AN ABSTRACT OF THE THESIS OF

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Statement of the Problem

Within the past ten years there has come into the secondary schools a vast program of extra-curricular activities. Undoubtedly these activities have a rightful place in the school program, and it is the problem of the school to carry on this program for the benefit of the pupils.

Much has been written concerning extra-curricular activities within the past 15 years, and authorities are agreed that they are now a part of the school program.

It is obviously to the advantage of the prospective teacher to prepare himself for taking part in the extra-curricular program, and it is the duty of the administrator to select teachers qualified to direct such a program.

In recent years, it has occurred to the writer that an adjustment might be made in the field of extra-curricular activities regarding the allotment of duties to the various teachers. It was a desire to discover the current practices of industrial arts teachers as to extra-curricular activities in the high schools of Arizona that prompted this study.

The Study

The study was begun by an extensive review of the literature of the field of extra-curricular activities and of the limited number of studies that had been made. Six studies of a similar nature were found and reviewed. Most of these dealt with preparation, duties, class loads, extra-curricular activities, and experience of industrial arts teachers.

For purposes of comparison with areas other than industrial arts, questionnaires were sent to each high school teacher of the state of Arizona--625 teachers returned the

questionnaire. Included in these returns were 56 industrial arts teachers, or 93.2 per cent of the total number of industrial arts teachers in the state.

In this study the teachers were asked to indicate their college preparation; major field of preparation; years of experience; subjects taught; school duties, attitude toward the extra-curricular program; extra-curricular activities; and school responsibilities. The response was gratifying and indicated an interest in the problem.

The Findings

The results of the study showed a highly favorable attitude on the part of the industrial arts teachers toward the extra-curricular program. It also showed that industrial arts teachers in Arizona high schools are exceptionally well prepared and that they are actively participating in the extra-curricular program. Seventy-five per cent of the industrial arts teachers used industrial arts as their major preparation.

The baccalaureate degree was held by 94.6 per cent of the industrial arts teachers, while 30.3 per cent held the master's degree. Only 5.3 per cent did not have a degree but held certificates in highly technical study, such as radio and electricity.

Fifty per cent of the industrial arts teachers have been graduated from institutions of higher learning since 1934.

The teaching experience of Arizona teachers averages 11.11 years, indicating that few of them leave the teaching profession. Seventy five per cent of the teachers having completed study for the master's degree have done so within the past eight years.

Arizona institutions supplied 58 per cent of all the industrial arts teachers. Forty two per cent have come from 16 other institutions outside the state.

Twenty three teachers coach athletics but were not employed for that purpose only. Sixty eight per cent of the industrial arts teachers found it necessary to teach other subjects in order to fill their schedules. Twenty four per cent of the industrial arts teachers do not sponsor an organized activity club but indicated that they took part in other extra-curricular activities and school duties, such as athletics, school parties, dances, picnics, etc.

The average teaching load for industrial arts instructors is six periods per day.

Many industrial arts teachers desire additional training in activities related to the curriculum.

Indications are that many teachers have adequate preparation for sponsoring clubs and show a willingness to serve in the promotion of the program. Sixty six and six tenths per cent of the industrial arts teachers took courses in college pertaining to the organization and supervision of extra-curricular activities.

Arizona industrial arts teachers give an average of 202.5 hours per school year for supervising extra-curricular activities. It is highly significant to note that 16, or approximately 37 per cent of the industrial arts teachers of Arizona high schools, are carrying more than the average extra-curricular load, from 202.5 hours to 500 hours. Twenty seven, or approximately 63 per cent of the teachers, are carrying less than the average load, their number of hours ranging from 12 to less than 202.5 hours per year.

The industrial arts teachers of Arizona rank with the upper third of the best prepared teachers in the nation.

It is recommended that prospective teachers take some courses in college pertaining to the organization, direction, and supervision of extra-curricular activities. It is also recommended that a further study be made to evaluate extra-curricular activities and that adjustment be made to equalize the responsibilities of teachers in carrying out the extra-curricular program.

It is further recommended that teachers with special training should be encouraged to take part in the extra-curricular program.

A SURVEY OF EXTRA-CURRICULAR ACTIVITIES OF INDUSTRIAL ARTS TEACHERS IN ARIZONA HIGH SCHOOLS

by

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CHAPTER I

Introduction

The writer believes that education and its facilities are being continually reorganized to make for more practical kinds of service, and also that an enormous expansion is being made in the curriculum to provide a varied and attractive program that will appeal to the entire range of the interests of youth.

Teachers and administrators must realize now, as never before, the significance and importance of the fact that the nation depends on the school more than on any other one agency to prepare oncoming generations for the duties of citizenship.

Elwood P. Cubberly, in the introduction to Fretwell's book, "Extra-Curricular Activities in Secondary Schools", makes this remark: "The school has recently come to realize the important distinction between the mastering of school tasks and the learning that takes place outside the school." Again Cubberly says, "The citizenship problem of the school thus has become that of so organizing and directing the group activities of the school and of its clientele that the practices which train youth for

good citizenship shall be carried out under conditions that tend to produce satisfying results and thus to train the pupils in intelligent self direction."

Fretwell (26:2) adds, "It is the business of the school to organize the whole situation so that there is a favorable opportunity for everyone, teachers as well as pupils, to practice the qualities of good citizenship."

In an unsettled world and a rapidly changing society, the current terms, international unrest, national unity, patriotism, democracy, and other like phrases, cannot be merely empty words but must have an unbiased, unprejudiced interpretation. "The main purpose of education," says McKown, (46:9) "is to make good citizens. The good citizen is an individual who not only has knowledge, ideals and attitudes, but who also has worthy habits."

Within the past ten years much has been said about extra-curricular activities in relation to the secondary schools. Since this is true, it seems to follow that there should be intelligent preparation on the part of those to whom this increasingly important assignment is made.

From observation during 25 years of teaching, it has been evident to the writer that the standards of the schools have been greatly raised and that teachers are cognizant of the importance of further training and study

in order to qualify for school positions. Oertel (49:30) makes this point: "In educational fields, largely because of the recent phenomenal development of extra-curricular activities in practically all schools, a premium is being placed upon teachers who can 'double'. It behooves teachers now in service, as well as those now in training, to prepare to meet the demands of tomorrow."

