 99. 1939.

⁵G. W. Crampton, The Pedagogy of Physical Training, p. 45. 1922.

⁶Leslie W. Irwin, op. cit., p. 176. 1944.

4

From the information obtained in this study, it is possible to get a true picture of the physical education programs that were offered in the class "B" high schools in Kansas during the school year 1946-1947. It is hoped that this study may inspire the educators of Kansas to build larger and stronger physical education programs which will aid future generations to progress physically as well as mentally.

PROCEDURE

In thinking about the program of physical education that is being offered in the State of Kansas in the Class "B" high schools, many questions arise as to types of leadership, variety of physical education facilities, and credit requirements now in vogue. It seemed desirable to know the facts concerning these questions and it was felt that a survey might instigate an effort to improve the conditions.

In order to make a study, the questionnaire method which consisted of two sections was used and was sent to: (1) the administrators of the Class "B" high schools in the State of Kansas, and (2) the physical education instructors of the Class "B" high schools in the State of Kansas. A questionnaire accompanied by a letter of explanation was mailed to each of the 156 Class "B" high schools in Kansas.

The classification of a class "B" high school in Kansas is determined by the school having its work accredited by the Annual High School Principal's Organization Report which must be filed in the office of the State Department of Public Instruction not

later than October 15 of each year, and each teacher of the school shall have not less than twelve college hours of preparation in the subject matter field and shall have at least five college hours in the specific subject preparation.⁷

A stamped and return addressed envelope was enclosed with each of the 156 questionnaires that were mailed. The mailing list was contributed by the Office of the State Superintendent, Topeka, Kansas.⁸

To facilitate an objective reply, the questionnaire was made a check list so far as possible. A minimum number of questions required writing, such as those dealing with the numbers of male students in the schools; credits required; sizes and numbers of facilities; type of play areas; ages, degrees, and years of experience of the physical education instructors; and the percentage of time allotted to the teaching of each activity.

Seventy-five of the questionnaires were returned and 68 contained information. One of the 68 questionnaires did not contain a section to the Administrator and two of them did not contain a section to the Physical Education Instructor. Therefore, the results of the survey are taken from 67 of the former and 66 of the latter.

The information was tabulated and the data were compiled into large charts containing units relative to the questions in the questionnaire. The charts were divided into Sections I and II as

⁷The Kansas High School Handbook, Department of Public Instruction, pp. 25-26. 1945.

⁸The Kansas Educational Directory, Department of Public Instruction, pp. 30-71. 1945.

were the questionnaires. Section I consisted of the information contributed by the school administrators and Section II consisted of the information contributed by the school physical education instructors. The units are separated by double lines marked close together. The units are arranged in the same order as the questions to which they pertain. The charts, with few exceptions, are self-explanatory.

Numerous questions and units were unanswered, and many blanks were left unfilled. These have been tabulated and compiled along with the answers to which they pertain in order to give a true picture. They have been listed as "No Answer". Any additional information which was volunteered by the administrators or physical education instructors was tabulated and the data were compiled immediately following the "No Answer" tabulations, with the question or statement to which it pertained.

Only two questions were asked which concerned a second gymnasium, namely, does the school have a second gymnasium, and if so, what is the size of it. There was no further questioning concerning the second gymnasium because it was merely desired to know how many Class "B" high schools have a second gymnasium to aid in visualizing the amount of physical facilities they possess.

The number of schools represented for each question and the percent of schools were given for each item to aid in visualizing the picture more clearly. Each percent was obtained by dividing the number of schools represented for each item by the total number of schools represented in the questionnaires. Each item in Section I was represented by 67 schools; therefore each item was

divided by 67. Each item in Section II was represented by 66 schools; therefore it was divided by the 66 represented.

The percentages were carried to two places past the decimal point. If the remainder was one-half or over, the second number on the right of the decimal point was raised to the next higher number, but if less than one-half, the number was left unchanged. For this reason, the percents in the answers of many questions will total more than 100 percent and some will total less than 100 percent.

A copy of the letter and of the questionnaire which were mailed to each school is found on pages 8 to 14.

Dear Fellow Teachers:

For graduate work in physical education, I am attempting, by means of the enclosed questionnaire, to make a survey of the physical education programs, facilities, and leadership in the Class "B" high schools in Kansas for the year 1946-1947.

In the survey I am seeking information from two sources, (1) the administrator of the school and, (2) the physical education instructor of the school.

I would appreciate very much your cooperation in helping me to make this study as extensive and inclusive as possible by checking the lists of items on the questionnaire and returning it to me at your earliest convenience.

Any information given by you will be held in strict confidence. However, I will be glad to send you results of this particular study if you so desire.

I believe this survey will have an educational value as it will give some idea regarding the types of programs now being offered and will help to plan larger programs in order to give students more carry-over value.

Thank you for the information.

Sincerely yours,

(Signed) C. M. Smith

To the Physical Education Instructors:

Please fill out the following items concerning your training and experience in physical education:

Age _____ College Degrees _____

Total number of years of experience in teaching physical education

Give the number of years of experience in teaching physical education in each of the following:

Class "A" high schools _____
Class "B" high schools _____
Class "C" high schools _____
Elementary schools _____

Please mark with an "X" each of the following activities in which you earned a school letter and write in the number of years in which you lettered in each activity both in high school and college:

[illegible]

Please mark with an "X" each of the following activities in which you participated while in high school and college:

High School:

Apparatus (), Archery (), Badminton (), Baseball (hardball) (),
Baseball (softball) (), Basketball (), Bicycling (), Boxing (),
Croquet (), Dancing (), Football (), Football (touch) (),
Golf (), Gymnastics (), Handball (), Hiking (), Horseshoes (),
Rope skipping (), Skating (ice) (), Skating (roller) (),
Soccer (), Swimming (), Table Tennis (), Tennis (), Track and
Field (), Tumbling (), Volleyball (), Weight-lifting (),
Wrestling (),

Other sports _____

College:

Apparatus (), Archery (), Badminton (), Baseball (hardball) (),
Baseball (softball) (), Basketball (), Bicycling (), Boxing (),
Croquet (), Dancing (), Football (), Football (touch) (),
Golf (), Gymnastics (), Handball (), Hiking (), Horseshoes (),
Rope skipping (), Skating (ice) (), Skating (roller) (),
Soccer (), Swimming (), Table tennis (), Tennis (), Track and
Field (), Tumbling (), Volleyball (), Weight-lifting (),
Wrestling (),

