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A comparative study of the participation and expenditures in interschool and intramural athletic programs

Charles Jackson Hopkins
Indiana State University

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A COMPARATIVE STUDY OF THE PARTICIPATION AND EXPENDITURES
IN INTERSCHOOL AND INTRAMURAL ATHLETIC PROGRAMS

A Thesis

Presented to

the Faculty of the Graduate School
Indiana State Teachers College

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Charles Jackson Hopkins

September 1950

The thesis of Charles Jackson Hopkins,
Contribution of the Graduate School, Indiana State Teachers
College, No. 708, under the title A COMPARATIVE
STUDY OF THE PARTICIPATION AND EXPENDITURES IN INTER-
SCHOOL AND INTRAMURAL ATHLETIC PROGRAMS

is hereby approved as counting toward the completion of
the Master's degree in the amount of 8 hours' credit.

Committee on thesis:

Charles Hardaway

David G. Glascock

Walter S. Marks, Chairman

Representative of English Department

Laban C. Smith

Date of Acceptance 9-16-50

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C.J.H.

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

Many persons have discussed the relative merits of the interschool and intramural athletic programs. Both are important to the success of a well-rounded athletic program in a high school.

I. THE PROBLEM

The purpose and importance of the study. The purpose of this study was to: (1) compare the number and percentages of persons participating in the interschool athletic programs with the number and percentages of persons participating in the intramural athletic programs; (2) compare the total amount of money spent on the interschool athletic programs with the total amount of money spent on the intramural athletic programs, and the per capita amount spent on each program.

Through this study, the relative picture of participation and expenditures in each program can be easily seen. As a result, it is hoped that certain recommendations about athletic programs can be made. In the light of the data collected, this study may: (1) aid teachers colleges' physical education departments to see the situation as it exists so they can better train students going into the field; (2) aid the athletic directors in high schools to see the true situa-

tion as it exists, so that they might make a more suitable program to benefit all students.

II. DEFINITIONS OF TERMS USED

Interschool athletics. Interschool athletics was interpreted to mean those sports in which competition between two or more schools occurred. The members of the interschool squads are selected on the basis of ability in a particular sport, and tend to be a selected group.

Intramural athletics. Intramural athletics was interpreted to mean those sports in which competition occurs within the population of one school. This competition did not include that in physical education classes. This program placed emphasis on participation rather than on ability in a given sport, and is open to all boys.

Small schools. Small schools was interpreted to mean those schools in which the total enrollment was from one through ninety-nine.

Medium schools. Medium schools was interpreted to mean those schools in which the total enrollment was from one hundred through two hundred ninety-nine.

Large schools. Large schools was interpreted to mean those schools in which the total enrollment was three hundred

CHAPTER II

REVIEW OF THE LITERATURE

There has always been a controversy concerning the relative merits of the interschool and intramural programs. It is usually conceded that both programs are necessary for a well-rounded athletic program, but where should the emphasis be placed, and to what degree should the emphasis be placed?

Frank G. Schultz¹ stated that, "we are in an era when the importance of the high school interscholastic program is prone to be overemphasized." He made a survey and noted that coaches from the East and Midwest tend to favor a more limited program.²

Very likely the slogan, "athletics for all" has done much to convince taxpayers of the limitation of the over-emphasized interscholastic program, and the need for a more comprehensive athletic organization which would provide athletic interests for all, rather than for a limited number.³

¹ Frank G. Schultz, "Administering the Athletic Program in the small High School," School Board Journal, 97:47, October, 1938.

² Ibid.

³ DeForrest Showley, "Recent Trends in High School Intramural Sports," Journal of Health and Physical Education, 12:356, June, 1941.

Showley⁴ reports that in practice most schools do not yet place sufficient stress upon the intramural program in athletics.

The trend toward intramural athletics is shown in School Opinion Poll taken by Nation's Schools.⁵ The polls showed seventy-five per cent of school administrators favoring mass athletics. Thirty-one per cent of five hundred school administrators queried, answered.

A blistering attack upon interschool athletics was made by Russel Tooze.⁶ He said:

The interschool athletic programs sends its tentacles throughout the whole school system. Its aim is singular--to produce winning teams. We must determine whether the school is an educational plant or an institution for raising funds.

Let physical, mental, and spiritual culture be the aim of all school activities. If this aim is fulfilled, America will be in the heart of everyone, and interscholastic competition will be disposed of with pleasure.

Most people do not take such a strong view, but several persons advocate the education of people to the needs of a greater expansion of the intramural program. Among

⁴ Ibid.

⁵ DeForrest Showley, School Opinion Poll, Nation's Schools, 32:48, November, 1943.