The development of the extra-curricular program has come as a result of the necessity for giving pupils a wider variety of activities other than the regular curriculum. Many clubs and activities incorporate the idea of self-activity wherein the student has an opportunity to express himself. It is evident that the student thus finds his place among his fellow students and soon learns that he is an individual within the group. Roemer and Allen (54:11) attest this factor when they say, "Probably nowhere in the school curriculum is it more essential for success that students should 'learn to do by doing'".

There seems to be a recognized agreement among authorities that extra-curricular activities offer unlimited possibilities in training the youth in our schools to take their place in society. In regard to this point, Foster (24:3) adds, "The best preparation for life is living and the best training for citizenship in a democracy is citizenship in a democracy. If this is true, both curriculum

and extra-curricular activities should be such that they approach and possibly reach life situations".

It seems evident that industrial arts teachers, because of their excellent training, have an enviable opportunity in our school systems for developing a well organized, directed, and supervised program of extra-curricular activities for the advancement of these socializing activities. It was this factor and the desire to study what industrial arts teachers were doing in Arizona high schools in the area of extra-curricular activities that inspired the writer to conduct this study.

Rugg (55:127) says--"American schools today are attempting to provide a training that will fit boys and girls to perform more efficiently the duties, and to solve more wisely the problems entailed under a democratic form of government." Again he states, "Education is no longer conceived of as a process of memorizing facts; it is a process of giving children experiences that shall be of value or use to them in life". It is quite evident that authorities are agreed that extra-curricular activities play a major part in the development of our school students and that extra-curricular activities are no longer just a superfluous innovation but that they are now becoming a part of the school curriculum.

CHAPTER II

PREPARATION FOR THE STUDY

Review of Literature

Much has been written, and many investigations have been made concerning conditions, duties, loads, and salaries of industrial arts teachers. As early as 1927, Strickler made such a study, and in rapid succession many other treatises dealing with industrial arts appeared. Most of them were based upon researches in cities, towns, and various sections of the country.

Compared to the number of studies made in industrial arts, little has been done in the field of extra-curricular activities of industrial arts teachers. Most of the studies dealt with preparation of the teachers as one of the important factors in the success of a teacher.

Livingston (42:20) recorded that 2.9 per cent of the Kansas teachers held master's degrees in 1930 and that 85.7 per cent held bachelor's degrees, making a total of 88.6 per cent holding degrees.

Carlisle (9:54) found that 2.4 per cent of the industrial arts teachers in Arizona (1931) held master's degrees and that 71 per cent held bachelor's degrees, or a total of 73.4 per cent holding degrees.

Larson (40:11) and Livingston (42:85), reporting findings in Nebraska and Kansas respectively, agree with

Carlisle's study of Arizona, which shows that considerably less than fifty per cent of the industrial arts teachers had majored in industrial arts work in their college courses. This study shows that 64.3 per cent of the industrial arts teachers hold baccalaureate degrees and that 30.3 per cent have master's degrees, a total of 94.3 per cent holding degrees.

Lynn (44:43) found that 2.1 per cent of the industrial arts teachers of Iowa held master's degrees and that 56.3 per cent held bachelor's degrees in 1925, making a total of 58.4 per cent of the teachers with degrees.

Lynn, Carlisle, Bolle, and Carter considered experience as an important factor in the success of an industrial arts teacher. Lynn (44:30) gives the median of Iowa teachers as 2.12 years, and Carlisle (9:95) gives the median as 5 years for the Arizona teachers (1931). DeSelle (17:20) in his study of Oregon industrial arts teachers showed a median of 7.25 years. This current study shows a median of 10.5 years and an average of 12.84 years' teaching experience.

Many school duties other than teaching make up the daily programs of the teacher, but very little investigation has been made concerning the extra-curricular activities which now fall to the lot of practically all teachers.

Bolle made a study of the qualifications and the activities of high school industrial arts teachers in the state of Illinois. Lynn made certain practices and standards the basis of his study of industrial arts teachers in Iowa. Livingston included the preparation, the salaries, and other factors related to the work of industrial arts teachers in the state of Kansas. Carlisle made a survey of the industrial arts program and the teacher qualifications in the public schools of Arizona (1930). This current study deals only with the duties, the experience, the preparation, the extra-curricular activities, and the school duties of the teachers of industrial arts in the senior high schools of Arizona.

Not enough has been done to establish any major conclusions as to the school duties of industrial arts teachers; yet there is every indication that a beginning has been made among students of graduate schools to investigate factors pertaining to industrial arts teachers which give promise of developing the various studies for future interpretations and evaluation. The writer does not feel qualified to make such a study of evaluations of extra-curricular activities but believes that, if such a study could be made, it would be interesting as well as valuable. A consensus of opinion among some teachers and administrators is that there are too many school activities,

and that we are losing sight of the fundamentals of education. This study makes no attempt to evaluate or list any aims or objectives pertaining to extra-curricular activities.

Larson made a study of the industrial arts and vocational education program and of the preparation and duties of teachers in the state of Nebraska. Diamond of the University of Michigan published a pamphlet in 1927 similar to the study made by Larson. The only study found of manual arts teachers of the entire United States was made by Friese of Wisconsin, who conducted an occupational analysis. Smith made the first study on the status of industrial arts in Minnesota. Friese of the Northeastern State Teachers College, Tablequah, Oklahoma, conducted a study of industrial arts programs and teachers in the state of Oklahoma in 1927.

Adolph, of Clifton, Arizona, made a survey of the vocational, prevocational, and industrial arts of Arizona in 1930. His study concerned the relation of the subjects offered to the industries of the state.

Nearly all of the studies made of industrial arts included the preparation of teachers; they show that a baccalaureate degree is the accepted universal standard as to the minimum of college training necessary to teach.

Davis, Livingston, Larson, Diamond, Carlisle, and Carter included preparation of teachers in their study. A comparison of their findings with those of this study can be found elsewhere in this text.

Larson, Livingston, and Carlisle, who made studies of Nebraska, Kansas and Arizona respectively, showed that less than one-half of the industrial arts teachers had majored in industrial arts work in their college courses. This current study reveals that 65 per cent of the high school industrial arts teachers of Arizona in 1941 had majored in industrial arts. The above figures reveal that Arizona industrial arts teachers hold an enviable place in relation to collegiate training.