Other sports _____

Please fill in the percentage of time allotted to each of the following activities which you offer in your physical education program:

Apparatus (%), Archery (%), Badminton (%), Baseball (hardball) (%),
Baseball (%), (softball) Boxing (%), Football (%), Football
(touch) (%), Golf (%), Gymnastics (%), Handball (%), Horse-
shoe (%), Skating (ice) (%), Swimming (%), Shuffleboard (%),
Table Tennis (%), Track and Field (%), Wrestling (%),
Other sports _____

To the Administrators of the Class B High Schools in Kansas:

In order to make a study of the physical education programs and facilities being offered in Class B high schools in Kansas, I am asking your cooperation in filling out the following, concerning your school:

1. Is physical education compulsory _____ or elective _____?
2. Does the physical education instructor coach competitive inter-scholastic athletics? Yes _____ No _____.
3. What is the total number of male students in school? _____.
4. What is the total number of male students in physical education classes? _____.
5. What is the average size of your physical education classes? _____.
6. How many credits are given each student each year in physical education? _____.
7. How many credits are required in physical education toward graduation? _____.

Please mark with an "X" each of the following activities for which your school has adequate facilities and equipment to offer students for their participation:

Apparatus (), Archery (), Badminton (), Baseball (hardball) (),
Baseball (softball) (), Basketball (), Boxing (), Football (),
Football-touch (), Golf, (), Gymnastics (), Handball (),
Horseshoes (), Skating-roller (), Swimming (), Shuffleboard
(), Table Tennis (), Tennis (), Track and Field (), Volley-
ball (), Wrestling (), Other Sports _____

Please give the approximate measurements and mark with an "X" the correct blanks of the following:

A. Gymnasium

1. Gymnasium Rooms:

A. How many gymnasia? _____.

2. Location of the gymnasium

- a. Is the ground floor at grade elevation _____ or above _____?
- b. Is it in a wing of the building? Yes _____ No _____.
- c. Does it have a southern exposure? Yes _____ No _____.
- d. Is it located so that it will permit close correlation of activities? Yes _____ No _____.

3. Size of the gymnasium

- a. Length of the first gym _____, second gym _____.
- b. Width of the first gym _____, second gym _____.
- c. Height under the lowest beam and trestle of the first gym _____, second gym _____.

4. Light and ventilation for the gymnasium:

- a. Are the windows on the long sides _____ or the ends _____?
- b. Window area is 30 _____, 25 _____, 20 _____, 15 _____, 10 _____, 5 _____ percent of the floor space.
- c. How many artificial lights are on the ceiling? _____.
- d. Do you have skylights? Yes _____ No _____.

5. Walls

- a. Are the walls glazed brick _____, oak wainscot with smooth brick _____, cement plaster wainscot with sand-finished plaster _____, unsurfaced concrete block _____?

6. Floors:

- a. Do you have hard pine boards for the top flooring? Yes _____ No _____.
- b. Do you have a subfloor laid diagonally? Yes _____, No _____.
- c. Do you have oak for the top flooring? Yes _____, No _____.
- d. Do you have hard maple boards for the top flooring? Yes _____ No _____.
- e. Do you have wood blocks on end for upper floor? Yes _____ No _____.
- f. Do you have wood blocks on end laid upon concrete? Yes _____ No _____.
- g. Do you have a sound reducing material between the two floors? Yes _____ No _____.

7. Bleacher Space:

- Do you have "lifting tiers" for seats? Yes ☐ No ☐.
- Do you have permanent bleachers on the long sides of the gym? Yes ☐ No ☐.
- Do you have movable bleachers? Yes ☐ No ☐.
- Can you seat more than half of your student body? Yes ☐ No ☐.

B. Service Facilities:

1. Locker and dressing room:

- You have an area of 30 ☐ 25 ☐ 20 ☐ 15 ☐ 10 ☐ 5 ☐ sq.ft. per pupil for the largest class.
- Does it adjoin the gym? Yes ☐ No ☐.
- Is it readily accessible from the athletic field? Yes ☐ No ☐.
- It contains seats for how many students? .
- It has 25 ☐ 20 ☐ 15 ☐ 10 ☐ 5 ☐ percent window area.
- Does it have sufficient pitch to allow water to drain off quickly? Yes ☐ No ☐.
- Is the floor non-slip concrete ☐ concrete with pulverized steel ☐ tile ☐.
- Does it have duck boards, flush with the floor leading to the drain? Yes ☐ No ☐.
- Are the walls tile ☐ brick ☐ plaster ☐ wood ☐.
- The locker type is the individual basket ☐ box ☐ self-service ☐.
- What is the length , width , and depth of the lockers?

2. Shower Room:

- Is it adjacent to the locker room? Yes ☐ No ☐.
- Easy to access from the gym ☐ athletic field ☐.
- Do you have fourteen sq.ft. of floor area for each shower head? Yes ☐ No ☐.
- Do you have more than 6 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ shower heads.
- Are your shower heads individually controlled and operated ☐ or are they gang controlled by an attendant or instructor ☐.
- Windows and doors' sashes covered with copper? Yes ☐ No ☐.
- Window area is 30 ☐ 25 ☐ 20 ☐ 15 ☐ 10 ☐ 5 ☐ percent of the floor area.
- The walls are marble ☐ glazed tile ☐ concrete ☐.

3. Sanitary Features:

- Do you have an entrance to the toilet from the shower ☐ and locker room ☐.
- Do you have windows in the toilet room? Yes ☐ No ☐.
- Do you have tile ☐ or concrete ☐ floors?
- How many urinals toilets lavatories do you have?

C. Auxiliary Room:

1. Physical education instructor's office:

- a. The length of the office is _____, the width is _____, the height is _____.
- b. Is it conveniently located for supervision of the athletic field _____, gym _____, shower and locker rooms _____?
- c. Is it equipped with a shower _____, toilet _____, closet _____?

D. Outside Play Areas:

1. Surface:

- a. What is the top dressing of the football field _____, Baseball diamond _____, tennis courts _____, and running track _____?

2. Number of courts:

- a. How many tennis courts _____, horseshoe courts _____, baseball diamonds _____, and football fields _____ do you have?