⁶ Russel Tooze, "Intramural versus Interscholastic Contests," School Activities, 14:92-4, April, 1943.

these was Paul R. Washke⁷, who said:

It is the job of the people who are acquainted with the objectives of and values to be gained from intramural participation, to educate and inform, so that this branch of physical education will receive the true consideration and place in the educational system which it so justly warrants.

Objectives to be realized in intramurals are: physical development, social adjustments, mental development, worthy use of leisure time, and expansion of neuro-muscular skills.

DeWitt⁸ voices a problem in the forming of an intramural program when he stated that there was no tangible basis around which intramurals could be organized.

An answer to the critics of the interscholastic program is made by Julian W. Smith.⁹ Mr. Smith said that the critics of the interscholastic program have usually fallen back on the argument that it reaches only a few boys. He continues by stating that the fact that every student cannot play on the first team is hardly an indictment of all interscholastic athletics. Competitive athletics do not call for defenders. Athletic games are based on democratic principles. They are a part of our democracy.

⁷ Paul R. Washke, "Some Objectives of Intramurals", Journal of Health and Physical Education, 10:86-7, February, 1939.

⁸ R. T. DeWitt, "Developing an Intramural Program", Journal of Health and Physical Education, 18:677, November, 1947.

⁹ Julian W. Smith, "Athletics For All," School Activities, 15:207, February, 1944.

A fear of the financial structure of the interschool program was expressed by Ralph LaPorte.¹⁰ He said that the citizen who contributed to the gate receipts for football, or other athletic sports, feels that it is his program, and that he has a right to criticize and find fault with its administration and coaching.

While this fear might be a real one, there is no need to worry about the accountability of the income. Hoek¹¹ says that today, monthly financial reports, game reports, and a summary of each sport's cost, together with a complete yearly report and inventory, are made.

Perhaps the best summation of the obligations of both the interschool and intramural programs is made by Carl L. Schrader.¹² He says, "We (in athletics of all kinds) and only we, meet all pupils throughout the entire school life, and meet them more intimately. What an opportunity, but what a responsibility."

It was not the purpose of this paper to take sides in the controversial issues between interschool and intramural

¹⁰ William Ralph LaPorte, "Is Our Athletic Philosophy Sound," Journal of Health and Physical Education, 10:580-1, December, 1939.

¹¹ Floyd G. Hoek, "Accounting for Athletic Funds," American School Board Journal, 115:56-7, September, 1947.

¹² Carl L. Schrader, "Lost Objectives," Journal of Health and Physical Education and Recreation, 19:254-5, April, 1948.

athletics. The writer merely wished to present the statistical data about each sport, as compiled from the questionnaires.

CHAPTER III

I. SOURCE OF DATA AND METHOD OF PROCEDURE

Source of the data. Data for this study were obtained from a questionnaire,¹ sent by the writer during the 1949-1950 school year.

This questionnaire concerned the following items: (1) the athletic director was asked to indicate the number of interschool sports in which his school participated, the number of participants, and the money spent for each sport from a check list provided for this purpose; (2) the athletic director was asked to indicate the number of intramural sports conducted in his school, the number of participants, and the money spent for each sport from a check list provided for this purpose.

Collecting the data. A questionnaire was sent to four hundred Indiana High Schools of varying sizes in different sections of the state. Returns were received from one hundred seventy-seven schools. Nine returns could not be used because of incomplete data or improper execution of the forms. One hundred sixty-eight schools, forty-two per cent, were finally used as a basis for the study.

¹ A copy of the questionnaire is included in the appendix of this thesis.

These schools were considered in three classes: (1), small schools, which included an enrollment of from one to ninety-nine; (2) medium schools, which included an enrollment of from one hundred to two hundred ninety-nine; (3) large schools which included an enrollment of three hundred and more.

Table I presents a summary of the number and types of schools represented in the study.

TABLE I
NUMBER AND TYPE OF SCHOOL PRESENTED IN THIS STUDY

Type	Number	Per Cent
Small	43	26
Medium	75	45
Large	<u>50</u>	<u>29</u>
Totals	168	100

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

Schools by size offering various interschool sports.

The various sports offered in the interschool athletic programs are shown in Table II. Column one lists, in alphabetical order, the sports offered. Column two is utilized for the recording of the small schools offering the sport. Column three is utilized for the recording of the medium schools offering the sport. Column four is utilized for the recording of the large schools offering the sport.

It is significant to note that all schools of all sizes offered basketball. Perhaps this is because Indiana is among the leaders of all the states in its high school basketball program.

In the smaller schools, softball was the second most popular offering. This is logical, since it does not require a great deal of money or space to play this sport. Track ranked third, and baseball fourth, in the small school classification. No other sports were offered in this classification.