The topic of salaries of industrial arts teachers is another area of investigation used by many but is not within the scope of this study. The writer believes it is appropriate to quote Livingston's review (42:11) of this factor:

> The median salary for Kansas teachers in 1927-28 was $1838. The median salary for Nebraska teachers for the same year was $1610. The median salary for general industrial teachers in Minnesota in 1927-28 was $1975. The 369 Michigan teachers concerned in Diamond's study (1926-27) received a median salary of $2225. Strickler found that 383 teachers (1926-27) in the country at large received a median salary of $2100. Larson stated that during the last five years the average salary of teachers in the state of Nebraska has been quite constant. The plateau for the average high school teachers is slightly rising.

DeSelle made a study of extra-curricular activities in Oregon and compared schools ranked in three groups, according to size of school.

Undoubtedly other features directly or indirectly related to this review are included in all of the studies that have been made. Necessarily, all of them cannot be considered in this study but will be referred to in the presentation of the several tables of data.

It is hoped that the results of the various investigations will clarify the many duties and accomplishments of the industrial arts teachers. When the entire field has been surveyed, prospective teachers may know what to prepare for, and training institutions will know how to prepare their products.

The Purpose of the Study

The purpose of this study is to ascertain the status and the trends in the qualifications, teaching program, extra-curricular activities, and other school duties which make up the daily program of industrial arts teachers of Arizona. It is hoped that evaluations of extra-curricular activities will be made in the future and that adjustments in assignments for the teacher will result.

Method of Conducting the Study

The author's problem, in this work, was the gathering and presentation of information relative to the preparation, experience, types of school duties, classroom teaching, and time devoted to extra duties by industrial arts teachers. It was also to interpret these data in terms of his experience in teaching industrial arts and in carrying on a program of extra-curricular activities. These data are shown in the table, and a list of conclusions and implications may be found elsewhere in this study.

The original plan for the investigation was to gather data by personal interviews with industrial arts teachers throughout the state. This plan was abandoned because of the time limitations of this study, as well as the heavy expenditures necessitated by travel in a large state with a sparse population.

It was decided to mail questionnaires to each industrial arts teacher in the Arizona high schools. Previously the questionnaire had been submitted to a number of industrial arts teachers in Arizona and, after corrections had been made, the final form was printed by the Phoenix Union High School printing department.

The Phoenix Union High School department of guidance and research offered its facilities for sending out the material. Dr. Lacey E. Eastburn, Director of Research and

Guidance, sent a letter to the superintendents of all of the high schools of the state requesting them to cooperate in this study. This was supplemented by a follow-up letter by the author.

A questionnaire was sent to each of the sixty teachers of industrial arts listed in the Arizona Educational Directory. Fifty six, or 93.3, per cent of the industrial arts teachers of Arizona high schools responded. Twelve schools listed no industrial arts teachers. Four schools listed two or more teachers, the largest school being Phoenix Union High School with a staff of nine teachers. A copy of the questionnaire and a letter of transmittal are included in the Appendix.

The questionnaire method was the only practical method of reaching all of the industrial arts teachers in Arizona, within the limited time available for this study. The fact that certain discrepancies are usually associated with the use of the questionnaire method has been considered in the findings of this study.

It has been felt among teachers in Arizona high schools that there should be an evaluation and a readjustment of the time allotment of extra-curricular activities. The method of placing responsibilities now used is rather a mimeographed method of selecting the same teachers year after year, who faithfully carry out their assignments

even to the point of sacrificing good teaching in the classroom, while others take little or no part in this program.

To provide a basis for comparison for this study, questionnaires were sent to every high school teacher in Arizona. Eight hundred twenty questionnaires were sent, and 625, or 76.2 per cent, were returned, showing a highly valid number of returns. Comparison of the industrial arts teachers to the total teaching staff of Arizona high schools will be made only in relation to teacher preparation and the total time used for extra-curricular activities. This should be of value, as it will show the relative amount of extra-curricular work done by the industrial arts teachers as compared to that of the entire teaching staff of the Arizona high schools.

There is a general belief among many high school teachers that every teacher has ample talent and training to conduct some type of extra-curricular activity. Undoubtedly a reasignment of extra-curricular duties would relieve from strain and responsibility certain versatile teachers who function year after year even to the point of school activity exhaustion.

It is hoped that this study will be beneficial to all who are interested in the extra-curricular programs in our high schools and especially to the: (1) teachers and students of industrial arts; (2) prospective teachers of

industrial arts; and (3) patrons of the school as well as executives and administrators.

The writer feels that Arizona teachers are doing their part in helping the school program function to its maximum in all phases of the American way of life.

Teachers are agreed that the schools are gradually absorbing the moral responsibility of training youth by the ever-expanding program of subject matter and a wide variety of activities.

Validity of the Study

In conducting this study, the writer was cognizant of the fact that the number of returns would be limited, thus possibly reducing the degree of validity. In a young state, such as Arizona, with a sparse population, even a hundred per cent response would have been none too great for effective results. A hundred per cent response to a questionnaire study of this type was not hoped for. The actual responses from 56 industrial arts teachers out of a possible 60 teachers listed in the Arizona Educational Directory for 1941 has been encouraging. Twelve high schools did not have industrial arts teachers. Forty schools, or 85.1 per cent, are included in this survey and represent 93.3 per cent of tht total number of industrial arts teachers in Arizona high schools.

It is believed that the responses are adequate for ascertaining the trends in extra-curricular activities of Arizona schools and show a high validity. Certainly, the study represents more than a sampling of Arizona high schools and seems to give a reasonably true perspective of the total industrial arts teaching staff in the Arizona high schools.

Limitations of the Study

This study is limited to the extra-curricular activities of industrial arts teachers in Arizona high schools, with the exception of a comparison made with the responsibilities and preparation of non-industrial-arts teachers of Arizona.

CHAPTER III

THE STUDY

Professional Preparation and Experience

Preparation is one of the important factors in the success of a teacher. An analysis of extra-curricular activities and the industrial arts teacher would mean little and would be incomplete without significant facts pertaining to the teachers carrying out this program.

Questions were asked to ascertain what degree of teacher preparation had been made by industrial arts teachers in Arizona.

It is highly encouraging to note that 94.6 per cent of the industrial arts teachers have a baccalaureate degree and that 30.3 per cent have master's degrees.