3. Bleachers:

- a. Do you have bleachers for these areas? Yes _____ No _____.
- b. Do you have permanent bleachers _____ or moveable bleachers _____?
- c. What is the seating capacity of the bleachers? _____.

4. Free area:

- a. How much free play area do you have which is not listed in the above mentioned areas? _____.

E. Swimming Pool

1. School swimming pool:

- a. Do you have a swimming pool? Yes _____ No _____.
- b. What is the length _____, width _____.
- c. What is the depth of the pool at the deepest end _____, at the shallow end _____.

2. City swimming pool:

- a. Does your city have a pool? Yes _____ No _____.
- b. Do you utilize the pool for physical education classes? Yes _____ No _____.
- c. What is the depth of the pool at the deepest end _____, at the shallow end _____?

DISCUSSION

Of the questionnaires mailed to the 156 Class "B" high schools in Kansas, 75 were returned but only 68 of these contained usable information. This makes a sampling of a bit over 43 percent of the schools under consideration.

In Fig. 1, the schools making usable returns are spotted on a map of Kansas. Examination of this map reveals that more than two-thirds of the returns came from the eastern half of the state. Due to the greater number of schools in the eastern half of the state, perhaps this is not out of proportion.

SECTION I. INFORMATION OBTAINED FROM THE ADMINISTRATORS
OF CLASS "B" HIGH SCHOOLS IN KANSAS

Information in the questionnaires contributed by the administrators is tabulated in the tables of Section I. Among the returns from schools, one from the administrator was omitted so this section of the returns totals 68 instead of 69.

Referring to Table 1, Section 1, it appears that physical education is compulsory in 40 of the schools, or nearly 60 percent. In 10 schools, it is elective and 10 do not offer it. It further appears that a few schools make requirements in some of the grades only. Clearly the state requirement effective in 1949 will call for considerable readjustment among these schools. One full credit of physical education will be required for graduation beginning with the freshman class of 1945. Seniors of 1949 will be required to have the one full credit.

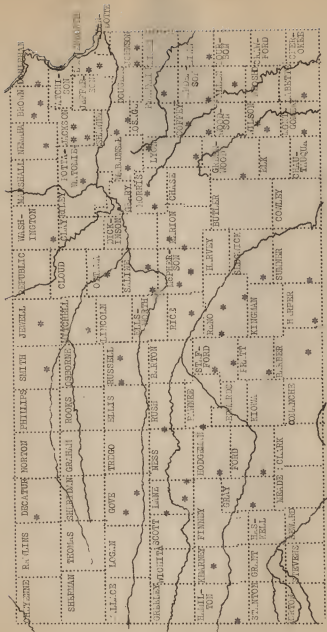


FIG. 1. Location of Class B high schools in Kansas from which data were obtained.

Table 1. Physical Education Data in High Schools.

Total No. of schools represented - 67			:	No. of	:	Percent
			:	schools	:	of schools
Physical Education:						
Compulsory	40	59.70				
Elective	10	14.93				
Not offered	10	14.93				
No answer	2	2.99				
Statements Added:						
Physical Education is compulsory for ninth and tenth grades and elective for eleventh and twelfth grades.	2	2.99				
Physical Education is compulsory for one year and elective three years.	1	1.49				
Physical Education is compulsory for ninth grade and elective for tenth, eleventh, and twelfth grades.	1	1.49				
Health Education is taught and is compulsory instead of Physical Education.	1	1.49				
The Physical Education Instructor Coaches Competitive Athletics:						
Yes	51	76.12				
No	8	11.94				
No answer	5	7.47				
No instructor	3	4.48				
Additional Information:						
30 students in school offering no Physical Education	1	1.49				
40 students in school offering no Physical Education	1	1.49				

Table 1. (concl.).

<hr/>		
Total No. of schools represented - 67	: No. of : : schools :	Percent : of : schools
<hr/>		
Total number of male students in Physical Education Classes:		
0 - 10	7	10.45
11 - 20	20	29.85
21 - 30	22	32.84
31 - 40	6	8.96
41 - 50	3	4.48
51 - 60	2	2.99
No answer	7	10.45
The average number of male students in the schools is 24.8. The entire group could be handled nicely in each school in one physical education class.		
The average total number of students in physical education classes is 22.17.		
Number of credits given each student each year in Physical Education:		
0	12	17.91
1	26	38.81
2	9	13.43
3	10	14.93
4 credit given yearly for Athletics	2	2.99
4 credit given Freshmen and Sopho- mores	1	1.49
Statement "We just give credit"	1	1.49
Statement "We just give credit for two years".	1	1.49
No answer	5	7.46
Number of credits required of each student toward graduation:		
0	14	20.90
1	4	5.97
2	4	5.97
3	35	52.24
4	4	5.97
No answer	1	1.49
Two years on no credit basis	3	4.48
	2	2.99
<hr/>		

Data concerning the duties of physical education instructors indicate that in slightly more than three-fourths of the schools, the physical education instructor coaches competitive athletics. Keeping in mind that in most cases he handles classwork in other fields also, it is evident that other than in competitive athletics, physical education is getting little attention.

Considering the number of male students reported, the average school enrollment of boys turns out to be about 25, while the average in physical education classes is barely over 22. Only nine of the schools have classes over 30 and but two in the 50-60 group. It would seem feasible, therefore, that in all these schools, not more than one section would be necessary if the varied ages and stages of development can be so accommodated.

When we come to the matter of credit for physical education, it develops that one-fourth credit per year is most common with one full credit required for graduation. A considerable proportion, nearly 18 percent, give no credit and nearly 21 percent do not require physical education credit for graduation.

The data as compiled in this survey indicated that the majority of Class "B" high schools in this state were equipped for the four major sports of football 63 percent, basketball 94 percent, baseball 76 percent, and softball 95 percent. There was a definite absence of facilities for individualized and basic training, only two schools being equipped for such things as apparatus, archery, and for gymnastics, showing a definite overload on the interscholastic side of physical education.

In considering Tables 2 and 3, it is easy to see that schools equipped themselves first for basketball, as 94 percent of the schools were so equipped and then considered other phases of the physical education field as the school developed. Even though the schools did equip themselves for basketball, they failed to build the gymnasiums to standard size for interscholastic competition, 88 percent of the schools were under standard size, and 5 percent above standards set by the National Federation of High School Athletic Associations,⁹ of which this state is a member. The standard playing space of gymnasiums as set by this Federation is 90'x 50'x 20'. The average size of gymnasiums as found by this survey was 60'x 35'x 18', which is far below the requirement set by the Federation. Seven percent of the schools gave no answer as to the size of the gymnasium.

