

A SURVEY OF INDUSTRIAL ARTS-PHYSICAL EDUCATION TEACHING
COMBINATION FOR SIXTY-THREE SECONDARY SCHOOLS IN OKLAHOMA

By

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M.v.B.

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CHAPTER I

PRELIMINARY STATEMENTS

Industrial Arts Education and Physical Education have expanded rapidly since the turn of the century due to the Industrial Revolution which needed more and better trained personnel. The Industrial Revolution brought about considerable leisure time for the average person. There was need for an athletic program to compensate for this changing situation. This need was instrumental in bringing about an accelerated program of Physical Education in the schools.

Reasons for Making Study

After teaching Industrial Arts and Physical Education for a few years as a combination, one becomes acquainted with the problems that consistently occur, and seeks some solution to these problems. The wisdom of this combination has been frequently discussed since both fields are demanding a considerable portion of the school day. It has been questioned if Industrial Arts or the Physical Education program will be neglected if taught as a combination. The relative claims of the two school programs have suggested the purpose of this report, which seeks to clarify this situation from several points of view.

It is the purpose of this study to present a compilation of views as revealed through a questionnaire, from

qualified Physical Education and Industrial Arts teachers, and from certain data obtained from the office of the State Department of Education.

Definition of Terms

The following definitions are given for the purpose of giving the reader a better understanding of this problem. Adequate bibliographical reference is made where the definitions have been found in publications.

Industrial Arts. Is one of the Practical Arts, a form of general or non-vocational educational education which provides learners with experiences, understandings, and appreciations of materials, tools, processes, products, and of vocational conditions and requirements incident generally to the manufacturing and mechanical industries. (15, page 27)

Physical Education. Is that part of education which proceeds by means of, or predominantly through, physical activity; it is not some separate partially related field. (14, page 13)

Industrial Education. Industrial Education is used to include the general course of the secondary school variously known as manual training, manual arts, industrial arts and industrial education, and the vocational work of the continuation school, trade school and evening schools. (6, page 1)

Manual Arts. A term used to describe such subjects as woodworking, mechanical drawing, metal work, printing, leather work, jewelry making, clay work, bookbinding, etc., when taught as a form of general education having for its chief purpose that of developing within the pupil, through work in the school shops, manual skill and an appreciation of good design and construction by practice with a variety of exercises and practical projects of personal value. (3, page 29)

Manual Training. Was the original term under which the industrial activity work was introduced into this country following the Centennial Exposition at Philadelphia in 1876. "I believe that the term 'manual training' might be rightly applied to any exercise in which thought is expressed by means of the hand." (12, page 7)

Industrial Arts in the Junior High School. Industrial Arts in the Junior High School level refers to all programs of shopwork, industrial drawing or arts and crafts activities offered for purposes of general education, exploration, orientation, and home mechanics training. (4, page 12)

Limitations of the Study

The scope of material of Industrial Arts and Physical Education as a combination teaching field is small. The study must be conducted through contact with teachers of these subjects, who have had experience in teaching Industrial Arts and Physical Education. Only eleven states have records which show the number of teachers with this combination. Research in this category has been practically untouched. (5, page 36)

Methods of Securing Data in This Study

In developing this study, a questionnaire was prepared and a letter, explaining the purpose of the research and urging cooperation from the teachers qualified to reply, was transmitted with it. This information, direct from the recipients, was supplemented by personal interviews with ten of the teachers questioned and with five other instructors; who, although not teaching in these two fields at the

present time, have had experience in former years at this combination. Reference books, texts, periodicals, and the authorized questionnaire supply the materials for the basis of the study.

The Study Plan

In the following chapters is presented the historical setting of Industrial Arts and Physical Education. The early history of the two fields is reviewed, and their gradual development in the school is discussed. Chapter IV is devoted to the discussion of the questionnaire and the usable facts.

CHAPTER II

THE HISTORICAL BACKGROUND OF INDUSTRIAL ARTS EDUCATION

In the closing years of the eighteenth century, and early part of the nineteenth, Pestalozzi, a Swiss educator, advanced much further in his instructional theory than writers of the preceding century. His newly-advanced theory resulted in the supplanting of the old method of expressing thoughts verbally with handling, observing and working with the object. Pestalozzi believed that the child developed mentally much faster through manual manipulation and by visual knowledge of the work.

European Techniques

Pestalozzi instituted his "industrial school for the poor", in which tasks were performed. The reformer prescribed and practiced the plan of having his artisans work in the following occupations: (a) farming, (b) spinning, and (c) weaving. In this experiment it was never believed that the tasks were related to intellectual development.

Manual training, as an educational tool, was recognized by three European countries: Finland, Sweden, and Russia. Finland was the first to establish such courses as part of the school instruction, and the first to make them compulsory.

Swedish Contributions

Although the "home sloyd" received its first impetus in Finland, other Scandinavian countries were quick to adopt this home-type work. In Sweden, the sloyd system, at its inception, was concerned primarily with furnishing a means of consuming leisure time in the rural home. According to Vaughn and Mays, in 1870 the government urged the rural homes to "devote some time to the various handicrafts such as carpentry, carving, stonework, basketry, etc." (13, page 25) Two years later special schools were established for the purpose of teaching Sloyd.

Russia and Technical Education

Russia followed the Scandinavian countries in recognizing the importance of handwork. However, the Russian motive was far removed from the Swedish aim for general education in that the former aspired solely to the training of skillful intelligent mechanics; and, further, to train them in the best and quickest way.

A school of Trades and Industries, established in Moscow in 1830, became so successful as a polytechnic school that, by imperial decree, it became known as the Imperial Technical School, in 1868. The resultant influence of this school was so great that it was responsible for the opening of the school of mechanic arts at the Massachusetts Institute of Technology in Boston in 1876.

The impetus given by this school, and others comparable, resulted in the movement to establish manual training high schools all over the United States.

Early American History

Industrial education found an early and strong foothold in the United States as a result of the influence of the important changes wrought by that program in England. Elementary education and free public schools were well established in the States when, in 1874, the Kansas State Agricultural College offered several shopwork classes, and Dr. Calvin M. Woodward was initiating an early interest in school shopwork.

So it was to fertile minds that the exhibit at the Centennial Exposition, in Philadelphia, was presented in 1876. The handiwork viewed was the Russian system of tool construction which had been accomplished in the Russian Imperial Technical Schools. This work was of particular interest to Professor John D. Runkle of the Massachusetts Institute of Technology, Boston and Dr. Woodward of Washington University, St. Louis.

Dr. Runkle immediately made recommendation to the Massachusetts Institute of Technology for the establishment of several shops for the instruction of Mechanic Arts. In 1877 Dr. Woodward's persistent efforts to build and equip a preparatory school for Washington University were resultant

in the establishment of the St. Louis Manual Training School. In 1880 it was instituted as the first manual-training school in America.

Industrial Arts in Elementary Grades and Junior High

In History of Manual and Industrial School Education

Anderson states that the development of the kindergarten in this country gave a powerful impetus to the movement for school education in the industries. (1, page 167)

Boston was the first of the public school systems to initiate an industrial program into the elementary schools. This was done at the insistence of the general public, after several other individual and group attempts at more practical instruction. This course preparation was approached from the Russian model of manual education.

Also advancing the industrial program in the elementary school were the schools for the poor, sponsored by philanthropic institutions in the belief that the best way to give permanent aid to the poor was to give practical help to the children.

In order to acquaint the public with the proposed industrial school program for children a Children's Industrial Exhibition was held, showing the things which had been done by this type of school. A tremendous upsurge of interest in the program was the result.

A definite course of study was soon adopted, and in 1888 the "Manual-Training Course of Study and Teachers Manual" was published. In this course work was outlined for each grade in the school, progressing from simple knife work in the lowest grade to joints, boxes, etc. in the fifth year.