Standards of teacher preparation have shown a gradual upward trend in Arizona and only recently has the Arizona Department of Public Instruction (Sect. 4) ruled that all high school teachers must have a master's degree, or its equivalent, by 1945 in order to teach in the secondary schools of the state.

Surely Arizona industrial arts teachers have an enviable record when the number of teachers holding bachelor of arts degrees has risen from 71 per cent in 1931 (shown by Carlisle 9:86) to 94.6 as found in this

study and when those holding the master's degrees have risen from 2.4 per cent to 30.3 per cent.

Davis (14:11) and Livingston (42:17) found that 89 per cent of the Kansas teachers hold the bachelor's degree. Larson (40:17) showed that 52 per cent of the Nebraska industrial arts teachers hold the bachelor's degree. Diamond (19:10) reported in 1927 that 29 per cent of the Michigan teachers held bachelor's degrees. Carlisle (9:15) in his study found that 71 per cent of the industrial arts teachers in Arizona in 1931 had a baccalaureate degree. He showed also that over 50 per cent of the industrial arts teachers of the state of Arizona in 1931 had prepared themselves in college to take some place in the education field; but less than one-half of them had limited their field to industrial arts. Included in this group were six graduates in engineering.

This study shows that 78.6 per cent of the teachers majored in their chosen field of industrial arts and are now teaching industrial arts subjects. Three teachers, holding degrees in engineering, were found to be teaching in the highly specialized fields of radio and electricity. This is a highly favorable situation and shows that Arizona has made great progress in its industrial arts program by selecting teachers trained in industrial arts.

TABLE I

Major Preparation of Industrial Arts Teachers in Arizona High Schools

Field	Teachers Reporting
Industrial Arts	31
Industrial Arts and Physical Education	5
Electrical Engineering	2
Trades and Industries	2
Industrial Arts and Geography	1
Practical Experience	1
Physical Education	1
Mechanical and Practical Experience	1
Industrial Arts and Mechanical Drawing	1
Auto Mechanics	1
Graphic and Plastic Arts	1
Industrial Arts and Social Science	1
Industrial Arts and Building Trades	1
Mathematics and Physical Science	1
Science and Mathematics	1
Industrial Arts, Physical Education and Health	1
Industrial Arts, Administration, and History	1
Engineering and Science	1
Vocational Education	1
Printing	1
Total	56

Forty two, or 75 per cent of the industrial arts teachers of Arizona high schools, used industrial arts as their major preparation. Five mentioned physical education as a minor subject to industrial arts. Only one teacher reported having majored in a field not directly related to industrial arts. This is a creditable showing and highly commendable when compared to Carlisle's study, (9:85) which showed that only 50 per

cent of the Arizona industrial arts teachers had prepared in the major field of industrial arts in 1931.

TABLE II

College Graduate Year of the Industrial Arts Teachers

Year	Teachers Reporting	Year	Teachers Reporting
1909	1	1933	6
1910	2	1934	8
1916	2	1935	1
1926	1	1936	4
1927	2	1937	3
1928	2	1938	1
1930	5	1939	1
1931	2	1940	6
1932	1	1941	2
		No answer	4
Median year at 1934		Total	54

Twenty six teachers, or 56 per cent, have been graduated since 1934, a favorable indication that a higher level of training is required to meet the rising teacher preparation standards in Arizona and that teachers are making efforts to improve their qualifications for teaching.

Four teachers reported practical experience as their preparation for teaching auto mechanics and building trades.

TABLE III

Professional Preparation of Industrial Arts Teachers in Arizona High Schools

Extent of Preparation	Degrees Reported	Per Cent Reporting
Bachelor degrees	53	94.6
Master's degrees	17	30.3

Fifty three teachers, or 94.6 per cent, reported having either the bachelor's degree or the master's degree. Three teachers, or 5.3 per cent, named auto mechanics, vocational mechanics, and practical experience respectively as their preparation for teaching. Seventeen teachers, or 30.3 per cent, had master's degrees.

TABLE IV

A Comparison of Professional Training

State	Per Cent Bachelor's Degrees	Per Cent Master's Degrees
Kansas 1930 (42:20)	89.0	3.0
Nebraska 1929 (40:19)	52.0	1.7
Arizona 1931 (9:84)	71.0	2.4
Arizona 1941 (This study)	94.6	30.3

Table IV makes a comparison of the percentage of bachelor's and master's degrees held by industrial arts teachers in two other states, as well as a previous study made by Carlisle, in 1931, of industrial arts teachers in Arizona. It is quite evident that industrial arts teachers of Arizona have made a creditable showing in their preparation during the past ten years. The study shows that the percentage of master's degrees has increased from 2.4 per cent in 1931 to 30.3 per cent in 1941. It also shows an increase of bachelor's degrees from 71 per cent in 1931 to 94.6 per cent in 1941. Undoubtedly Kansas and Nebraska have a higher percentage of master's degrees since Livingston and Larson made their studies.

As a basis for comparing the preparation of the industrial arts teachers with that of the non-industrial-

arts teachers in Arizona, questionnaires were sent to each teacher in the state, a total of 820 teachers. Six hundred twenty five, or 76.2 per cent, of the questionnaires were returned. Of these, 562 or 98.7 per cent of the non-industrial-arts teachers in Arizona high schools reported having bachelor's degrees, and 276 or 38.5 per cent reported having master's degrees. Three teachers, or one-half of one per cent reported that they held doctor's degrees.

Seven teachers, or 1.2 per cent, held special certificates but had no degrees.

Twelve teachers expected to receive the master's degree in 1941.

TABLE V

Professional Preparation of 569
Non-industrial-Arts High School Teachers in Arizona

Extent of Preparation	Degrees Reported	Per Cent
Bachelor's degrees	562	98.7
Master's degrees	276	48.5
Doctor's degrees	3	.05

It is evident from Table V that the standard of preparation is far above the bachelor's degree, and the

trend indicates that Arizona teachers are preparing to qualify for the master's degree as required by state law in 1945.