⁹National Federation of State High School Athletic Associations Handbook, p. 23. 1946.

Table 2. Activities for which school has adequate equipment.

Activities	No. of schools	Percent of schools
Apparatus	1	1.49
Archery	2	2.99
Badminton	11	16.48
Baseball (Hardball)	51	76.12
Baseball (Softball)	64	96.52
Basketball	83	94.03
Boxing	21	31.34
Football	27	40.30
Football (Touch)	15	22.39
Gymnastics	11	16.48
Handball	5	7.46
Horseshoes	20	29.85
Skating (Roller)	4	5.97
Swimming	3	4.48
Shuffleboard	12	17.91
Table Tennis	38	56.72
Tennis	19	28.36
Track and Field	31	46.27
Volleyball	47	70.15
Wrestling	10	14.93
Additional information:		
Dancing	1	1.49
Six man football	2	2.99
Soccer	1	1.49

Table E. Data concerning high school gymnasiums.

	No. of schools	Percent of schools
Number of gymnasiums		
0	2	2.99
1	62	92.54
2	2	2.99
Additional information:		
No gymnasium, physical education is taught in basement	1	1.49
Gymnasium used by school isn't owned by school nor located near it	1	1.49
No answer	1	1.49
Location of gymnasium		
Ground floor or grade elevation	45	67.16
Above grade elevation	9	13.43
No answer	8	11.94
Additional information:		
Below grade elevation	5	7.46
In the wing of the building		35.32
No		46.27
No answer		10.45
Does it have a southern exposure	30	44.78
No	28	41.79
No answer	9	13.43
Will it permit close correlation of activities	59	88.06
Yes	2	2.99
No answer	6	8.96
The gymnasium which is used by the school is not located in school building	1	1.49
Total number of first gymnasiums owned by school	62	92.54

Table 3. (cont.).

	No. of schools	Percent of schools
The size of the average gymnasium is 60 x 35 x 18 feet. This gymnasium is sufficient in size for the size of physical education classes.		
Length:		
40 - 50	2	2.99
51 - 60	12	17.91
61 - 70	22	32.84
71 - 80	21	31.34
81 - 90	2	2.99
91 -100	1	1.49
101 -110	1	1.49
111 -120	1	1.49
Width:		
25 - 35	18	26.86
36 - 45	35	52.24
46 - 55	5	7.46
56 - 65	3	4.48
66 - 75	1	1.49
Height:		
0 - 10	2	2.99
11 - 20	36	53.73
21 - 30	23	34.33
No answer	1	1.49
No answer concerning size of gymnasium:		
60 x 30 x 18	1	1.49
70 x 30 x 15	1	1.49
Location of windows:		
On long sides	41	61.19
On ends	3	4.48

Table 3. (cont.).

	No. of schools	Percent of schools
Additional information:		
On both long sides and both ends	5	7.40
On both long sides and one end	2	2.99
On one long side and two ends	5	7.46
On one long side and one end	4	5.97
No answer	7	10.45
Percentage of window area as compared to floor space:		
50	18	17.91
25	12	17.91
20	21	31.34
15	5	4.48
10	8	11.94
5	5	7.46
No answer	6	8.96
Number of lights on ceiling of first gymnasium:		
0 - 5	10	14.93
6 - 10	38	56.72
11 - 15	12	17.91
16 - 20	2	2.99
No answer	5	7.46
Number of schools having skylights:		
Yes	2	2.99
No	60	89.55
No answer	5	7.46
Material used in construction of walls:		
Glazed brick	9	15.43
Oak wainscot with smooth brick	2	2.99
Cement plaster wainscot with sand finish plaster	45	67.16
Unsurfaced concrete blocks	1	1.49
No answer	1	1.49

Table 3. (cont.).

	No. of schools	Percent of schools
--	----------------	--------------------

Additional information:

Glazed tile	1	1.49
Wood finish	1	1.49
Glazed brick and plaster	1	1.49
Glazed painted brick	1	1.49

Material used in construction of floors:

Hard pine boards for the top flooring	7	10.45
Hard maple boards for top flooring	40	59.70
Oak for the top flooring	11	16.42
Wood blocks on end for upper floor	1	1.49
Subfloor laid diagonally	40	59.70
Wood blocks on end laid upon concrete for subfloor	18	26.86
Sound reducing material between the two floors	11	16.42
No	48	71.64
No answer	1	1.49

Additional information:

Hard maple top flooring and sample sub-floor on a concrete base	1	1.49
Concrete floor	1	1.49

The one concrete floor and the one floor containing wood blocks on end for upper flooring did not contain a subfloor.

Bleacher space:

Lifting tiers for seats	9	13.45
Permanent bleachers on long sides of gymnasiums	22	47.76

Movable bleachers:

No answer as to movable bleachers	13	26.87
	15	28.39

Table 5. (concl.).

	No. of schools	Percent of schools
Additional information:		
Permanent bleachers on one long side	1	1.49
Permanent bleachers in balcony on one long side	1	1.49
Only chairs for seats	1	1.49
Can seat more than half of student body:		
Yes	62	92.54
No answer	5	7.46
No schools had more than one type of bleachers in the gymnasium.		

The consensus of all authority in the field of physical education is that in the utopian gymnasium, the window space should be from one-half to one-third of the floor space. This survey brings out that all of the schools in this survey had less than 30 percent window space and that only 45 of the 67 schools had from 20 to 30 percent window space, 6 giving no answer to this question. Electric lighting was adequately supplied; of the 62 schools sampled, 52 had from 6 to 20 lights in the ceiling of the gymnasium. The largest grouping came in the 6 to 10 bracket where 57 percent of the schools fell. Only 2 schools had skylights which are not important.

In consideration of the construction of the gymnasium, two types of walls seemed to dominate; glazed brick was used by 9 of the 67 schools, and cement plaster wainscot with sand finish

plaster were used in 45 schools or 6 percent of those sampled. In the eight additional schools, there were seven different wall finishes.