Boston again led the way with a pedagogically sound and practical system of manual training for the seventh, eighth and ninth grades. This American system included the idea of class instruction which had been rejected by the Russians.

After the introduction of manual training in the grammar grades a new movement came into being--that of Manual Arts. The latter of the movements of manual training in the elementary schools was that of Industrial Arts, and that term, according to Bennett, is the term applied in most American schools today. (2, page 453)

Vaughn and Mays believe that "Industrial Arts have probably been accepted more completely in the junior high school than in any other place in the public school." (13, page 198) They further state that it is the nature of the course, and the characteristics of the junior high pupil which makes industrial arts so adaptable to this particular stage of education.

Industrial Arts in the High School

The first school of its type in America was the Manual Training High School of Washington University, St. Louis, Missouri. It was through the inspiration and efforts of Dr. C. M. Woodward that this new type of secondary school was established.

At the time of its inception it was purposed for instruction in mathematics, drawing, English and instruction and practice in the use of tools. The latter included carpentry, wood turning, pattern making, iron chipping and filing, forge work, brazing and soldering, and the use of machine shop tools. Admittance required a minimum age of fourteen and the length of course was three years. The opening enrollment was soon quadrupled.

The course of study included mathematics, science, language, drawing and shopwork, all of which were carried on at the same time. Of these, shopwork was allotted a double period.

Within the ten-year period from 1880 to 1890 less importance was attached to giving a better education toward a variety of occupations in the industries; and, instead, more attention was concentrated on the general educational value of manual training. The belief was advanced that the work shop provoked interest in the other school courses. Soon there developed two schools of thought on the purpose

of shop training: believers in the value to general education, and advocates of its vocational value.

Establishment of other schools of its type resulted after the phenomenal success of the St. Louis Manual Training School. Variations from the original school were patterned to parallel local conditions and changing ideas. The movement known as Manual Training in General High Schools followed final acceptance of the first schools. A constantly broadening scope of opportunities was being offered, and the rapid increase in the number of manual-training institutions reflected the usefulness of, and desire for, such a program.

CHAPTER III

THE HISTORICAL BACKGROUND OF PHYSICAL EDUCATION

Ancient Origin of Athletic Games in the Far East

Games and contests date back to the earliest history of the human race. However, the earliest records of athletic games are those of the first Olympiad in 776 B. C. According to the Encyclopedia Americana, II:

Their origin reaches back into a remote antiquity, prior to the commencement of the historical era in Greece, and by the Greeks was attributed to a Divine source.

Only the Greeks were permitted to participate in the contests; barbarians were allowed as spectators but slaves and women were not granted even this privilege. In later years any man who could prove that he was of Greek ancestry was eligible. When the Romans conquered and overran Greece this competition was continued with the Roman also being a competitor. Shortly following this, the scope of competition was extended to anyone who desired to enter. Every fourth year contestants representing all civilized nations competed for a period of four days, the last of which was spent in feasting and celebrating.

Early Development of Athletics in America

There is little indication in recorded American history of organized competitive sports, likely because there

was an abundance of adventure and challenging situations in routine daily life of the frontier youth--enough to satisfy any desire for similar mode of entertainment.

During the early days of the nation, substitution for organized sports was seen in family and community affairs, which were predominantly mutually beneficial with little aspect of challenge, such as barn- and house raisings, huskings, etc.

With the formation of schools, sports appeared, although the first schools generally attracted boys of the leisure classes for whom battling the elements for a livelihood was not a necessity. But, instinctively, as man has always done, the desire for conquest and glory in some form presented itself, and was satisfied with organized competitive games. They were at first crude, but developed as the organizations increased.

Organized Sports Before Civil War

Physical education was little known in the United States until well after the Civil War. The nation was still a pioneer country and there were few large cities. The average child had work to do at home which required a considerable amount of physical effort and time.

Prior to 1840 there were no organized American games and no universally accepted rules. Community socials, holidays and fairs offered opportunity for games, which were rarely planned in advance. A kind of soccer was a very popular group game, as was a form of shinney, and an innovation known as "town ball."

In 1839 Abner Doubleday, of New York City, first introduced a type of ball game, played on a diamond-shaped field, and dubbed baseball. The formation of the first baseball club followed, in 1845. Emmett A. Rice, in his Brief History of Physical Education, gives the interesting information that the Knickerbocker Club and the New York Nine, both of New York City, played a game in which the loser was to buy a dinner for the winner. (8, page 165) Enthusiasm for the new game was so pronounced that, by the latter 1850s, the number of clubs in New York alone numbered in the mid-twenties. (8, page 165)

A National Association of Baseball Players was founded and rules of the game agreed upon. This new sport so caught--and held--the public fancy that, during the Civil War, the baseball clubs began to charge admission to their games and to pay their players from the proceeds; this was the beginning of professional baseball. Baseball soon evolved as one of the most popular American sports.

An example of the growth and continued popularity of this sport is illustrated by a decision at a conference of the following organizations, in late 1949: Professional Baseball, the National Federation, American Legion Junior Baseball, National Amateur Baseball Federation, American Baseball Congress and National Baseball Congress of America. They made plans to conduct a series of clinics in all states, in early 1950, in which these groups choose to cooperate, instructional teams to be provided as a service of Professional Baseball. (7, page 54)

Introduction of Athletics in American Schools

After the Civil War the pervading spirit of the nation's youth was restlessness, characterized by a dissatisfaction with the previous slow tempo of life. War had dispelled former lassitudes and American youth attuned himself to the tenor of speed, intensity and emotional strain accompanying the sudden spurt in growth of our cities and the mechanization of industry.

Educators quickly saw the need for a program of physical activities to meet this change and turned to Europe for a model. The result was the integration of importations from several countries, Germany, Sweden and England in particular. The former had to offer excellent systems of gymnastics and organized class instruction, which saw

considerable adaptation to American interests. Games such as football and tennis were adopted from England, with an emphasis on recreation and play.

Needless to say, the latter type of entertainment is most popular in this nation. Typical of a democratic people, recreational sports are much more appealing than the regimentation of gymnastics. It is perhaps reasonable to attribute this interest in English-fostered recreation to the fact that the background and traditions of American civilization are considerably English and that vigorous competitive sports naturally appeal to a nation of pioneers and frontiersmen.

General Divisions of Physical Education

In The Curriculum in Sports, Staley defines Physical Education as:

the contribution made to the complete education of the child by the fundamental psychomotor (big-muscle) activities, including play, games, athletics, gymnastics, dancing, pantomime, dramatic activities, swimming, hiking, camping, scouting activities and similar programs, industrial or social service activities, such as gardening, farming, housekeeping, if these are healthful and educative.

Briefly, the curriculum called Physical Education covers the field of behavior variously known as vigorous play activities, big-muscle play activities, play, recreation activities, gymnastics, athletics and sports. The

activities mentioned are primarily known as leisure-time activities.

Values of Physical Education

Although concerned primarily with the functions of physical education in the school, the adaptation of the athletic program to general society would result in the same values to the adult participants.

Physical Education should provide for the masses of people in a democracy a common background of games, sports, dances and outing activities, which would develop a desirable uniformity in common ideals and attitudes among all classes of society. A successful program will also result in the developing and maintenance of some sport into an American institution through which the people may gain a practical idealism. Further, it will teach all boys and girls some of the physical activities which make up part of the cultural heritage of the race. Success in achieving this will be evident in a better appreciation of both past cultures and modern civilization.