Track was the second choice of the middle-sized school, followed closely by baseball. Softball was fourth, and football, six and eight and eleven man, was offered. Golf, tennis, and cross-country were also made available by this size school.

Track was second choice for the larger schools with

TABLE II

SCHOOLS BY SIZE OFFERING VARIOUS
INTERSCHOOL SPORTS

Sport	Small Schools (1-99)		Medium Schools (100-299)		Large Schools (300 and over)	
	No.	Per cent	No.	Per cent	No.	Per cent
Baseball	20	47.	48	64.	39	78.
Basketball	43	100.	75	100.	50	100.
Cross country	0	0.	2	3.	8	16.
Football 11-man	0	0.	14	18.	42	84.
Football 6,8-man	0	0.	16	21.	5	10.
Golf	0	0.	6	8.	33	66.
Softball	26	60.	22	29.	4	8.
Swimming	0	0.	0	0.	5	10.
Tennis	0	0.	2	3.	26	52.
Track	23	53.	49	65.	47	94.
Wrestling	0	0.	0	0.	9	18.

eleven man football, baseball, golf, tennis, cross-country, wrestling, eight man football, swimming, and softball following in that order.

With more men available, more facilities at their disposal, and more money in the budget, it is only natural that large schools should offer sports requiring manpower and expensive equipment.

Schools by size offering various intramural sports.

Table III shows the various sports offered in the intramural athletic programs. Column one lists, in alphabetical order, the sports offered. Column two is utilized for the recording of the small schools offering the sport. Column three is utilized for the recording of the medium schools offering the sport. Column four is utilized for the recording of the large schools offering the sport.

In contrast to the interschool sports program, only eighty-five schools, about fifty per cent, offered basketball as an intramural sport. Still, it was the sport offered most in each of the three sizes of schools.

Ping pong was second in the small school offering. Softball and volleyball were next in popularity in this area. Baseball, touch football, badminton, track, and tennis followed in that order.

Volleyball rated second among the sports offered in

TABLE III

SCHOOLS BY SIZE OFFERING VARIOUS INTRAMURAL SPORTS

Sport	Small Schools (0-99*)		Medium Schools (100-299)		Large Schools (300 and over)	
	No.	Per cent	No.	Per cent	No.	Per cent
Aerial						
darts	0	0.	1	1.	0	0.
Archery	0	0.	2	3.	5	10.
Badminton	3	7.	6	8.	5	10.
Baseball	7	16.	13	17.	4	8.
Basketball	19	44.	44	59.	22	44.
Bowling	0	0.	1	1.	1	2.
Boxing	0	0.	1	1.	1	2.
Checkers	0	0.	1	1.	0	0.
Football,						
touch	4	9.	14	19.	11	22.
Golf	0	0.	2	3.	4	8.
Horseshoes	0	0.	2	3.	1	2.
Ping Pong	18	42.	17	23.	12	24.
Shuffle-						
board	0	0.	1	1.	0	0.
Soccer	0	0.	5	7.	3	6.
Softball	11	25.	18	27.	15	3.
Speedball	0	0.	3	4.	5	10.
Swimming	0	0.	0.	0.	2	4.
Tennis	1	2.	4	5.	9	18.
Track	2	5.	9	12.	10	20.
Volleyball	11	26.	22	29.	16	32.
Wrestling	0	0.	4	5.	5	10.

the medium schools. Softball, ping pong, touch football, baseball, and badminton, were next in popularity. Other intramural sports offered by five schools or less were archery, golf, soccer, speedball, boxing, tennis, shuffleboard, wrestling, aerial darts, checkers, bowling, and horseshoes.

Volleyball also rated second in the large schools, followed by softball, touch football, track, and tennis in that sequence. Five schools or less offered archery, badminton, baseball, golf, soccer, speedball, boxing, swimming, wrestling, bowling, and horseshoes.

It will be noted that more sports were offered by the schools for their intramural programs than for their interschool programs. This is natural, since many of the sports are not feasible for competition between schools. Also, many of the intramural sports require much less equipment and are easier to finance than many of the interschool sports.