Hard maple and oak were the main woods used for top flooring; 61 percent of the schools used hard maple, and 17 percent finished oak. Pins, concrete and wood blocks on end were also used to a lesser extent. The subfloor in 60 percent of the cases was laid diagonally, although 27 percent of the schools had wood blocks on end upon concrete for the subfloor to carry the load, help acoustics, and prevent breakage of the thin top floor. There was one concrete floor and the one floor containing wood blocks on end for upper flooring, did not contain a subfloor.

Data concerning the seating capacity of the gymnasium indicate that permanent bleachers on the long sides of the gymnasium dominated among those schools sampled, 48 percent of the schools being in this category. Movable bleachers and lifting tiers for seats were a strong minority, amounting to 41 percent between them. One school had permanent bleachers in a balcony, and one had only chairs for seats. No school had more than one type of bleacher in the gymnasium. Of the 62 schools reporting, all 62 could seat more than half of the student body, but few could accommodate much of a public crowd, should interest develop.

In the matter of service facilities, two of the 67 schools contributing information reported no facilities available; four reported showers, toilet, dressing, and locker rooms combined; and 63 had separate facilities. The remaining four schools fail-

ed to answer the questionnaire in this feature. The number of square feet of floor space per pupil varies from a high of 30 to a low of five, with 27 percent of the schools reporting the latter.

There should be 15 square feet per pupil for locker and dressing room. Over 40 percent of schools sampled had less than 15 square feet and the majority had five.

Table 4. Service facilities, locker, and dressing room.

	No. of schools	Percent of schools
Number of schools represented	67	100
Number of schools that contributed information on separate service facilities	63	94.03
Showers, toilet, dressing, and locker rooms combined	4	5.97
No service facilities	2	2.99
No answer pertaining to service facilities	4	5.97

Number of square feet per pupil:

30	3	4.48
25	4	5.97
20	9	13.43
15	11	16.42
10	13	19.40
5	18	26.86
No answer	9	13.43

Accessible to:

Gym	49	73.13
No	12	17.91
No answer	6	8.96
Athletic field	47	70.15
No	13	19.40
No answer	7	10.45

Table 4. (cont.).

	: No. of : schools	: Percent : of : schools
Entrance to shower room:		
Yes	34	50.74
No	15	22.39
No answer	18	26.86
Entrance to locker room:		
Yes	30	44.78
No	19	28.36
No answer	18	26.86
Schools with toilets having windows:		
Yes	54	81.00
No	5	7.46
No answer	8	11.94
Additional information:		
Outdoor toilet	1	1.49
Material used in construction of floors:		
Tile	1	1.49
Concrete	54	81.00
No answer	10	14.93
Additional information:		
Wood	2	2.99
Number of urinals:		
0	2	2.99
1	33	49.26
2	17	25.37
3	2	2.99
No answer	12	18.40

Table 4. (cont.).

	No. of schools	Percent of schools
Number of toilets:		
1	8	11.94
2	16	23.88
3	18	26.86
4	11	16.42
5	1	1.49
6	1	1.49
8	1	1.49
No answer	11	16.42
Number of lavatories:		
1	39	58.20
2	8	11.94
3	2	2.99
4	1	1.49
No answer	17	25.37
Additional information:		
Schools having urinals, toilets and lavatories but gave no number	1	1.49
Shower adjacent to the locker room:		
Yes	56	83.58
No	4	5.97
No answer	7	10.45
Shower easily accessible from the gymnasium:		
Yes	57	85.07
No	5	7.46
No answer	5	7.46
Shower easily accessible from the athletic field:		
Yes	28	41.79
No	18	26.86
No answer	21	31.34

Table 4. (cont.).

	: : No. of : schools	: Percent : of : schools
Fourteen square feet of floor space per shower head:		
Yes	23	41.79
No	24	55.32
No answer	15	22.39
Number of shower heads:		
More than 6	4	5.97
5	1	1.49
4	7	10.45
3	8	11.94
2	21	31.34
1	19	28.36
0	0	0.00
No answer	7	10.45
Shower heads are:		
Individually controlled	56	83.58
Gang controlled	2	2.99
No answer	9	14.43
Window and door sashes covered with copper:		
Yes	6	8.96
No	54	81.00
No answer	7	10.45
Percentage of window area to floor space:		
25 percent	3	4.48
20 percent	8	11.94
15 percent	8	11.94
10 percent	15	22.39
5 percent	12	17.91
0 percent	2	2.99
No answer	19	28.36
Material used in construction of the walls:		
Marble	0	0.00
Concrete	50	74.64
Glazed brick	5	7.46
No answer	7	10.45

Table 4. (cont.).

	No. of schools	Percent of schools
Additional information:		
Plaster	3	4.48
Sheet metal	1	1.49
Wood wainecot and plaster	1	1.49
Seats how many pupils:		
0 - 10	20	29.85
11 - 20	28	41.79
21 - 30	4	5.97
31 - 40	1	1.49
41 - 50	0	0.00
51 - 60	1	1.49
No answer	13	19.40
Locker room window space what percent of floor space:		
25	7	10.48
20	12	17.91
15	5	7.45
10	12	17.91
5	18	26.86
0	1	1.49
No answer	12	17.91
Sufficient pitch of floor to allow water drainage:		
Yes	46	68.66
No	14	20.90
No answer	7	10.45
The average school will seat 13 students in the locker and dressing rooms.		
Material used in construction of floors:		
Non-slip concrete	50	74.64
Concrete with pulverized steel	1	1.49
Tile	3	4.48
No answer	10	14.93

Table 4. (cont.).

	: : No. of : schools	: Percent : of : schools
Additional information:		
Concrete	1	1.49
Shower, toilet, dressing and locker rooms are combined and have con- crete floor	2	2.99
Duckboard:		
Yes	15	22.39
No	45	67.16
No answer	7	10.45
Material used in construction of walls:		
Tile	4	5.97
Brick	7	10.45
Plaster	41	61.19
Wood	2	2.99
No answer	9	13.43
Additional information:		
Cement	1	1.49
Plaster and brick	2	2.99
Wood and plaster	1	1.49
Types of lockers:		
Individual basket	10	14.93
Box	24	35.32
Self-service	12	17.91
No answer	18	26.86
Additional information:		
Nails and hooks	1	1.49
Hooks and shelves	1	1.49
Steel lockers inside of gymnasium but no size given	1	1.49

Table 4. (concl.).