Physical Education will help prepare children to live more complete and satisfactory lives, both as children and as adults. Every boy and girl, if provided with experiences in sports such as football, basketball, baseball and golf, will develop an understanding and appreciation of the

sports and of their well-earned place in the lives of every citizen. Experience in athletics develops broad and varied interests in any participant and leads naturally to other desirable activities. Of course, participation will be suited to the grade level and the tendencies and abilities of the individual for greatest success. A well chosen program teaches clean, wholesome games and fosters interest in worthwhile recreation. And, finally, through an intelligent experience with Physical Education one can recognize and consider the opportunities for a life vocation that may be found in physical education, recreation, camping, and related fields.

General Objectives

Physical Education has a great responsibility, which is recognized and being met more satisfactorily as better methods and better-trained personnel are found, and the public is enlightened to an appreciation of the tremendous possibilities of this phase of education. This attitude is reflected in organized summer playground activities sponsored by civic groups in many municipalities of the nation.

One objective is to develop skills in activities and favorable attitudes toward play that will carry over and function during leisure time. The selection of activities suitable for particular ages and inclusion of a portion

which can be carried over as leisure-time activities in adulthood is suggested by J. B. Sharman, in Modern Principles of Physical Education. (9, page 147)

A second objective of physical education is to develop the organic systems of the body so that each individual may live at the highest possible social and physical level. It is generally accepted that participation in vigorous physical activities contributes to organic development, which makes for a more normal, healthy life.

A third objective of Physical Education is that, through it, opportunities are provided for participation in physical activities that will result in educative experience. Character development, desirable emotional attitudes, social cooperation and a sportsmanlike way of behavior are recognized as potentialities for development through the Physical Education program.

CHAPTER IV

EXPLANATION AND DISCUSSION OF THE QUESTIONNAIRE

The Basis for Selecting the Questionnaire

In undertaking a task of this scope, it was necessary to have information pertinent to his program which could be supplied by none other than the Industrial Arts or Physical Education teacher. It was also expedient to have some concrete personal opinions as to the desirability of combining these two fields as a teaching combination.

Obviously a personal interview or a detailed report was the only means of securing such information. Since the former plan was not feasible, the questionnaire method was adopted.

This inquiry was as concise and brief as possible, to encourage acknowledgement by the recipients. Yet, of necessity, it was somewhat lengthy, as it covered phases relevant to two unrelated subjects. As many questions as were practicable were phrased so as to require only a check-mark yes-or-no answer. Personal opinion was encouraged in the letter of transmittal which accompanied the questionnaire. These two forms are reproduced on pages 21, 22 and 23.

Marshall von Bieberstein
Stilwell High School
Stilwell, Oklahoma

May 15, 1950

Dear Fellow Teacher :

Your assistance in completion of the enclosed questionnaire will be greatly appreciated.

I am making a survey of coaching and teaching Industrial Arts, in Oklahoma, as a subject combination, which study is being prepared as partial fulfillment of the requirements for the Masters Degree. It is designed to make available information pertinent to these two fields to future teachers and coaches, and to school administrators. According to records on file in the offices of the State Department of Education, you are teaching in these two fields. Doubtless you have often formulated, in your own mind, some of the questions included here. Any additional information or opinions will be valuable in completing this study, and are earnestly requested.


It is believed that completion of the enclosed form will require only a few minutes of your time. For your convenience, most of the inquiries have been stated so that only a "yes" or "no" answer will be necessary. A stamped, self-addressed envelope is enclosed for the return of your completed form.

Your cooperation and prompt response will be sincerely appreciated.

Very truly yours,

Marshall von Bieberstein
Coach and Industrial Arts Instructor
High School
Stilwell, Oklahoma

Approved :



for DeWitt Hunt, Adviser and Head,
School of Industrial Arts Education
and Engineering Shopwork
Oklahoma A. and M. College

A QUESTIONNAIRE

Concerning Industrial Arts and Coaching as a teaching combination in Oklahoma. An inquiry conducted by Marshall von Bieberstein, Graduate Student, Oklahoma A. and M. College, under the direction of Dr. DeWitt Hunt.

Name of School _____ Address _____

Name of Teacher _____ Position Held _____

Graduate of what college? _____ Date _____

Master's Degree? _____ From what college? _____ Date _____

Major _____ Minor _____ No. hours in Major _____

No. hours in Minor _____ Degree(s) Held _____

Does physical education, or coaching, pay above state schedule in your school?
yes ___no___.

How do you make athletic trips? School bus ___Private cars___ Other means___.

If by bus, do you drive it? yes ___no___.

Do you have responsibility for condition of field, gym, etc? yes ___no___.

Do you compete in a conference? Football ___Track___ Baseball ___Basketball___

Gymnastics ___None___. In what conference? _____

Do you select and order your own equipment? yes ___no___.

Do you have an assistant? yes ___no___.

Do you administer, or help administer, athletic funds? yes ___no___.

How do you procure certain athletic gear, which can be made in shop? (ex: sleds, dummy frames, etc.) Buy ___You construct___ Students construct___.

Estimate percent of your athletes who are shop students. _____

How many hours per day are you allowed for practice? _____.

How many hours do you average per week in practice, other than school hours?
_____.

At what time of the afternoon does athletic practice start? _____.

When weather does not permit outside activity, do you work in shop? yes ___no___.

When on out-of-town trips, how many hours do you plan to be in the visiting city before game time? _____.

Do you feel that a car is necessary in your work? yes ___no___.

Is practice field on school premises? yes ___no___. If not, how far? _____.

Is transportation furnished from school to athletic practice field? yes ___no___.

How many students have you in: mechanical drawing___, shop___.

Who cares for shop equipment? Instructor___ Students___ Both___.

Are shop athlete students taken from shop classes for: games___, ticket sales___, preparation of field___, other activities___.

Do you do maintenance work for school? yes ___no___.

Do students earn money for the Industrial Arts department? yes ___no___.

Are fees collected through office___, or Industrial Arts department___?

Do you order your supplies before school begins? yes ___no___. If "yes", how many weeks early? _____.

Do you buy locally as much as possible? yes ___no___.

When do you run necessary errands? during school hours___ before and/or after school___.

Are projects displayed? yes ___no___.

Are there any shop classes, other than yours, which use your room and equipment? yes ___no___.

What tool system do you use? Locker room___, wallboard___, portable tool rack___

bench_____.

How many years have you both coached and taught Industrial Arts?_____.

Is Industrial Arts-Coaching combination preferred by your superintendent?
yes___no___.

Have you other duties, such as hall, playground duty, etc? yes___no___.

Do you have an "off" period? yes___no___.

Are funds more abundant in Industrial Arts or Athletic department?_____?

With what department do school assemblies/activities interfere most?

Athletics_____Industrial Arts_____.

Does your school have a public address system? yes___no___.

Do you like teaching Industrial Arts, and Coaching, as a combination? yes___no___

How long do you plan to continue with this combination?_____

Do you believe this combination desirable from the standpoint of teaching?
yes___no___.

What are its chief objections? (Answer in following space)

Please fill in the following schedule of classes, enrollment, etc:

Period No.	From _____ To _____ (give time)	Name of Subject Taught	Number in Class	Number of Athletes	Grades in Which taught
1					
2					
3					
4					
5					
6					
7					

Distribution of Questionnaires

The list of teachers given in the State Directory of Industrial Arts Teachers, who teach Industrial Arts and Physical Education, is not complete. It contains fifty-one names of teachers employed in this combination. A thorough search through the schedules of each secondary school in the state, using the records in the Office of Secondary Education, Oklahoma City, resulted in the addition of twelve more names to the list of questionnaire recipients. This form was mailed on May 15, 1950.

Percentage of Returned Questionnaires

A total of sixty-three questionnaires were mailed. The largest number of responses was received on the fifth day; and, at the end of three weeks, the total number of answers amounted to thirty-seven, which was slightly less than a sixty per-cent return. A follow-up postal card was then mailed to those who had not responded. The message on the card read as follows:

On May 15 I mailed you a questionnaire concerning Industrial Arts and Physical Education as a teaching combination and have not yet received your reply. I would appreciate it very much if you would complete the form and mail it to me at your very earliest convenience.