Actual number of boys per school participating in interschool sports. The actual number of boys per school participating in interschool athletic is reflected in Table IV, together with the number of boys enrolled, and the percentage of boys playing interschool sports. Column one lists the sports in alphabetical order. Column two shows the total number of boys enrolled, the actual number of participants in the particular sport, and the percentage of boys participating

TABLE IV

ACTUAL NUMBER OF BOYS PER SCHOOL PARTICIPATING IN
INTERSCHOOL SPORTS

Sport	Small Schools (1-99)			Medium Schools (100-299)			Large Schools (300 and more)		
	Total	Total	Per	Total	Total	Per	Total	Total	Per
	No. Boys	No. Part.	cent	No. Boys	No. Part.	cent	No. Boys	No. Part.	cent
Baseball	561	400	71.3	4176	913	21.8	10920	1248	11.4
Basketball	1376	946	68.7	6450	2175	33.7	17250	1950	11.3
Cross country				201	40	19.9	5771	533	9.2
Football, 11-man				1918	490	25.5	14742	2940	19.8
Football, 6-8 man				1392	416	29.8	852	130	15.3
Golf				564	36	6.4	10758	396	3.7
Softball	858	546	63.6	1628	440	27.0	1000	140	14.0
Swimming							2300	125	5.4
Tennis				232	12	5.2	8996	286	3.2
Track	759	322	42.4	4753	1029	21.6	15839	1303	8.9
Wrestling							2241	270	12.0
Totals	3354	2214	62.3	20914	5510	26.4	90669	9321	10.3

Aggregate total 115,137 enrolled
17,045 participants
14.8 per cent average

Note: In figuring the above total percentages, it is possible that each individual has been counted more than once, since he might have participated in more than one sport.

in the small schools. Column three reveals the total number of boys enrolled, the actual number of participants in the particular sport, and the percentage of boys participating in the medium schools. Column four is utilized for the large schools, pointing out the total number of boys enrolled, the actual number of participants in the particular sport, and the percentage of boys participating.

Baseball was the sport in which the greatest percentage of boys participated in the small schools. Basketball was second highest, softball third, and track last.

The medium schools found basketball as the sport in which the largest percentage of boys was utilized. Six and eight man football, softball, eleven man football, baseball, track, and cross country followed in sequence. Fewer than five per cent played golf and tennis.

The biggest percentage of boys played eleven man football in the large schools. Six and eight man football, softball, wrestling, baseball, and basketball followed in that order. Sports having less than a ten per cent following included cross country, track, swimming, golf, and tennis.

An average of 14.8 per cent of the total number of boys enrolled in the schools of all sizes participated in the interschool sports program. The small schools had an average of 62.3 per cent of the total number of boys enrolled in their schools participating in the interschool program. The medium

schools had an average of 26.4 per cent of the total number of boys enrolled in their schools participating in the inter-school program. The large schools had an average of 10.3 per cent of the total number of boys enrolled in their schools participating in the interschool program.

Actual number of boys per school participating in intramural sports. Table V lists the number of boys enrolled in the different schools, the actual number of boys per school participating in intramural sports, and the percentage of boys participating in intramural sports. Column one lists, in alphabetical order, the various sports offered. Column two reveals the number of boys enrolled, the actual number of boys participating, and the percentage of boys participating in intramural sports in the small schools. The same information: the number of boys enrolled, the actual number of boys participating, and the percentage of boys participating in intramural sports in the medium schools, is reflected by column two. Figures for the large schools are shown in column three, where the number of boys enrolled, the actual number of boys participating, and the percentage of boys participating in intramural sports are listed.

The small schools mentioned softball as the sport in which the greatest percentage of boys was utilized. Volleyball rated second, with basketball, ping pong, baseball,

TABLE V

ACTUAL NUMBER OF BOYS PER SCHOOL PARTICIPATING IN INTRAMURAL SPORTS

Sport	Small Schools (1-99*)			Medium Schools (100-299)			Large Schools (200 and over)		
	Total	Total	Per	Total	Total	Per	Total	Total	Per
	No. Boys	No. Part.	cent	No. Boys	No. Part.	cent	No. Boys	No. Part.	cent
Aerial darts				146	22	15.0			
Archery				463	23	4.9	3716	75	2.0
Badminton	173	21	12.1	1320	47	3.5	3481	59	1.7
Baseball	341	77	22.6	2541	136	6.3	2783	212	7.6
Basketball	943	401	40.4	8729	2712	31.0	10712	1986	18.5
Bowling				140	20	14.3	546	60	10.9
Boxing				242	18	7.5	409	27	6.6
Checkers				148	23	16.9			
Football, touch	201	45	22.4	2773	168	6.0	8879	1320	14.9
Golf				412	10	2.4	1623	50	2.5
Horseshoes				313	30	9.6	216	20	9.2
Ping Pong	912	360	39.5	2321	340	14.6	6728	328	4.9
Shuffleboard				120	24	20.0			
Soccer				1103	124	11.2	1424	268	17.9
Softball	562	440	78.3	3712	1440	38.8	7612	1502	19.7
Speedball				681	156	22.9	2200	263	11.9
Swimming							1512	82	5.5
Tennis	58	10	17.4	816	82	10.0	4580	261	6.7
Track	112	24	21.4	1713	352	20.5	4863	718	14.7
Volleyball	562	264	46.9	4417	1056	23.9	8211	1920	23.4
Wrestling				812	52	6.4	2401	160	6.6
Totals	3864	1642	45.1	33019	6805	20.5	71896	9301	12.9
Aggregate totals:									
108,779 enrolled									
17,748 participants									
16.3 percentage									

Note: In figuring the above total percentages, it is possible that each individual has been counted more than once, since he might have participated in more than one sport.

touch football, track, tennis, and badminton following respectively.