	No. of schools	Percent of schools
Length of lockers:		
10" - 20"	4	5.97
21" - 30"	12	17.01
31" - 40"	10	14.93
41" - 50"	3	4.48
51" - 60"	10	14.93
61" - 70"	0	0.00
71" - 80"	7	10.45
Width of lockers:		
0" - 10"	8	11.84
11" - 20"	28	41.79
21" - 30"	4	5.97
No answer	6	8.86
Depth of lockers:		
0" - 10"	10	14.92
11" - 20"	25	37.31
21" - 30"	3	4.48
No answer	8	11.94

Two schools had only nails, hooks and shelves; one school had steel lockers in gymnasium, but gave no size, and 46 had lockers. Eighteen schools did not answer the part of the unit containing questions pertaining to the lockers.

Data found in Table 4 show lockers and dressing rooms accessible to gymnasium in 49 schools and to the athletic field in 47 schools.

Seating for more than 20 pupils was provided in only six of the 54 schools.

Non-slip concrete was used on the locker room floors of 75

percent of the schools. Insufficient pitch of floor caused improper drainage in 14. Duckboard was used in 15 dressing rooms to prevent slipping. Plaster was the most popular material used in wall construction, as 61 percent of the schools used only plaster.

Table 4 shows that only 18 percent of the schools reported self-service lockers. The less desirable basket and box lockers were used by 50 percent of the schools, while two schools used only hooks or shelves. One school had steel lockers in the gymnasium, but gave no size. Eighteen schools did not answer the part of the unit containing questions pertaining to the lockers, which probably indicated their absence.

Table 4 shows that 84 percent of the schools had the shower room adjacent to the locker room; 85 percent had showers easily accessible from gymnasium; 42 percent were convenient to the athletic field.

The ideal requirement of 14 square feet of floor space per pupil was reported in 42 percent of the schools, although only 6 percent had more than six shower heads. There should be at least one shower head for 12 boys. Individually controlled showers were used in 84 percent of the schools, and 3 percent had gang control levers. Information obtained on covering for door and window sashes showed only 9 percent using the more desirable copper covering.

The extremes in percentage of window area to floor space in shower rooms was 25 percent in 4 percent of the schools and 5 percent in 3 percent of the schools, with the largest group of

schools, 22 percent having 10 percent window area.

As in locker and dressing rooms, the most widely used material for wall construction in shower rooms was concrete, 75 percent of the schools being in this class, and 7 percent reported using glazed brick. Plaster, sheet metal and wainscoting accounted for another 8 percent of materials used in wall construction.

In the matter of toilets, Table 4 shows one school with outdoor accommodations. In 51 percent of the schools, there was an entrance from toilet to shower and 45 percent had locker entrances. Data in Table 4 show 81 percent of the schools reporting windows in toilet rooms. The floors were primarily concrete, with only 1 percent reporting tile and 3 percent using wood.

Information obtained from the 67 schools shows a distinct lack of urinals. A minority of 3 percent of the schools reported three urinals, while 49 percent reported one. Insufficient toilets were also reported. Seventy-nine percent of the schools had four or less and 70 percent of schools had but two lavatories. One toilet should be provided for each 12 boys and one lavatory for each 15 boys.

Table 5. Instructor's office and storage room.

	: No. of : : schools :	: Percent : of : schools :
Total number of schools represented	67	100.00
Number of schools having auxillary rooms	15	22.39

Size of physical education instructor's office:

Length:

6' - 8'	3	4.48
9' - 11'	5	7.46
12' - 14'	5	7.46
15' - 17'	2	2.99
No	30	44.78
No answer	22	32.84

Width:

3' - 5'	3	4.48
6' - 8'	7	10.45
9' - 11'	5	7.46
No	30	44.78
No answer	22	32.84

Height:

6'	6	8.96
9'	6	8.96
12'	3	4.48
No	30	44.78
No answer	22	32.84

Average size of physical education instructor's
office 11' x 7' x 8'.

Conveniently located -

For supervision of athletic field:

Yes	12	17.91
No	3	4.48
No answer	52	77.61

Table 5. (concl.).

	No. of schools	Percent of schools
For supervision of gymnasium:		
Yes	12	22.39
No answer	52	77.61
For supervision of locker and shower room:		
Yes	13	19.40
No	2	2.99
No answer	52	77.61
Physical education instructor's office is equipped with a shower:		
Yes	1	1.49
No	14	20.90
No answer	52	77.61
Physical education instructor's office is equipped with a toilet:		
Yes	1	1.49
No	14	20.90
No answer	52	77.61
Physical education instructor's office is equipped with a closet:		
Yes	10	14.93
No	5	7.46
No answer	52	77.61

Table 6. Outdoor play facilities.

	No. of schools	Percent of schools
Total number of schools represented	67	100.00
Total number of schools that answered the unit pertaining to outside play areas	60	89.55
Surface of football fields:		
Grass	20	29.85
Sod	6	8.96
Dirt	7	10.45
No field	11	16.42
No answer	23	34.33
Surface of baseball diamonds:		
Grass	23	34.33
Sand	2	2.99
Dirt	20	29.85
Sod	3	4.48
No diamond	10	14.93
No answer	9	13.43
Surface of tennis courts:		
Dirt	12	17.91
Sand	6	8.96
Gravel	2	2.99
Native grass	2	2.99
No courts	8	11.94
No answer	37	56.22
Surface of running tracks:		
Sand	6	8.96
Gravel	2	2.99
Cinders	3	4.48
Dirt	12	17.91
Sod	1	1.49
Grass	5	7.46
No tracks	11	16.42
No answer	27	40.50

Table 6. (cont.).

	No. of schools	Percent of schools
Number of tennis courts:		
0	8	11.94
1	10	14.93
2	11	16.42
3	1	1.49
No answer	57	55.22
Number of horseshoe courts:		
0	26	38.81
1	17	25.37
2	3	4.48
4	1	1.49
No answer	20	29.88
Number of baseball diamonds:		
0	10	14.93
1	45	67.16
2	3	4.48
No answer	9	13.43
Additional information:		
Baseball diamond located at grade school instead of high school	1	1.49
Number of football fields:		
0	11	16.42
1	33	49.25
No answer	23	34.33
Additional information:		
Football field located at grade school instead of high school	1	1.49
Schools that have bleachers:		
Yes	11	16.42
No	45	67.16
No answer	11	16.42

Table 6. (concl.).