From this group five answers were received within two weeks, making a total of forty-two answers, or a

sixty-seven per cent response. In addition, four replies were received from teachers who wished to explain that due to schedule changes, or for similar reasons, they were not teaching in these two fields as formerly planned. This further heightened the proportion of replies received to slightly more than seventy-three per cent.

Responses from Combination Teacher

The teachers who responded were, as a whole, most thorough and conscientious in answering each question. It is understood that, in spite of the fact that the inquiry was made as brief as practicable, some little time and thought were required in completion of the questions. For comments concerning the study much appreciation is due.

For example, one respondent volunteered the information that this year was the first for shop in his school and that it was already the most popular course for boys. Another proffered his school's rather unusual situation of giving part of the coaching task to their vocational agriculture teacher; this combination he recognized as being unusual.

Qualifications of Teachers Answering Questionnaire

In considering a combination of two such varied subjects as Industrial Arts and Physical Education, to be taught by the same teacher, one would first question the

qualifications of the instructor. An interesting comparison of teaching fields was made upon receipt of the questionnaires.

Table I shows the qualifications of the respondents to the inquiry. Major and minor fields are given, in addition to any other activity in which the instructor is currently teaching. The degree held is indicated, as well as the number who hold the position of Superintendent or Principal and who also teach Industrial Arts and Physical Education.

Of the forty-two teachers who replied, thirty, or seventy-five per cent, have majors in Industrial Arts, and nine have this field for a minor subject. Five, or twelve per cent, have a major in Physical Education and nine have minors. Seven majors in fields other than these two are represented, history predominating. However, mathematics, secondary education and agriculture are also included.

Of this group of instructors thirty-six hold Bachelors degrees, three hold Masters, and three are teaching with ninety-120 hours. One of the group is the Superintendent of his school and ten are Principals.

TABLE I

THE NUMBER OF INDUSTRIAL ARTS AND PHYSICAL EDUCATION MAJORS
AND MINORS, THE SUBJECT TAUGHT, THE DEGREE HELD AND ADDI-
TIONAL ADMINISTRATIVE DUTIES

Qualifications as determined from data obtained from the
State Department of Education

Tea- cher No.	Ind.Arts Major or minor	Phys.Ed. Major or minor	Teach ing I.Art	Teach ing P.Ed.	Other Subj. Taught	Degree	Supt.	Prin.
1	M		x	x	Art	BS		
2	m	M	x	x		BS		
3	M		x	x	Biol.	BS		
4	M		x	x		BA		
5	M	M	x	x		BA		
6	M		x	x	Soc.S	BS		x
7	M	m	x	x		BS		
8	M	m	x	x	Math.	BS		
9	M		x	x	Math.	BS		x
10	M	m	x	x		MS		
11			x	x	Admin	BS		
12	M	m	x	x		MA-MS		
13	M	m	x	x		BS		
14	M		x	x		BS		
15	M		x	x	Speech	BS		
16	M		x	x	Soc.S	BS		x
17	M	m	x	x	Soc.S	BS		
18	M		x	x	Sci.	BS		x
19	M		x	x	Hist.	BS		x
20	m		x	x	Agri.	BS		
21	M		x	x	Hist.	BS		
22	M		x	x	Math.	MA		
23	M		x	x	Hist.	BS		x
24	M	m	x	x	Hist.	BS		
25	m		x	x	Sci.	BS		
26	M		x	x	Biol.	BS		x
27	m		x	x	Hist.	BS		
28	m		x	x	Soc.S	BS		
29	M		x	x	Ed.	BS		
30		M	x	x	Hist.	BS		
31		m	x	x	Hist.	BS		x
32	m		x	x		90-120		
33	M		x	x	Hist.	90-120		
34	M		x	x	Radio	BS		
35	m	M	x	x		BS		
36	m		x	x	Hist.	BS		x
37	m	M	x	x		BS		
38	M		x	x	T & I	BS	x	
39	M	m	x	x		BS		
40	M		x	x	Hist.	BS		
41	M		x	x	Math.	90-120		x
42	M		x	x	Econ.	BS		

Experience in this Combination

The number of years experience of the teachers questioned varies greatly. One third of the forty-two teachers questioned had taught Industrial Arts and Physical Education only one year. One fifth had taught this combination for a two-year period. The remainder had taught from periods of three years to as many as twenty-two years.

Figure 1 is a vertical bar graph which indicates, at a glance, the vast differences in the number of years taught and the average tenure of employment in the two fields.

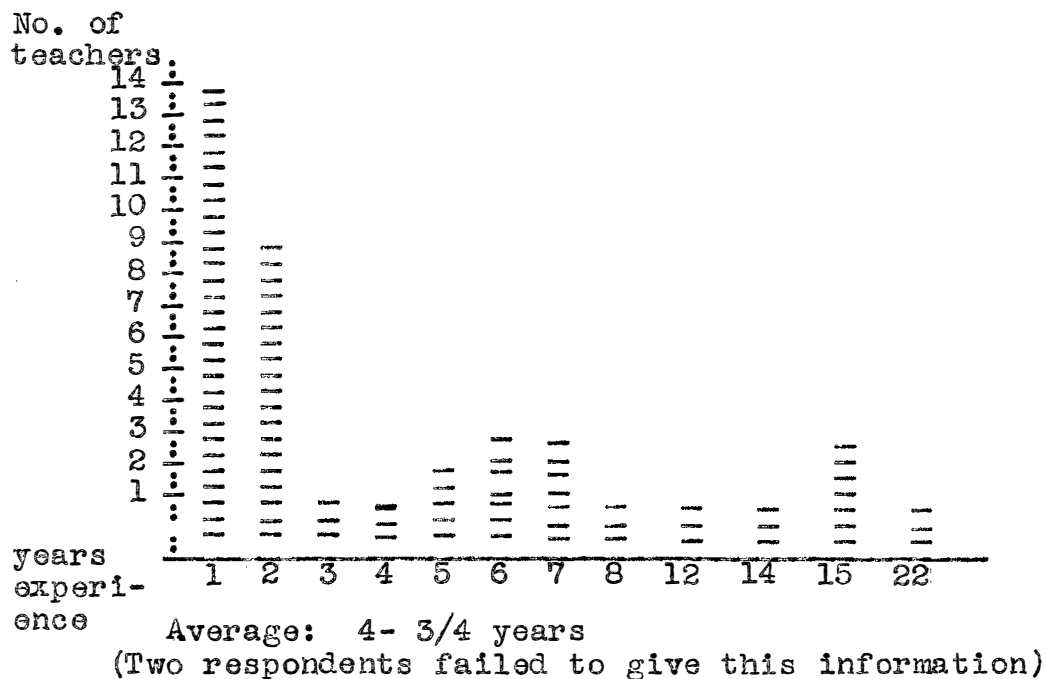


Figure 1

YEARS EXPERIENCE IN INDUSTRIAL ARTS-PHYSICAL EDUCATION COMBINATION

Per Cent of Schools Paying Above State Schedule
and
Salary Comparisons

Of the forty-two schools compared, thirty-eight, or ninety-one per cent, pay the Industrial Arts-Physical Education teacher a salary above that fixed by state schedule; three schools, or seven per cent, do not pay other than the prescribed schedule. One school represented, or two per cent, is a private school, independent of state funds.

Table II is a comparative list of salaries. It will be noted immediately that there is a wide range--the lowest salary paid being \$1800 and the highest \$3850. Teacher number twelve holds both M. A. and M. S. degrees and has twelve years of experience in teaching this combination. His salary is \$3300. Teacher number thirty-three, who has ninety-120 hours, and one year of experience in teaching both Industrial Arts and Physical Education, also receives a salary of \$3300.