Softball was also the sport in which the greatest percentage of boys played in the medium schools. Following were basketball, volleyball, speedball, track, shuffleboard, aerial darts, ping pong, bowling, soccer, and tennis. Sports having less than ten per cent participation included archery, badminton, baseball, touch football, golf, horseshoes, and wrestling.

The greatest percentage of boys participated in volleyball in the large schools. Following, in sequence, were softball, basketball, soccer, touch football, track, speedball, and bowling. Sports having less than ten per cent participation were archery, badminton, baseball, golf, horseshoes, ping pong, swimming, tennis, and wrestling.

An average of 16.3 per cent of the total number of boys enrolled in the schools of all sizes participated in the intramural sports program. The small schools had an average of 45.1 per cent of the total number of boys enrolled in their schools participating in the intramural program. The medium schools had an average of 20.5 per cent of the total number of boys enrolled in their schools participating in the intramural program. Twelve and nine-tenths per cent of the total number of boys enrolled in the large schools participated in the intramural program.

A comparison of Tables IV and V will show that both small and medium schools had a greater percentage of their boys participating in interschool sports than in intramural sports. On the other hand, the large schools had a greater percentage of their boys participating in intramural sports. Because of the greater number in the large school area, the aggregate total indicated that a slightly greater percentage participated in interschool sports, 16.3 per cent playing intramural sports, and 14.8 per cent playing interschool sports.

The percentage for intramural sports is low. Even though eight more sports were offered in the intramural programs than in the interschool programs, there was an increase of only 1.5 per cent in the number of boys participating in the intramural sports.

By comparison with the other schools, the small schools had the highest percentage of boys participating in the intramural program. Yet, despite the fact they offered five more sports, 17.2 per cent fewer boys participated in their intramural programs than in their interschool programs.

The medium schools also had 5.5 per cent fewer boys participating in their intramural programs even though they offered twice as many intramural sports than they did interschool sports.

Only the large schools had a larger percentage of boys playing intramural sports than interschool sports, and this

was by a scant 2.6 per cent margin, even though six more intramural sports were offered.

In interpreting the percentage in each type of activity, it must be remembered that the individuals may participate in both interschool and intramural activities; thus, the figures are not directly comparable.

Financial report of schools regarding various sports offered on interschool basis. Table VI lists the amount of money spent on each interschool sport, and the income from each of those interschool sports. The alphabetical list of sports is shown in column one. Column two reveals the money spent and the income received from sports offered by the small school. The medium school status in regards to the amount of money spent and the income received from sports offered is shown in column three. The amount of money spent and the income received from sports offered in the large schools are itemized in column four.

Basketball was the only profitable sport in the small school category. Other sports had no income whatsoever.

Basketball was the most profitable sport in the medium schools too. Eleven-man football also showed a profit. All other sports indicated a deficit, and six and eight man football was noticeably unprofitable.

Again, basketball was the sport which made the most

profit for the large schools. Eleven man football also revealed a profit. None of the other sports was profitable.

The aggregate totals, compiled from the figures of all schools, showed an income of \$832,988. The money spent on all sports totaled \$610,132, leaving a profit of \$222,856. The small schools listed an income of \$52,933, and expenses of \$48,793, for a profit of \$4,140. The income for the medium schools, who had expenses in the amount of \$172,550, was \$238,695, thus showing a profit of \$66,145. The large schools revealed the largest profit, \$152,571, as a result of \$541,360 income, and \$388,789 expenses.

Financial report of schools regarding various sports offered on intramural basis. The amount of money spent on intramural sports is shown in Table VII. There is no income derived from the sports. Column one lists the sports in alphabetical order. The amount of money spent on intramural sports in the small schools is mentioned in column two, while column three itemizes the amount of money spent on intramural sports in the medium schools. The cost of intramural sports in the large schools is revealed in column four.