TABLE VI

Comparison of Preparation of Industrial Arts Teachers and Non-industrial Arts of Arizona

Extent of Preparation	Industrial Arts		Non-industrial-Arts Teachers	
	No.	Per Cent	No.	Per Cent
Bachelor's degrees	53	94.6	562	98.7
Master's degrees	17	30.3	276	48.5
Doctor's degrees			3	.05

A comparison of industrial arts teachers and non-industrial arts teachers of Arizona shows a very interesting trend in teacher preparation. The industrial arts teachers had 94.6 per cent holding baccalaureate degrees and 30.3 per cent master's degrees. The non-industrial-arts teachers have 98.7 per cent holding the baccalaureate degree and 48.5 per cent the master's degree, showing 18.2 per cent more master's for the non-industrial-arts teachers and 4.1 per cent more bachelor's degrees than the industrial arts teachers.

This comparison indicates that Arizona high school teachers are well prepared for teaching and that the trend is for more preparation in order to meet the requirements of the state school laws by 1945.

Teaching Experience of Instructors

TABLE VII

Teaching Experience of the Industrial Arts Teachers

Years of Experience	Teachers Reporting	Years of Experience	Teachers Reporting
1	3	14	3
2	1	15	3
3	4	16	2
4	3	17	2
5	5	18	1
6	4	19	1
7	5	21	1
8	3	25	4
10	3	27	1
11	1	28	1
12	1	29	1
		Total	55 *

Median--8 years Average--11.11 years

*One did not answer the question.

Table VII shows the years of experience of the men who are now teaching industrial arts. This table does not indicate that the teachers reporting have taught industrial arts subjects during all of this time nor that all of their teaching has been done in Arizona.

Carlisle (9:95) showed a median of five years and an average of 7.5 years of teaching experience for the state of Arizona in 1931. This study shows that Arizona had a median of eight years and an average of 11.11 years in 1941, indicating that Arizona teachers now have a longer teaching experience. The author is unable to interpret this difference in years unless it is perhaps due to a higher salary schedule inducing them to remain longer in Arizona. Another factor is that Carlisle made his study in 1931, and now, ten years later, better prepared teachers are satisfied to remain on the job longer perhaps because of better facilities for their teaching. Still another explanation may be that the average teacher is now older than in 1931.

The median number of years of experience, which is eight years, bears out a fairly well-known fact that recently graduated teachers are being sought with comparatively no value being placed on experience greater than eight years.

Years Since Degrees Were Obtained

TABLE VIII

Number of Years Since Baccalaureate Degrees Were Obtained

Number of Years	Teachers Reporting	Number of Years	Teachers Reporting
32	1	8	3
31	1	7	5
25	2	6	1
14	2	5	3
13	2	4	1
11	4	3	2
10	1	2	2
9	2	1	2
		Total	34

From Table VIII the average time since the 34 graduates received the baccalaureate degree was 9.8 years, with a median of eight years. Eight, or 26.4 per cent, of the industrial arts teachers of Arizona received their baccalaureate degrees 13 years or more ago. One reported that it had been 32 years and another, 31 years ago. This is hardly believable when one considers the recent demand for better prepared teachers.

It is clear that more than 50 per cent of the industrial arts teachers have received their bachelor's degrees in the last seven years. This is perhaps due to the fact

that two Arizona State Teachers Colleges now offer master's degrees in industrial arts and that the trend is for more preparation.

TABLE IX

Number of Years Since Master's Degrees Were Obtained

Number of Years	Teachers Reporting	Number of Years	Teachers Reporting
31	1	7	3
17	1	6	1
11	1	5	1
10	1	4	1
8	1	3	1
		1	4
		Total	16
Average 7.5 years		Median 6 years	

Twelve, or 75 per cent, of the industrial arts teachers of Arizona having master's degrees received their degrees during the past eight years (shown in Table IX). Three reported that they had completed their required work and would submit their theses for final fulfillment for the master's degree within the next year. There seems to be a decided probability that teachers who obtain the master's degree will do so within a period of six to eight years after receiving the baccalaureate degree.

Schools Supplying Teachers Having Degrees

TABLE X

Teacher Training Schools
Supplying Degree Teachers

Schools	Teachers Supplied	Per Cent
University of Arizona, Tucson, Arizona	11	21.82
Tempe State Teachers College, Tempe, Arizona	10	18.2
Flagstaff State Teachers College, Flagstaff, Arizona	9	16.4
Oregon State College, Corvallis, Oregon	3	5.46
Stout Institute, Menomonie, Wisconsin	2	3.64
Colorado State College of Education, Greeley, Colorado	3	5.46
Iowa State College, Ames, Iowa	2	3.64
Bradley Polytechnic Institute, Peoria, Illinois	1	1.82
Colorado Agricultural College, Ft. Collins, Colorado	1	1.82
Kansas State College, Fort Hays, Kansas	1	1.82
Missouri State Teachers College, Kirksville, Missouri	1	1.82
Peabody College for Teachers, Nashville, Tennessee	1	1.82
Rose Polytechnic Institute, Terre Haute, Indiana	1	1.82
Rutgers University, New Brunswick, New Jersey	1	1.82
Santa Barbara State Teachers College, Santa Barbara, California	1	1.82
St. Cloud Teachers College, St. Cloud, Minnesota	1	1.82
Thomas Normal, Detroit, Michigan	1	1.82
University of Oregon, Eugene, Oregon	1	1.82
Wilberforce University, Wilberforce, Ohio	1	1.82
Vocational Mechanics Schools, Mesa, Arizona	1	1.82
Total 53		100.00

Two teachers reported practical experience as their training, and one teacher failed to report.

Fifty two teachers having the baccalaureate degree or master's degree represent 19 different colleges of the middle west and Pacific coast states. The University of Arizona supplies 11; Tempe, Arizona, State Teachers College, 10; and Flagstaff, Arizona, State Teachers College, 9. A total of 30 teachers or approximately 50 per cent of all the industrial arts teachers in the high schools of the state received their major training in these three institutions.

A significant fact is that a greater number of teachers are now being prepared in the three Arizona colleges and employed within the state. Master's degrees are now given in industrial arts in the two state teachers colleges, where a great development in the program of industrial arts has taken place within the past ten years.

This situation has changed greatly within the last ten years, as this report shows that 24 per cent more of the industrial arts teachers of Arizona have prepared themselves in Arizona institutions than in 1931, when Carlisle made his report. This should justify the continuance of industrial arts courses in Arizona colleges provided the teacher training institutions continue to offer an acceptable program.