Teachers with only one year of experience in teaching these two subjects receive salaries from a low of \$2000 to a high of \$3700. The average salary of the thirty-nine teachers whose rate of pay was available is \$2947.33, or a difference of \$447.33 above prescribed state-aid maximum for Bachelors degree with five years of teaching experience.

TABLE II

SALARIES

From data obtained from the State Department of Education

Teacher Number	Salary	:	Teacher Number	Salary
1	\$ 2500	:	22	\$ 3422
2	3300	:	23	2724
3	3100	:	24	2600
4	3600	:	25	2600
5	3000	:	26	3700
6	1800	:	27	2800
7	2800	:	28	3250
8	3100	:	29	*
9	3100	:	30	2600
10	3400	:	31	2400
11	2600	:	32	2000
12	3300	:	33	3300
13	3500	:	34	3000
14	*	:	35	3300
15	3000	:	36	2800
16	3000	:	37	3850
17	3000	:	38	3500
18	3500	:	39	2800
19	2800	:	40	2100
20	*	:	41	2900
21	3200	:	42	2700

Average: \$2947.33

* No information reported

Teachers with Assistants

Although the Industrial Arts teacher expects to teach his own classes and be accountable for the upkeep of his tools, the necessity of an assistant in Physical Education is recognized, especially if the teacher has the bulk of the responsibility for the athletic and Industrial Arts programs.

Advantages of an assistant coach are many. Briefly: the head coach is allowed more time to concentrate on actual instruction and participation in teaching activities since minor, and routine--but necessary--tasks are performed by his co-worker. The assistant can prevent loafing by any group which is not being instructed at the particular time the coach is working with another group. The assistant coach is available to "scout" games of future rivals at the time the head coach is engrossed in his own games. With a staff of more than one coach the school is able to offer a varied program of Physical Education other than one limited to competitive sports. This is a distinct advantage to the entire student body.

To the question: "Do you have an assistant?" twelve, or twenty-nine per cent answered "yes." Twenty-nine, or sixty-nine per cent, answered "no." One failed to respond to this question.

Time Spent Outside of School Hours

In the high school, especially if the enrollment is small enough to accomodate only one teacher to each field, full responsibility for his department falls to the Industrial Arts instructor and the coach. When these two fields are combined, a tremendous responsibility is placed on the teacher of these activities.

Much work and time is involved in the daily routines of these teachers, and usually performed during the school hours. But to produce a thorough job in either field, much additional time is required, both day and night.

To accomplish the numerous daily errands required of both an Industrial Arts teacher and a Physical Education teacher frequent distraction from classes is necessary. Since so many duties to be met by these teachers cannot be successfully accomplished by anyone else, heavy inroads are made upon their available time. To facilitate speedy performance of these tasks it is convenient to have use of an automobile. In some instances this may even be considered a necessity. For example, in situations where the school is located a considerable distance from the athletic field or town that would require much walking on errands, the need of an automobile by the Industrial Arts-Physical Education teacher is readily recognized.

In response to the inquiry: "Do you consider a car necessary in your work?" thirty-eight answered in the affirmative; only four in the negative. Of the latter, the athletic practice field was on--or very near--the school premises (so that equipment did not have to be carried by car); three of these teachers order necessary supplies before school terms begin; and one offered the information that he had access to the school's driver-training car.

Extra Time Spent in Industrial Arts

The Industrial Arts instructor is responsible for maintenance and purchase of shop equipment as he is best qualified to perform these tasks. It is necessary, prior to the convening of school in September, that he spend some time in preparation for the year's work. This may require several days or even weeks. Estimates must be made for required amount of lumber, abrasives, hardware, finishing materials, etc., and purchases made or orders mailed to insure receipt by the time school is under way. Tools and equipment must be checked and put in workable condition. Broken or obsolete equipment must be replaced and new ordered, if necessary. The shop itself probably requires a thorough cleaning; work stations and work benches will need some repair, as may the floors, doors, walls, etc. New drawing tables and other devices may require some repair and renovation.

Of the forty-two teachers questioned, twenty-seven order necessary shop equipment and materials in advance of the prospective school year. Fourteen did not order early, and one failed to reply. The average length of time the order was placed prior to time anticipated for use was seven weeks.

During the school term, much of the shop work can be completed in the allotted school hours. But, often, extra

hours will be required of the instructor and students in completing projects by the end of the term, or by certain times, such as Christmas, displays of shop projects, etc. Time other than class time will often be necessary for make-up tests.

If fees are collected through the Industrial Arts department, rather than administrative offices of the school, additional bookkeeping, on the part of the instructor, is involved. Orders for material required by the students, or negotiations for sale of projects can hardly be delegated to anyone other than the instructor. Time outside of school is required, also, if students do work for the public.

Figure 2 is a vertical bar graph, showing proportion of fees collected by Industrial Arts department and administrative offices of the schools.

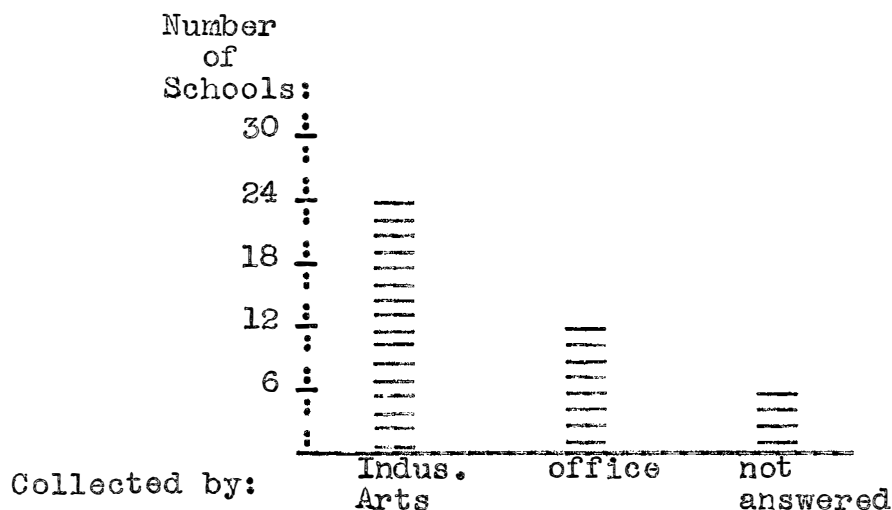


Figure 2

COMPARISON OF FEES COLLECTED BY INDUSTRIAL ARTS DEPARTMENT AND ADMINISTRATIVE OFFICES OF SCHOOL

Maintenance work done for the school will require additional outside time on the part of the teacher and students alike, as will jobs done in the shop as favors for other teachers. Such things as repair of desks and chairs, construction of stage settings, etc. are of benefit to other departments, but time consuming.

Many pieces of athletic gear--very expensive if purchased--can be constructed by the shop teacher and students. If the shop teacher is also athletic instructor he is, of course, familiar with the project; but again, time outside of class must be used. Recipients of the questionnaire were asked if certain athletic equipment, which could be constructed in the shop, (ex: sleds, dummy frames) is bought or built by the teacher or the students. Eight, or one fifth, of the teachers reported that they purchased such equipment; nineteen, or slightly less than half, of the teachers construct their equipment, and fourteen, or one third, report that the students do the construction.

Extra Time Spent in Physical Education

Most schools arrange to have a normally adequate amount of time set aside daily for physical education, particularly competitive sports. Yet, it is common practice to continue daily training beyond the close of the school day. As this may not involve any certain number of hours

every day the question was phrased in the questionnaire: "How many hours per week, other than school hours, do you average in practice?" Answers ranged from no extra hours to a high of thirty hours. School hours allowed for practice were reported fewer in number than outside time, as twenty-eight allowed one hour of school time; ten utilized two hours; one was permitted two and one half hours; and two reported only one half hour devoted to Physical Education.