Expenses for many of the sports were low because varsity equipment or physical education equipment was used. Also, much of the equipment for other sports was on hand, thus

TABLE VII

FINANCIAL REPORT OF SCHOOLS REGARDING VARIOUS SPORTS
OFFERED ON INTRAMURAL BASIS

Sport	Small schools (1-99) Money spent	Medium schools (100-299) Money spent	Large schools (Over 300) Money spent
Aerial darts	\$	\$ 23	\$
Archery			60
Badminton	60	48	62
Baseball	93	156	200
Basketball	177	763	1624
Bowling		10	
Boxing		7	
Checkers			
Football, touch	18	48	305
Golf		20	40
Horseshoes		20	
Ping Pong	179	459	214
Shuffleboard		30	
Soccer		30	24
Softball	160	270	860
Speedball		38	50
Swimming			
Tennis		76	96
Track	5	135	142
Volleyball	105	476	451
Wrestling			
Total	\$ 797	\$ 2569	\$ 4128
Aggregate total - \$ 7494			

requiring no purchases of equipment.¹

Ping pong cost the most money in the small school intramural program, with basketball and softball next in line.

Basketball was the most expensive sport in the medium school intramural program. Following, in sequence, were volleyball, ping pong, softball, baseball, and track. Sports costing less than one hundred dollars included aerial darts, archery, badminton, bowling, boxing, checkers, touch football, golf, horseshoes, shuffleboard, soccer, speedball, swimming, tennis, and westling.

Basketball was also most expensive for the large schools. Softball, volleyball, touch football, ping pong, baseball, and track followed in that order. Sports costing less than one hundred dollars were archery, badminton, bowling, boxing, golf, horseshoes, soccer, speedball, swimming, tennis, and wrestling.

The aggregate total showed \$7,494, as the amount of money spent on the intramural sports programs. The small schools spent \$797. The medium schools spent \$2,569. The large schools spent \$4,128.

A comparison of Tables VI and VII reveals an extreme difference in the amounts of money spent on the interschool and intramural programs. The aggregate totals show that \$610,132 was spent on the interschool programs while only

¹ This was indicated in the questionnaires returned.

\$7,494 was spent on the intramural programs. The small schools spent \$48,793 on their interschool programs and \$797 on their intramural programs. The medium schools spent \$172,550 on their interschool programs and \$2,569 on their intramural programs. The large schools spent \$388,789 on their interschool programs and \$4,128 on their intramural programs.

Cost per participant per sport in schools offering various interschool sports. Table VIII shows the cost per participant per sport in schools offering various interschool sports. Column one names the sports in alphabetical order. The total cost, the total number of participants, and the cost per participant in the small schools are itemized in column two. Column three reveals the total cost, the total number of participants, and the cost per participant in the medium schools. Column four gives the same comparable data for the large schools.

Basketball was the most expensive sport in the small schools, the cost per participant being \$44.59. Baseball, track, and softball followed in sequence.

The medium schools named six and eight man football as the most expensive sport, \$107.23, being the cost per participant. Eleven man football, basketball, golf, baseball, track, tennis, softball, and cross country followed in that order.

Basketball also cost the most in the large schools. The cost per participant was \$112.51. Six and eight man football, eleven man football, track, baseball, wrestling, golf, tennis, cross country, swimming, and softball were next in line.

The aggregate total was 17,045 participating at a cost of \$610,132 for a per capita average of \$35.79. The small schools had 2,214 participating at a cost of \$48,793 for a per capita average of \$22.04. The medium schools had 5,510 participating at a cost of \$172,550 for a per capita average of \$31.26. The large schools had 9,321 participating at a cost of \$388,789 for a per capita average of \$41.71.

Cost per participant per sport in schools offering various intramural sports. The cost per participant per sport in schools offering various intramural sports is listed in Table IX. The sports are listed in alphabetical order in column one. Column two itemized the total cost, the total number of participants, and the cost per participant in the small schools. Columns three and four furnish the same data for medium and large schools respectively.

Badminton was the most expensive sport in the small schools, costing \$2.57 per participant. Baseball, ping pong, basketball, touch football, volleyball, and track followed in sequence. There was no cost for archery, checkers, or wrest-