In this study, seven reported having attended Oregon State College, three of them receiving a bachelor's degree,

to place this teacher training center in fourth place among the institutions supplying industrial arts teachers for Arizona.

Only eight per cent of the industrial arts teachers of Kansas (42:18) are supplied by out-of-state schools as compared with 82 per cent (9:87) of the Arizona teachers

This study shows that 42 per cent of the instructors now teaching industrial arts in Arizona high schools come from other states.

Teachers with no teacher training reported having had practical experience, and one who attended only the Vocational Mechanics School of Mesa, Arizona, are not included in the above percentages. Only teachers with degrees were considered, and no attempt was made to distinguish between the different types of degrees held.

Carlisle (9:115) wrote in 1931:

> Arizona is conspicuous by 82 per cent of her industrial arts teachers receiving their college training in institutions out of the state, chiefly from schools north and west of the Mississippi River.... The number of industrial arts teachers supplied by Arizona teacher-training institutions does not justify maintenance of departments for training industrial arts in them or any of them.... Eighteen of the teachers have 'majors' and seven have 'minors' in industrial arts work in their college training courses.

This condition has changed greatly since Carlisle made this report in 1931 as this study shows that only 42 per cent of the Arizona industrial arts teachers come from other states.

Subject Combinations

The teaching of other subjects in combination with industrial arts is increasing in frequency in Arizona high schools. Eighteen reported teaching only industrial arts subjects (from Table XI). Thirty eight, or 68 per cent, of the industrial arts teachers found it necessary to fill their schedules with one or more other subjects. Most of the subjects taught in conjunction with industrial arts are closely related to the work, with the exception of dramatics and coaching.

The following seven tables (XI to XVII) show the combination of other subjects with industrial arts and the frequency of each combination.

A significant fact is that mathematics, algebra, and general science have a frequency of three, and coaching appears only twice.

Twenty three teachers responded that they coached some branch of athletics but were not hired for that purpose only.

No particular grouping or combination of subjects recurs with any great frequency. Nevertheless, it is quite evident that coaching is a very common minor preparation. No special course is recommended, since it is impossible to predict what subject combinations will be required of Arizona industrial arts teachers. Mathematics

would seem to be the most likely subject for which an industrial arts teacher should prepare as a minor subject, since mathematics and science appear most often as the teaching combination with industrial arts.

TABLE XI

Subjects Taught without a Combination

Subject	Frequency
Industrial Arts	7
Mechanical Drawing	3
Printing	2
Auto Mechanics	1
Practical Electricity	1
Crafts	1
Vocational Mechanics	1
General Shop	1
Total	17

Read: There are seven instances where industrial arts is the only subject taught without a combination; three instances where mechanical drawing is the only subject taught.

Carlisle (9:56) reports only five teachers in Arizona, ten years ago, who found it necessary to fill their schedules with teaching assignments other than industrial arts. This current study reveals 19 teachers teaching 16 subjects having 19 frequencies. The seven teachers who reported industrial arts evidently are teaching general shop, as they did not mention any subjects.

TABLE XII

Combinations of Industrial Arts Subjects with Other Subjects

Combinations	Frequency
Industrial Arts Subjects and:	
Mathematics	4
Algebra	6
Dramatics	1
Industrial Geography	1
Physical Education	3
Social Science	1
Safety	1
Geometry	2
Chemistry	1
Vocational English	1
Coaching	2
Typing	1
Business	1
General Science	3
Commercial Mathematics	1
Total	29

Twenty nine industrial arts teachers replied that they taught one subject other than industrial arts. No combination of subjects appeared with a greater frequency

than six. Ten, or 34.4 per cent, of the total number of frequencies were recorded as mathematics and algebra. This may be due to the fact that most industrial arts teachers choose mathematics as a related subject during their industrial arts training in college and feel that they can teach these subjects with greater skill.

TABLE XIII

Two-Subject Combination

Subjects	Frequency
Industrial Arts, Mathematics	2
Mechanical Drawing, Algebra	2
Woodworking and Dramatics	1
Building Trades and Algebra	1
Printing and Industrial Geography	1
Woodworking and Metals	1
Woodworking and Mechanical Drawing	1
Auto Mechanics and Coaching	1
Auto Mechanics and Metals	1
Industrial Arts and Mechanical Drawing	1
Industrial Arts and General Metals	1
Vocational Shop and Algebra	1
Printing and Woodworking	1
Industrial Arts and Building Trades	1
Industrial Arts and Physical Education	1

TABLE XIV

Three-Subject Combination

Subjects	Frequency
Mechanical Drawing, Auto Mechanics, Mathematics	1
Industrial Arts, Mathematics, Coaching	1
Woodworking, Typing, Business	1
Radio, Electricity, General Shop	1
Woodworking, Mechanical Drawing, General Science	1
Auto Mechanics, Industrial Drawing, Commercial Mathematics	1
Radio, General Shop, Forge	1
General Shop, Algebra, General Science	1
Building Trades, Industrial Arts, Mechanical Drawing	1
Woodworking, Trades, Electricity	1
General Shop, Algebra, Geometry	1
Industrial Arts, Physical Education, General Science	1

TABLE XV

Four-Subject Combination

Subjects	Frequency
Industrial Arts, Physical Education, Social Science, Mathematics	1
Woodworking, Auto Mechanics, Metal, Safety	1
Mechanical Drawing, Crafts, Basic Arts, Painting	1
General Shop, Algebra, Geometry, Chemistry	1
Building Trades, Carpentry, Plumbing, Plastering	1
Machine Shop, Mechanical Drawing, Vocational Mathematics, Vocational English	1

TABLE XVI

Five Subject Combination

Subjects	Frequency
Manual Training, American History, Vocational Analysis, Civics	
Coaching	1

TABLE XVII

Industrial Arts Subjects Taught and the Frequency of Single and Multiple Combinations