Figure 3 is a vertical bar graph, showing the number of extra hours per week spent in practice of athletics, in addition to school hours. An average of two and three fourths hours of the teacher's time is required at the close of the day and/or at night practice sessions.

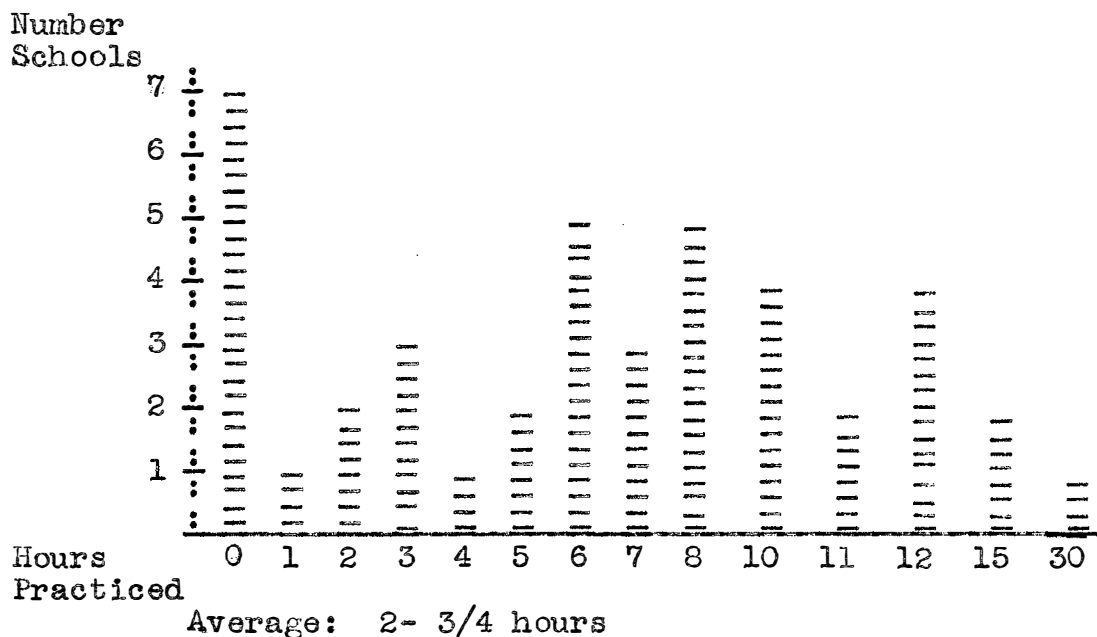


Figure 3

HOURS PER WEEK, OTHER THAN SCHOOL HOURS ALLOWED, SPENT
IN ATHLETIC PRACTICE

If the athletic practice field is a considerable distance from the school proper, extra time is required in walking to and from the field, as none of those questioned reported transportation furnished to the practice field. Although twenty-four, or slightly more than half the teachers, reported that their field was on school premises, the others reported distances of from one block to one and one half miles, with an average distance of slightly less than one half mile.

In instances where weather does not permit outside activities, the Industrial Arts-Physical Education teacher may have a choice of utilizing athletic time for discussion of athletics, or sending Industrial Arts students to work in the shop and the remainder of his athletes to study hall. Twenty-three of the teachers report that they follow the latter procedure; eighteen use the extra time for study appertaining to the athletic program. If the greater portion of athletes are also shop students, the plan of converting hours, which cannot be used in outside activity, to shop-work is more practicable. Percentages of shop-athlete students range from five per cent to one hundred per cent, with an average of fifty-seven per cent.

Time required for athletic trips, and participation in games, is usually additional to school hours. Night

games seem to be predominant. Extra time is necessary before and after games for dressing, showers, preparation and return of equipment, meals, etc. This is in addition to traveling time and time spent visiting in community before-game practice and warming-up exercises. When asked how many hours the coach expected to spend in the visiting city, before participation in an event, answers ranged from one half hour to three hours, with average time of one and one half hours.

If athletic trips can be made by automobile, time required in traveling is lessened; and, due to greater comfort on the trip, less time is required in preparation for play. Seventy per cent of those questioned reported trips made by bus, and thirty per cent travel by automobile.

A considerable amount of time is required if the Physical Education teacher is responsible for care and preparation of playing field and equipment. Such tasks often can be delegated to students, but general supervision must still be the responsibility of the coach, unless there is an assistant coach. Eighty per cent of teachers questioned report that they have the responsibility for condition of playing field, gymnasium, etc., while twenty per cent do not have this extra encumbrance. Thirty-eight of those reporting select and order their athletic equipment; three do not.

Some additional responsibility is entailed when the Physical Education teacher administers, or helps administer, athletic funds. Twenty-two teachers replied to this question in the affirmative; twenty in the negative.

Percentage of Schools Having Conference Play

The school which competes in conference play requires more of the Physical Education teacher's time and effort than the school which is not involved in such an extensive program. While the program of local or intramural athletics is valuable, the time and training required of students and coach is not so intensive, nor is there the feeling of responsibility for team success felt in conference competition.

Advantages of conference participation may be seen in a statement explaining these same advantages not enjoyed by intramural athletics in "Complete Intramural Program", by Ray Smalling, in which he states, "Intramural athletics bring in no money at the gate. No credit for participating is given; and, as a rule, the crowds that attend the games are infinitesimal..." (10, page 50)

Of the forty-two schools studied, five compete in conference play in one sport only; twenty compete in two; and eight participate in three and four conference sports. Figure 4 shows the number of schools studied which compete in conference play, and the number of sports in which they are engaged.

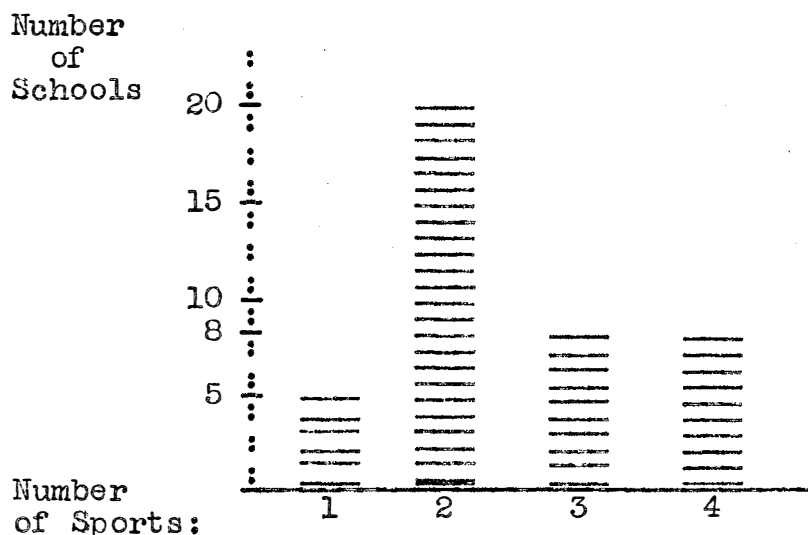


Figure 4

NUMBER OF SCHOOLS COMPETING IN CONFERENCE
PLAY AND NUMBER OF SPORTS IN WHICH ENGAGED

Of these same schools nineteen, or forty per cent, play conference football; nine, or twenty per cent, compete in a track conference; thirty-two, or eighty per cent, participate in conference baseball; thirty-six, or ninety per cent in conference basketball; and only one school, or two per cent, competes in gymnastics.

Table III shows the conference sports in which the individual schools studied are engaged.