TABLE IX

COST PER PARTICIPANT PER SPORT IN SCHOOLS OFFERING VARIOUS
INTRAMURAL SPORTS

Sport	Small schools (1-99)			Medium schools (100-299)			Large schools (Over 300)		
	Cost	No. part.	Cost per part.	Cost	No. part.	Cost per part.	Cost	No. part.	Cost per part.
Aerial	\$		\$	\$		\$	\$		\$
darts				23	22	1.05			
Archery					23		60	75	.80
Badminton	60	21	2.57	48	47	1.02	62	59	1.05
Baseball	93	77	1.21	156	136	1.15	200	212	.94
Basketball	177	401	.44	763	2712	.28	1624	1986	.82
Bowling				10	20	.50		60	
Checkers					23				
Football, touch	18	45	.40	48	168	.29	305	1320	.23
Golf				20	10	2.00	40	40	1.00
Horseshoes				20	30	.67		20	
Ping Pong	179	360	.53	459	340	1.35	214	328	.65
Shuffleboard				30	24	1.25			
Soccer				30	124	.24	24	368	.09
Softball	160	440	.36	370	1440	.19	860	1502	.57
Speedball				38	156	.24	50	263	.19
Swimming								82	
Tennis		10		76	82	.93	96	261	.19
Track	5	24	.21	135	352	.38	142	718	.20
Volleyball	105	264	.40	476	1056	.45	451	1920	.24
Wrestling					52			160	
Totals	\$797	1642	\$.49	\$2569	6805	\$.39	\$3128	9301	\$.44

Aggregate total - Cost \$ 7,494.00
 Number participants 17,748
 Cost per participant \$.44

ling.

The large schools named badminton as the most expensive sport, the cost per participant being \$1.05. Golf, baseball, basketball, archery, ping pong, softball, volleyball, touch football, track, speedball, tennis, and soccer followed in sequence. There was no cost for bowling, boxing, horseshoes, swimming, and wrestling.

The aggregate total was 17,748 participating at a cost of \$7,494 for a per capita average of \$.42. The small schools had 1,642 participating at a cost of \$797 for a per capita average of \$.49. The medium schools had 6,805 participating at a cost of \$2,569 for a per capita average of \$.39. The large schools had 9,301 participating at a cost of \$4,128 for a per capita average of \$.44.

A comparison of Tables VIII and IX shows an extreme difference in the per capita cost for interschool sports and intramural sports. The aggregate average per capita was \$35.79 for interschool sports, and only \$.42 for intramural sports.

Source of income for operation of intramural sports programs. Table X names the source of income for the operation of the intramural sports programs. The possible sources of income are listed in column one. The uses of those sources by the small, medium, and large schools, are listed in columns two, three, and four respectively.

TABLE X

SOURCE OF INCOME FOR OPERATION OF INTRAMURAL SPORTS PROGRAMS

Source	Small Schools 1-99	Medium Schools 100-299	Large Schools 300 and over
School Board	1	10	13
Interschool Athletic Fund	19	37	26
Combination of the two above	<u>3</u>	<u>7</u>	<u>6</u>
Totals	23	54	45

The small schools received the greatest financial aid for their intramural program from the interschool athletic funds. Only one small school received funds from the school board.

The interschool athletic fund was also the source of income for the intramural programs in the medium and large schools. Ten schools in the medium classification received funds from the school board, while thirteen large schools were given financial aid by the same source.

Comparison of the number of schools offering interschool sports with the number of schools offering intramural sports. Table XI compares the number of schools offering interschool sports with the number of schools offering intramural sports.

The types of sports programs being compared are listed in column one. Column two names the sports programs being offered by the small schools, while columns three and four list the same information for the medium and large schools respectively.

TABLE XI

COMPARISON OF THE NUMBER OF SCHOOLS OFFERING INTERSCHOOL SPORTS WITH THE NUMBER OF SCHOOLS OFFERING INTRAMURAL SPORTS

Sports Program	Small School 1-99		Medium School 100-299		Large School 300 and over	
	No.	Pct.	No.	Pct.	No.	Pct.
Interschool	43	100	75	100	50	100
Intramural	23	53	54	72	45	90

The table reveals that twenty small schools did not have an intramural program, along with twenty-one medium schools, and five large schools.

The table shows that all schools in this study offered at least one sport on their interschool program.

CHAPTER V

SUMMARY AND CONCLUSIONS

This study was an attempt to compare the number of boys participating in the interschool athletic programs with the number of boys participating in the intramural athletic programs. It was also an attempt to compare the costs of the interschool athletic programs with the costs of the intramural athletic programs.

Data for this study were obtained from a questionnaire sent by the writer to high school athletic directors in various-sized schools throughout the state of Indiana. One hundred sixty-eight schools were studied.

Eleven interschool sports were offered by the various schools, with 14.8¹ per cent of the boys enrolled participating in the interschool programs. Each of the one hundred sixty-eight schools studied offered at least one interschool sport.

Twenty-one intramural sports were offered by the various schools, but only 16.3² per cent of the boys enrolled participated in the intramural programs. Forty-six of the schools studied did not offer any intramural programs.

¹ These percentages should be qualified in that individuals could be counted more than once.

² Ibid.

A great difference was found in the cost of the two programs. The interschool athletic program cost \$610,132, while the intramural program cost \$7,494. The average cost per participant per sport was \$35.79, for the interschool program, and \$.44, for the intramural program.