Industrial Arts Subjects	Combinations					
	Subjects Taught					Totals
	1	2	3	4	5	
Mechanical Drawing and Auto Mechanics	0	0	1	0	0	1
Industrial Arts	7	3	2	1	0	13
Mechanical Drawing	3	2	0	0	0	5
Woodworking, Auto Mechanics, Metal	0	0	0	1	0	1
Woodworking	0	1	1	0	0	2
Building Trades	0	1	0	0	0	1
Radio, Electricity and General Shop	0	0	1	0	0	1
Printing	2	1	0	0	0	3
Woodworking and Metals	0	1	0	0	0	1
Woodworking and Mechanical Drawing	0	1	1	0	0	2
Auto Mechanics	2	1	0	0	0	3
Practical Electricity	1	0	0	0	0	1
Metals and Auto Mechanics	0	1	0	0	0	1
Auto Mechanics and Industrial Drawing	0	0	1	0	0	1
Crafts	1	0	0	0	0	1
Radio, General Shop, Forge	0	0	1	0	0	1
Vocational Mechanics	1	0	0	0	0	1
Industrial Arts and Mechanical Drawing	0	1	0	0	0	1
Mechanical Drawing, Crafts	0	0	0	1	0	1
General Shop	1	0	2	1	0	4
Industrial Arts and General Metals	0	1	0	0	0	1
Building Trades, Industrial Arts, Mechanical Drawing	0	0	1	0	0	1
Woodworking, Trades, and Electricity	0	0	1	0	0	1
Vocational Shop	0	1	0	0	0	1
Machine Shop and Mechanical Drawing	0	0	0	1	0	1
Printing and Woodworking	0	1	0	0	0	1
Industrial Arts and Building Trades	0	1	0	0	0	1
Manual Training	0	0	0	0	1	1
Totals	18	17	12	5	1	53

CHAPTER IV

THE STUDY (CONTINUED)

Extra-Curricular Activities

TABLE XVIII

Extra-Curricular Activities of Industrial Arts Teachers

Divisions	Number Reporting
Extra-curricular activities	40
No extra-curricular activities	14
Did not answer	2
Total	56

Seventy-one per cent (from Table XVIII) of the industrial arts teachers reported that they directed or supervised an extra-curricular activity. Fourteen teachers, representing 25 per cent, reported that they had no responsibility for extra-curricular activities or organized groups. This shows a decrease of 23 per cent since Carlisle made his study in 1931. DeSelle (17:31) reported 22.4 per cent not participating in extra-curricular activities in Oregon.

Briggs (8:693) reported, in his study of 4981 teachers in the secondary schools of the nation: "...that 76 per cent of the teachers in the west are guiding and directing extra-curricular activities and are rated among the best 1/3 of all the high school teachers in the U.S.A. It is coincident that 71 per cent of the Arizona industrial arts teachers direct or supervise extra-curricular activities and therefore rank in the upper one third group as among the best of all high school teachers in the nation.

Forty teachers specified that they had direct charge or supervision of 54 separate organized extra-curricular activity clubs averaging a little more than one club per teacher. Six teachers had two clubs each. Six clubs not included in the questionnaire were added to the list. Although 25 per cent of the industrial arts teachers had no organized clubs, the average is approximately one club per teacher.

Table XIX was made in order to show what club activities teachers are engaged in. Some activities are only seasonal, but the table should afford those who anticipate entering the field of teaching an understanding of what to expect in regard to extra-curricular activities. There seems to be a rather diversified scattering of clubs, with Boy Scouts, Craftsman Club, Hobby Club, Tennis Club and radio "Hams" club occurring with more than ordinary

frequency. This table does not show any major athletic coaching duty other than tennis. It is believed that there is a consensus of opinion among school executives and teachers that a combination of teaching and coaching is unsatisfactory because both make heavy demands on time.

The author is aware of the fact that a definition of extra-curricular activities is still indeterminate, and that no universal agreement has been reached, but he feels that any school curricular activity is important insofar as it is to the best interests of the pupils participating. Livingwood (41:614) says, "Extra-curricular activities may be defined as those legitimate activities which have been developed in schools to supplement the curriculum program, with a view to realizing more completely the aims and functions of education."

Again quoting from Wilds, E. H. (68:3):

> Those activities of the school that are outside of the traditional curriculum including those activities carried on apart from the course of study planned and constructed by the administrator and the teachers of the school. Those activities that have sprung up and developed through the students' own desires and efforts, that are carried on apart from the hours of the regular school program and that are participated in without the rewards of regular school credit.

Comparisons of tables of this nature, with a great many interpretations and variety of activities as to what constitutes an extra-curricular activity, is not wholly

to be relied upon. Carter (10:18) says in regard to interpretations, "Comparisons of investigations are never wholly to be relied upon, since terms used in collecting the data differ and conditions are not controlled. Standardization must come in many phases of Industrial Arts work before deductions can be recognized as little more than general trends."

To the writer's knowledge, no complete survey has ever been made of the extra-curricular activities of high school teachers in Arizona. It is interesting to learn that in this survey made by the author, 624 extra-curricular activities were reported by 625 teachers in response to a questionnaire sent to 820 high school teachers in Arizona. The questionnaire was returned by 76.2 per cent of all the teachers. These returns represented 44 high schools, or 74.5 per cent of all schools in the state.

The average number of extra-curricular responsibilities for each teacher in the state was 1.33. One hundred eighteen organized clubs were reported by the academic teachers, and 27 clubs were reported by the industrial arts teachers.

TABLE XIX

Citation of Cases of Extra-Curricular Activities

Individual Cases	Frequency
Agricultural Club	2
Boy Scouts	4
Craftsman Club	3
Dramatics Club	1
Gymnasium Club	2
Golf Club	1
Hobby Club	4
Home Workshop Club	3
Home Room Club	5
Health Club	1
Hi-Y Club	2
Honor Society Club	2
Industrial Arts Club	1
Kodak Club	1
Model Aircraft Club	2
Model Boatbuilding Club	1
Radio "Hams" Club	3
Rifle Club	2
Stagecraft Club	1
Safety Club	1
Tennis Club	4
Card Club	1
Lettermen's Club	3
Boxing Club	1
Science Club	1
Bookbinding Club	1
Service Club	1
(Did not answer	2
Total	56

Although two did not answer, and fourteen replied that they did not supervise an extra-curricular club, it is evident that industrial arts teachers are assuming the responsibility in the expanding program of extra-curricular activities. It is probable that the industrial

arts teacher will sponsor some club for which he has special talent or preparation.

The Agricultural Club, Boy Scouts, Debating Club, Dramatics Club, Gym Club, Girls' League, Home Economics Club, Honor Society Club, Kodak Club, Library Club, Pep Club, Rifle Club, Tennis Club, Golf Club, Hobby Club, Lettermen's Club, Music Club, and Spanish Club were reported with the greatest number of frequencies by the academic teachers. Less than 13 frequencies of any club were not listed.