It is believed probable that the size of the city and school is, at least partially, determinant of the type and number of conference sports in which to engage. Figure 5 shows the enrollment of schools studied. There is a

TABLE III

CONFERENCE SPORTS IN WHICH SCHOOLS STUDIED ARE ENGAGED

School No.	Football Confer.	Basketball Confer.	Baseball Confer.	Track Conf.	Gymnastics Confer.
1		X	X		
2		X	X		
3				X	
4		X	X		
5	X	X			
6		X			
7		X	X		
8		X	X		
9		X	X		
10					*
11	X	X			
12	X	X	X		
13					X
14	X	X	X		
15		X			
16		X	X		
17	X	X	X		
18	X	X	X		
19		X	X		
20					*
21	X	X	X	X	
22	X	X	X		
23		X	X		
24	X	X	X	X	
25	X	X	X	X	
26		X	X		
27	X	X	X		
28		X	X		
29	X	X	X	X	
30					*
31		X	X		
32		X	X		
33		X	X		
34	X	X			
35	X	X	X		
36	X	X	X		
37	X	X	X	X	
38	X	X	X	X	
39	X	X	X	X	
40		X	X		
41		X	X	X	
42	X	X	X		
Totals:	19	37	32	9	1

* Not engaged in conference sports

large range in number, from the smallest to the largest School represented, which tends to indicate rather thorough coverage of sizes and types of state high schools.

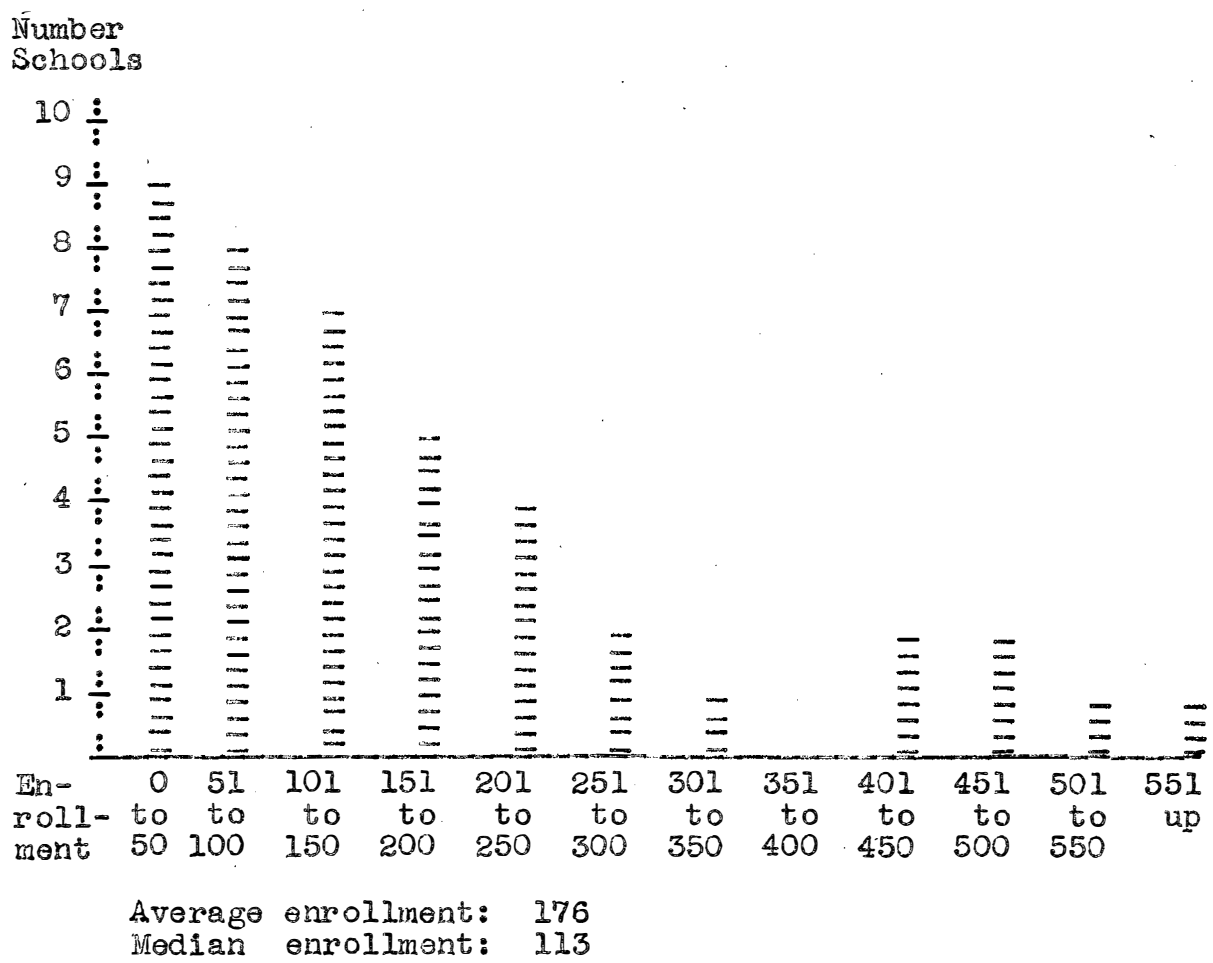


Figure 5

ENROLLMENT OF SCHOOLS STUDIED

Comparing Availability of Funds

In answer to the question: "Are funds more abundant in Industrial Arts or Athletic department?" five, or twelve per cent, reported more money for Industrial Arts. Twenty-

nine, or seventy per cent, were allotted more funds for use in the athletic program. Three failed to answer, and five remarked that "about the same" amount was allowed each department.

Desirability of Combination from Viewpoint
of Teaching as Expressed by Teachers in Their
Replies to the Questionnaire

On inquiring of the forty-two teachers as to the desirability of teaching Industrial Arts and Physical Education, as a combination, twenty-eight teachers, or sixty-six and two thirds per cent, deemed this a good combination from the point of view of teaching; thirteen, or thirty-one per cent, did not consider this a desirable combination. One teacher questioned failed to answer this requested information.

Expected Time to Continue Combination

Recipients of the questionnaire were asked the length of time they expected to continue teaching this combination. Thirty-one of the forty-two respondents answered this particular question, indicating some uncertainty or indecision in the plans of those who failed to respond. Two stated that they were abandoning this teaching combination after the present school year. Fifteen indicated that they would probably teach these two subjects for an indefinite length of time. Four responded with the information that they would continue with this teaching only until a better position was obtained, or the completion of a higher degree

leading to another job, or another coach was hired. Four indicated plans to teach Physical Education and Industrial Arts only a 'short time' and four others from periods of five to twenty years. Two were undecided.

Chief Objection to This Combination

Of the forty-two situations studied, twenty-eight teachers reported that they were satisfied with this teaching combination; thirteen reported dissatisfaction; and only one had no definite opinion. Thirty-six of the respondents declared that they liked teaching these two subjects, regardless of the disadvantages they recognized. Six stated that they did not like to teach Industrial Arts and Physical Education. Five remarked that they had no objections to this teaching combination.

Objections offered by those volunteering the information covered a thorough range of reasons. All seemed to agree on the principal disadvantage of lack of time to do a thorough job of both subjects. This thought was expressed in many ways. One respondent reasoned, "both fields require too much time." And one indicated that the combination was a particular disadvantage to him because it resulted in having to employ a substitute often.

Opinions of Teachers as to the Successful Teaching of
Industrial Arts and Physical Education as a Combination

Opportunities, advantageous especially to the student, were noted in a number of the opinions solicited. Two teachers suggested the combination offered, closer association with and better guidance for the students. They believed this results in development of character and friendships. The Superintendent of one teacher added his opinion to the questionnaire, which suggests a new approach to the discussion of desirability--from viewpoint of need. He wrote, "A great need exists in small schools with enrollments of one hundred in the High School, and less, for teachers with such a combination as you are here listing."