However, the interschool programs had an income of \$832,988, while the intramural programs had no income. In most cases, the intramural programs relied on the interschool program funds for revenue.

Small schools utilized the greatest percentage of their personnel in the interschool and intramural programs, using 62.3 per cent of their boys in the interschool programs, and 45.1 per cent of their boys in the intramural programs. However, 46.5 per cent of the small schools studied had no intramural programs.

Medium schools used 26.4 per cent of their boys in the interschool program and 20.5 per cent of their boys in the intramural programs. Twenty-eight per cent of the medium schools studied had no intramural programs.

Large schools used 10.3 per cent of their boys in the interschool programs, and 12.9 per cent of their boys in the intramural programs. Ten per cent of the large schools studied had no intramural programs.

II. RECOMMENDATIONS

As the result of this study, the following recommendations seem to be pertinent:

(1) Athletic directors should attempt to determine in the light of modern educational trends whether or not their interschool and intramural programs are consistent in respects to financial aspects, and if the emphasis on each is adequate.

(2) Athletic directors should attempt to determine if the small amount of money per capita spent in the intramural programs is a factor in the low participation in the intramural programs.

(3) This study indicated that funds for the operation of the intramural programs in many schools were allocated from the interschool budgets. Therefore, it should be determined whether or not the lack of intramural programs and the low participation in them are due to the difficulty of obtaining funds.

(4) Athletic directors should attempt to determine why a much larger percentage of boys do not participate in the intramural programs than in the interschool programs, since the intramural programs are open to all boys, while the interschool programs are open to select groups only.

(5) If athletics are considered important in the high school curricular, teachers colleges' physical education de-

partments should place greater stress on the development of, high school intramural programs, since many schools, which can afford interschool programs, do not have intramural programs.

III. SUGGESTIONS FOR FURTHER STUDY

The results of this investigation point to the need for further study in the same area. The following problems seem to be suggested.

(1) What are the obstacles causing schools to have no intramural programs?

(2) What can be done to increase the participation in the intramural programs?

(3) What are teachers colleges' physical education departments doing in this field to better prepare graduates to handle these problems?

(4) Is the emphasis on interschool athletics in this state detrimental to the intramural programs?

(5) Is there a need for intramural programs in the small school where they do not exist, since there is already a large percentage of participation in the interschool programs?

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APPENDIX

Figures To Be Based on 1948-49 School Year

1. Enrollment in High School_____.
2. Number boys in High School_____.
3. Inter-School Sports Played. Please check those sports in which there is actual competition between your high school and other high schools.

Sport	Do You Play It	Number Participants	Money Spent on Sport*	Income From Sport**
1. Baseball	_____	_____	_____	_____
2. Basketball	_____	_____	_____	_____
3. Football 11 man	_____	_____	_____	_____
4. Football 6 man	_____	_____	_____	_____
5. Golf	_____	_____	_____	_____
6. Softball	_____	_____	_____	_____
7. Swimming	_____	_____	_____	_____
8. Tennis	_____	_____	_____	_____
9. Track	_____	_____	_____	_____
10. Wrestling	_____	_____	_____	_____
11. Others (Please List)	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

*This should include the money spent for equipment, supplies, awards, meals, officials, transportation, and all other expenses involved in conducting the sport.

**This should include the gate receipts, guarantees, and all other incomes from the particular sport.

4. How many different individuals took part in the total interschool activities_____.

5. Intramural Sports Played. Please check those sports in, which you actually have an intramural league, tournament, or some definite type of organized play outside the gymnasium classes.

Sport	Do you Play it	Number Participants	Money Spent on Sport	(supplies equipment awards, etc.)
1. Archery	_____	_____	_____	
2. Badminton	_____	_____	_____	
3. Baseball	_____	_____	_____	
4. Basketball	_____	_____	_____	
5. Football 11 man	_____	_____	_____	
6. Football 6 man	_____	_____	_____	
7. Football touch	_____	_____	_____	
8. Golf	_____	_____	_____	
9. Ping Pong	_____	_____	_____	
10. Soccer	_____	_____	_____	
11. Speedball	_____	_____	_____	
12. Softball	_____	_____	_____	
13. Swimming	_____	_____	_____	
14. Tennis	_____	_____	_____	
15. Track	_____	_____	_____	
16. Volleyball	_____	_____	_____	
17. Wrestling	_____	_____	_____	
18. Others (Please List)	_____	_____	_____	
	_____	_____	_____	
	_____	_____	_____	

6. Where do you get your money to conduct your intramural program? Please check the possible answer, or supply the answer.

(1) School Board furnishes it. _____

(2) Inter-School Athletics pays the bill. _____

(3) Others (please list)

7. How many different individuals took part in the total intramural program? _____

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