	No. of schools	Percent of schools
Type of bleachers:		
Permanent	6	8.96
Movable	5	7.46
No answer	56	83.58
Seating capacity of bleachers:		
50	4	4.97
70	1	1.49
75	1	1.49
150	1	1.49
200	3	4.48
300	1	1.49
No answer	56	83.58
Amount of free play area:		
Plenty	1	1.49
7 acres	1	1.49
5 acres	6	8.96
4 acres	1	1.49
2 acres	8	11.94
1½ acres	2	2.99
1 acre	10	14.93
½ acre	4	5.97
¼ acre	2	2.99
No	8	11.94
No answer	24	35.32

In referring to Table 5 of this section, it is evident that there is a decided deficiency in instructors' offices and storage rooms. Only 15 of the 67 schools sampled even made provision for them and they were small and inadequate. The average size was 11' x 7' x 8'. They were as a whole, conveniently located to the athletic field, gymnasium, and in good position to supervise the locker and shower room. Only one had either shower or toilet,

while two of the 15 had closet space.

In considering Table 6 in this section, it is obvious that the top surfacing of the outside play area varied. The tendency was toward grass top surfacing for the football fields, and baseball diamonds, although 13 of the 33 schools having football fields and 25 of the 48 schools having baseball diamonds used sand, dirt or sod to a lesser degree. The running tracks are predominately dirt. Of the 29 schools having tracks, 12 or 41 percent had dirt top surface. There were only 24 horseshoe courts in the 67 schools reporting, and 35 had tennis courts, varying from one to three in number. Only six of the schools had permanent bleachers in their free play area, and five had movable bleachers showing a distinct evidence of insufficient game seating. The seating capacity of the bleachers provided was from 50 to 300 persons, 50 being the common number.

Five acres of free play area is considered the minimum space for students to express themselves physically in sports of their own choice and interest. All but eight schools had less than this amount. This free play area should be situated so as to be convenient, and facilitate discipline, and protect property.

Table 7. Swimming pool facilities.

	No. of schools	Percent of schools
Total number of schools represented	67	100.00
Schools that have a swimming pool:		
Yes	1	1.49
No	59	88.06
No answer	7	10.45
No answer regarding size or depth	1	1.49
City swimming pool:		
Yes	6	8.96
No	58	86.57
No answer	3	4.48
Do not utilize pool for physical education classes:		
Yes	5	7.46
No answer	1	1.49
Depth of pool at deepest end:		
10'	2	2.99
9'	1	1.49
8'	1	1.49
No answer	2	2.99
Depth of pool at shallow end:		
3'	2	2.99
2½'	2	2.99
No answer	2	2.99

One of the most vital phases of physical education as covered in Table 7, is woefully neglected in Class "B" schools in Kansas. Only one has a pool in the school and two others are able to use city pools for physical education classes. The reason for this

is the extremely high cost per pupil of pool construction for small schools. This is not the situation in Kansas alone, but the condition is true among all schools of the same size in the United States.

SECTION II. INFORMATION CONTRIBUTED BY THE PHYSICAL EDUCATION INSTRUCTORS OF CLASS "B" HIGH SCHOOLS IN KANSAS

Information in the questionnaires contributed by the physical education instructors of Class "B" high schools is tabulated in the tables of Section II. As indicated in Table 8, only 52 of the 66 schools in question, or 78 percent had physical education instructors and their ages varied from 21 to 60 with an even break of 29 percent each in the 31 to 40 and 41 to 50 year brackets, and 11 percent each in the upper and lower brackets. As to education and experience, 36 percent had at least B. A. or B. S. degree.

Table 8. Qualifications of instructors.

	: : No. of : schools	: Percent : of : schools
Number of schools represented	66	100.00
Number of schools that had a physical education instructor	52	78.79
Ages of physical education instructors:		
21 - 30	7	10.61
31 - 40	19	28.79
41 - 50	19	28.79
51 - 60	7	10.61
No answer	14	21.21

Table 8. (concl.).

	No. of schools	Percent of schools
College degrees:		
B A	7	10.61
B S	17	26.76
AB and MA	9	13.64
BA and MS	5	7.61
BS and MA	6	10.04
BS and MS	7	10.61
BS and LLD	1	1.52
No answer	14	21.21
Total number of years in teaching physical education:		
0 - 5	18	27.27
6 - 10	15	22.73
11 - 15	6	9.09
16 - 20	8	12.12
21 - 25	3	4.55
26 - 30	2	3.03
No answer	14	21.21
In Class "A" high schools:		
0 - 5	8	12.12
6 - 10	2	3.03
11 - 15	1	1.52
In Class "B" high schools:		
0 - 5	14	21.21
6 - 10	6	9.09
11 - 15	4	6.06
16 - 20	3	4.55
21 - 25	1	1.52
In Class "C" high schools:		
0 - 5	6	9.09
6 - 10	1	1.52
In elementary schools:		
0 - 5	4	6.06
In Junior High Schools:		
0 - 5	1	1.52
6 - 10	1	1.52

The other 64 percent were men with Master's degrees and one had an L.L.D. Most of the 64 percent were principals of the Class "B" schools as well as physical education instructors. The majority of these instructors average less than 11 years of teaching experience in physical education which was for the most part in Class "B" high schools.

Table 9 deals with the experience of the physical education instructors as pupils in their high school training. Examination of this table reveals participation in basketball as most common, including nearly 70 percent. Others, outstanding in importance are baseball 56 percent, football 39 percent, softball 35 percent, and track and field 42 percent. Individual and non-interscholastic activities such as gymnastics, tumbling and apparatus come in for minor attention which further emphasizes lack of training and probably lack of interest in fundamental training.

Table 9. High school participation of physical education instructors.

Activities	No. of schools	Percent of schools
Apparatus	8	12.12
Archery	1	1.52
Badminton	5	7.58
Baseball (Hardball)	37	56.06
Baseball (Softball)	23	34.88
Basketball	46	69.70
Bicycling	6	9.09
Boxing	14	21.21
Croquet	7	10.61
Dancing	8	12.12
Football	25	37.88
Football (Touch)	8	12.12
Golf	5	7.58
Gymnastics	21	31.82

Table 9. (concl.).