One teacher suggests that it is advantageous to the athletic program to have the Industrial Arts and Physical Education fields combined, when he remarks, "You have a lot of shop students who are eligibility cases (in competitive sports) and take shop as a way of getting by..." It is noted from other answers that this combination also poses a disciplinary problem when the teacher must be out of the shop and students are left idle and with access to the tools and machinery.

Opinions for and against this teaching combination are well summarized in the statement made, "Either field would be a full-time job if taught right."

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A Summary of the Findings

This subject was chosen for study because of the tendency to combine Industrial Arts and Physical Education as a teaching combination in the state of Oklahoma. The wisdom of combining these two fields was questioned inasmuch as each requires a considerable amount of the instructor's time and personal supervision, both during and after school hours.

Of the sixty-three questionnaires mailed to teachers in the state, who are currently teaching Industrial Arts and Physical Education, forty-six responded in some manner. This was a reply of seventy-three per cent.

These teachers represented an average of four and three fourths years of experience in teaching this particular combination.

Of the forty-two schools compared, ninety-three per cent pay salaries above state schedule and seven per cent pay prescribed state schedule.

Twelve of the teachers questioned have assistants; twenty-nine do not.

Thirty-eight of the instructors questioned consider an automobile necessary in their work. Four do not.

Of the forty-two teachers, twenty-seven order necessary shop equipment and materials in advance of the prospective school year. Fourteen do not do so.

Twenty-four of the teachers questioned are responsible for the collection of fees in the shop department. Twelve report fees collected through the administrative offices of the school.

One fifth of the teachers reporting purchase athletic equipment. Slightly less than half the teachers construct this equipment in the school shop, and one third report that the students do the construction.

Teachers reported spending from one to thirty hours per week in athletic practice in addition to school time allotted to athletics. Average time spent is two and three fourths hours per week.

Of the athletic fields in use, slightly more than one half are on the school premises. Average distance of the remaining fields is one half mile.

Twenty three teachers report that they utilize time for shop work which is normally allotted for athletics, but which cannot be used for practice when the weather is bad. Eighteen use this time for study of the athletic program.

The average time spent in the visiting cities before games is one and one half hours.

Seventy per cent of the schools use busses for athletic trips; thirty per cent travel by automobile.

Eighty per cent of the teachers questioned have the responsibility for the condition of the field, gymnasium, etc. Twenty per cent do not.

Twenty-two teachers administer, or help administer, athletic funds. Twenty do not.

Five schools compete in conference play in one sport; twenty participate in two; and eight take part in three or four conference sports.

Forty per cent play conference football; twenty per cent compete in a track conference; eighty per cent participate in conference baseball; and ninety per cent in conference basketball. Two per cent compete in gymnastics conference.

School enrollment of the schools studied ranges from fifty to five hundred fifty, or more. Average high school enrollment is one hundred seventy-six. Median enrollment is one hundred thirteen.

Twelve per cent of the schools studied report more funds in the Industrial Arts department. Seventy per cent are allotted more money for use in the athletic program. Twelve per cent report "about the same" amount available for each department.

Two thirds of the teachers consider Industrial Arts-Physical Education a good teaching combination. Thirty-one per cent does not believe so.

Nineteen teachers intend to continue teaching Industrial Arts and Physical Education for a considerable length of time. Ten plan to teach this combination only a very short time.

Twenty-eight teachers report satisfaction with this subject combination; thirteen are dissatisfied.

Thirty-six instructors like teaching these two subjects; six do not.

Conclusion

The fact that ninety-three per cent pay salaries above state schedule, and that none of these schools is independent, indicates that this particular combination results in the payment of better salaries than could be expected from many other teaching fields.

Since the majority of teachers questioned considers it necessary to have an automobile if teaching Physical Education and Industrial Arts, there is a tendency to believe that use of an automobile is advantageous, if not actually necessary.

It is believed that the twenty-seven teachers who order shop equipment and materials in advance of the time needed will experience less loss of time in initiating their shop programs.

The teachers who are responsible for the collection of fees in the shop department and the construction--or supervision of construction--of athletic equipment will, likely, lose a portion of their time which could be used to advantage in the shop or athletic programs in doing these extra jobs.

The average Industrial Arts-Physical Education teacher finds it necessary to spend almost three hours per week in athletic practice, other than school hours.

In situations where the athletic practice field is not on the school premises additional time is required in walking to and from the field each day.

Slightly over half the schools can take advantage of weather conditions which prevent athletic practice by utilizing this additional time for work in the shop.

The fact that an average of one and one half hours is spent in visiting cities before game time indicates additional time, outside of school hours, which is required of the teacher-coach.

The use of busses for traveling, by the majority of schools studied, also requires more time on athletic trips.

According to the questionnaire the greater per cent of the teachers are responsible for the condition of the field, gymnasium, etc. This requires a considerable additional portion of the teacher's time.

The fact that eighty per cent of the schools studied participate in conference play, in one or more sports, suggests an additional responsibility on the teacher-coach toward a successful conclusion of the athletic program.

Although enrollment in one school was more than five hundred fifty, the average and median enrollment indicates that the schools utilizing the combination of Industrial Arts-Physical Education are the smaller high schools of the state.

The majority of the schools studied report more funds available for use in the athletic department, indicating possibilities for greater success in that program because of more money to be used to the advantage of the department.

It would be assumed that Industrial Arts-Physical Education is a popular teaching combination as two thirds of the teachers questioned indicated so in their opinions. Further, nearly two thirds of those answering reported their intentions to continue with the combination; and, even though thirteen of these teachers are dissatisfied with their present teaching plan, seven of them admitted that they like to teach this combination.

Recommendations

In making this survey several additional problems presented themselves; which, if solved, would greatly simplify the duties faced by the Industrial Arts-Physical Education teacher in instances where retention of this combination in the school curriculum is deemed advisable.

1. The new teacher to this combination would profit from suggestions and advice which might be offered in an interview with a fellow teacher who has had several years experience at teaching in this combination.
2. Sharing athletics with another teacher is almost essential if the shop program is to receive a fair amount of the teacher's time.
3. The Industrial Arts-Physical Education teacher should have one free hour per day to be used as he

feels necessary; and, primarily for upkeep of the shop. Errands, marking papers, make-up tests, etc. could easily utilize one hour a day.

4. Assistance by local or school organizations in transportation to games, aid with preparation of field and gymnasium, purchase of athletic equipment, etc. would relieve the teacher of minor responsibilities.

5. Two hours of school time should be allotted for athletic practice, especially if the school is a participant in conference play. This will reduce the amount of extra time consumed in practice in many schools.

6. The teacher might be relieved of many minor duties if fees could be collected through an agency other than the Industrial Arts department, itself, and if material for use in the shop is ordered prior to convening of school and is available when needed.

7. The Industrial Arts-Physical Education teacher should be relieved of extra activities, such as playground, hall duties, etc., and the additional responsibility entailed as a Principal or Superintendent.

8. A compilation of additional information concerning teaching combinations in small high schools would be advantageous. Special attention should be given to

fields requiring much personal attention and time in addition to the school hours, as required by Industrial Arts and Physical Education programs.

I believe that the Industrial Arts and Physical Education combination should be discouraged as each subject requires such a great amount of an instructor's personal attention and time. Teaching Industrial Arts and Physical Education, without an assistant in one or both fields, undoubtedly results in the neglect of one to the advantage of the other. In my opinion the one which receives less time and attention will, in the majority of cases, be the Industrial Arts program. The conscientious teacher will, I think, become discouraged at the feeling of inadequacy at being able to completely meet the demands of two such full-time programs.

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