Activities	No. of schools	Percent of schools
Handball	11	16.67
Hiking	8	12.12
Horseshoes	18	27.27
Rope skipping	6	9.09
Skating (Ice)	15	22.73
Skating (Roller)	11	16.67
Soccer	13	19.70
Swimming	15	22.73
Tennis	21	31.82
Table Tennis	16	24.24
Track and Field	28	42.42
Tumbling	8	12.12
Volleyball	21	31.82
Weight Lifting	2	3.03
Wrestling	10	15.15
None	1	1.52
No answer	2	3.03
Additional information:		
Scooter	1	1.52

In consideration of Table 10, it is found that again the major sports of basketball, baseball, track, and football dominate the college participation of the physical education instructors. Individual and non-inter-scholastic activities such as gymnastics, tumbling, and apparatus came in for minor attention, although it was found there was a slight rise in percentage over high school participation which further emphasizes the lack of training and probably lack of interest in fundamental training.

Table 10. College participation of physical education instructors.

Activities	No. of schools	Percent of schools
Apparatus	9	15.64
Archery	2	3.03
Badminton	7	10.61
Baseball (Hardball)	22	33.33
Baseball (Softball)	19	28.79
Basketball	35	50.00
Bicycling	2	3.03
Boxing	8	12.12
Crequet	1	1.52
Dancing	9	13.64
Football	25	37.88
Football (Touch)	7	10.61
Golf	7	10.61
Gymnastics	17	25.76
Handball	13	19.70
Hiking	6	9.09
Horseshoes	10	15.15
Rope Skipping	1	1.52
Skating (Ice)	6	9.09
Skating (Roller)	5	7.58
Soccer	6	9.09
Swimming	11	16.67
Tennis	17	24.24
Table Tennis	12	18.18
Track and Field	24	36.36
Tumbling	11	16.67
Volleyball	17	25.76
Weight Lifting	2	3.03
Wrestling	6	9.09
No answer	8	12.13

Table 11 gives one an overall picture of time spent in the classroom on each of the 18 major fields in physical education as taught in Kansas Class "B" high schools. Here again it is clear that the so-called major sports dominated the classroom time, while the fundamental training courses were neglected, the largest per-

cent giving only 10 percent of their time in this field of endeavor. There were two schools which failed to answer this particular question.

In obtaining the information for this study, there was sent to the 156 Class "B" high schools in Kansas a preliminary survey as a test method to obtain information as to the amount of return that would be available. In the original questionnaire, inquiry was made into several different aspects of girls physical education, but due to a very insufficient number of returns on that item of the questionnaire, it was left out of the second and more comprehensive questionnaire, returns from which have been considered in this study.

CONCLUSIONS

1. Only half of the schools studied offered physical education as a required course, most of them giving one-fourth credit annually and one credit toward graduation.

2. The coach of interscholastic athletics is usually the physical education teacher and frequently interscholastic athletics constitute the only physical education in the boys' program.

3. The majority of the schools had facilities to offer baseball (hardball and softball), basketball, table tennis and volleyball. Fewer than one-half offered football, but for interscholastic competition only.

4. The tendency in construction of gymnasiums, is for the top flooring to be either hard maple, or oak, with a subfloor laid diagonally. The walls were predominately cement, plaster wainscot, with sand finish plaster.

5. The window space as compared to the floor space is insufficient in the gymnasiums. Window space should be equal to from one-third to one-half the floor space.

6. Too many schools have insufficient service facilities. The locker, shower, and dressing rooms are too small in comparison to the number of students they serve.

7. A very small percent of the schools have storage or office space for physical educational director.

8. Swimming, an important activity, is completely absent in physical education programs; only one school had a pool.

9. Only five percent of the schools met the requirements for standard sized gymnasiums.

10. Bleacher space for athletic contests were inadequate. One school had only movable chairs for seating, and most of the schools had permanent bleachers on but one side of the gymnasium.

11. The top surfacing of outside play areas varied. The tendency was toward grass top surfacing for the football fields, dirt was used for the running track, baseball diamond, and tennis courts of the school. Sand was used for the latter three areas to a lesser extent.

12. All but eight schools had less than the five acres of free play area which is considered a minimum amount of space for students to express themselves physically in sports of their own choices and interest.

13. Perhaps due to the war, the largest number of physical education instructors was from 41 to 50 years old, and they averaged less than 11 years of teaching experience in physical education which was for the most part in Class "B" high schools.

14. The majority of the physical education instructors earned their high school letter in the more common sports of baseball, basketball, football, track, and field events. The same was true in college with the exception that a very few earned letters in baseball.

15. The physical education instructors have a very limited background in the participation of sports in gymnasium classes both in high school and college which may be carried on to leisure time, or recreation.

16. The major portion of time in physical education classes was allotted to the teaching and coaching of those sports which are used in interscholastic competition.

17. The Class "B" schools in Kansas may very profitably obtain new facilities for a more varied physical education program and employ trained and capable instructors which will make the instruction and results tangible.

18. The lesson learned by our recent war should be profitable to the people of this country and they should act intelligently and diligently in order to give the present and future generations the advantages which are now offered to them by providing higher qualifications for the instructor, and better facilities for him to work with, along with more free play area whereby the students may express themselves adequately.

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BIBLIOGRAPHY

- Crampton, C. Ward. The Pedagogy of Physical Education. New York: Macmillan, 235 p. 1922.
- Dice, Sol D. Unpublished letter to author, June 14, 1946.
- Irwin, Leslie W. The Curriculum in Health and Physical Education. St. Louis: C. V. Mosby, 391 p. 1944.
- Irwin, Leslie W. "New Directions in Physical Education." Journal of Health and Physical Education, Vol. 17, No. 5, 296 p. May, 1946.
- Kansas High School Handbook. Department of Public Instruction, Topeka, Kansas. 1945.
- Kansas High School Directory. Department of Public Instruction, Topeka, Kansas. 1945-1946.
- Rice, Emmett A. A Brief History of Physical Education. New York: A. S. Barnes, 350 p. 1939.
- Williams, J. P. and Wm. L. Hughes. Athletics in Education. Philadelphia and London: W. B. Saunders, 414 p. 1930.
- National Federation of High School Athletic Associations Handbook. Chicago, Ill. 44 p. 1946.