Comparison with Other Schools

TABLE XX

Comparison of Five Studies Dealing with Extra-curricular Activities of Industrial Arts Teachers

Had no extra-curricular duties	Per Cent
Arizona (Carlisle)	47.0
Iowa (Lynn)	27.7
Kansas (Livingston)	15.9
Illinois (Carter)	7.4
Oregon (DeSelle)	22.4

Actual teaching in the classroom is but a small part of the teacher's work. Many surveys have been made of

curricula, but little study has been made of extra-curricular activities of industrial arts teachers. This study shows that 25 per cent of the Arizona industrial arts teachers have no extra-curricular responsibilities of the type designated as an organized club. Many have other non-curricular duties. This compares favorably with Iowa, Illinois, and Oregon. Although a seemingly large number do not conduct an organized club or activity, this study reveals that nearly all industrial arts teachers are assigned to some special duty other than teaching.

TABLE XXI

Time Used for Extra-curricular Activities by Industrial Arts Teachers

Hours per Year Reported	Frequencies	Approximate Hours per Year
12	2	24
18	1	18
20	2	40
25	1	25
30	1	30
40	1	40
45	1	45
50	2	100
53	1	53
60	1	60
84	1	84
100	2	200
108	1	108
111	1	111
124	1	124
130	1	130
140	1	140
144	1	144
150	2	300
154	1	154
180	2	360
240	1	240
250	1	250
277	1	277
278	1	287
287	1	300
300	1	340
340	1	350
350	1	350
360	2	720
375	1	375
380	1	380
438	1	438
450	2	900
500	1	500
Total	43	Total 8707

Time Used for Extra-curricular Duties

From Table XXI showing the time given to extra-curricular duties, 43 industrial arts teachers reported, and 13 did not answer the question. During the school year 8707 hours were used by the 43 teachers, an average of 202.5 hours for each industrial arts teacher, or 5.6 hours per week. These data compare favorably with Carlisle's report (9:60) of an average of more than an hour per day used for extra-curricular activities.

These findings are modified by the fact that few teachers kept an accurate account of time spent in extra-curricular activities, while others either could or would not approximate the total number of hours used during the year.

It seems highly significant to note from this table that 16, or approximately 37 per cent, of the teachers are carrying more than the average extra-curricular load, from 202.5 hours to 500 hours. Twenty seven, or approximately 63 per cent, of the teachers are carrying less than the average load, their number of hours ranging from 12 to less than 202.5 hours per year.

TABLE XXII

Minutes Per Week Used by Industrial Arts Teachers in Conducting Extra-curricular Activities

Number of Weeks	Minutes Per Week	Number of Weeks	Minutes Per Week
36	50	36	750
36	600	5	30
10	1200	36	90
6	150	36	5
34	480	38	180
36	30	36	120
36	300	36	5
36	950	30	40
22	750	6	180
32	250	38	225
36	900	37	450
10	450	36	600
38	60	20	600
40	500	52	120
14	600	24	480
36	60	36	20
32	232	36	50
52	900	36	150
30	240	36	60
18	300	30	60
36	30	36	180
	Total	1314	Total 14587

From 56 returns (shown in Table XXI) 11, or 19.6 per cent, did not answer the question pertaining to the time given to extra-curricular duties. Two did not give minutes per week used for conducting extra-curricular activities. The average of the number of minutes devoted to extra-curricular activities by industrial arts instructors is 338 minutes, or approximately 5.6 hours per week.

TABLE XXIII

Comparison of Academic Teachers of Arizona High Schools with Industrial Arts Teachers Sponsoring Clubs

Teachers	Number of Teachers Reporting Clubs	Clubs Reported
Industrial Arts Teachers	42	54
Academic Teachers	354	570

Comparative Responsibilities of Industrial-Arts and Non-Industrial-Arts Teachers

From Table XXIII 42 industrial arts teachers sponsor 54 organized activity clubs, an average of 1.26 for each teacher. Three hundred fifty four academic teachers reported 570 organized clubs that they sponsored or supervised, an average of 1.33 clubs per teacher. There is a prevalent belief among industrial arts teachers in the field of teaching that they are better qualified by virtue of their training to conduct extra-curricular activities; also that there is a greater demand upon their departments for outside work and miscellaneous activities. This is hardly shown to be true in the above table, as a difference of 0.07 is negligible. Undoubtedly the training afforded prospective teachers in colleges is becoming more expansive, and more consideration is given the teachers who can do more than mere classroom teaching.

E. E. Oertel (49:30) has this to say, "It behooves teachers now in service, as well as those in training, to prepare to meet the demands of tomorrow in a profession rapidly finding new and important instruments and tools for the most expeditious and effective shaping of its products".

TABLE XXIV

Comparison of Time Used for Extra-curricular Activities by Industrial Arts Teachers and Academic Teachers of Arizona High Schools

Teachers	Number Reporting	Total Hours	Average No. of Hours
Industrial Arts Teachers	43	8707	202.5
Academic Teachers	432	88537	204.9

Of 625 questionnaires received, representing 76.2 per cent of the total high school teaching population of Arizona, 432 reported on the total time used for extra-curricular activities. A hundred per cent return would be more valid; yet 52.7 per cent of the total teaching staff is more than a sampling and represents a true cross-section of the entire state. Four hundred thirty two academic teachers reported a total of 88,537 hours used for extra-curricular activities during the year.

This is an average of 204.9 hours for each high school teacher who reported. This surpasses the 202.5 average hours used by the industrial arts teachers by 2.4 hours, an almost negligible amount when distributed over a school year of 36 weeks.

TABLE XXV

Teachers Performing Special Duties, Other Than Teaching, Such as Care of Lockers, Hall Duty, Ground Duty, Ticket Sales, Pageants, Athletic Games, and School Plays

Answers	Frequency
Yes	51
No.	5
Total	56

Summary of Special Duties

The special duties that must be performed about the school and campus are duties at athletic contests, gate-keeping, ticket selling, refereeing games, timekeeping, noon lunch duty, or ground patrolling.

Most of these duties do not impose upon the teacher's time, as they are mostly seasonal and in a few cases are performed during regular class sessions. From twenty-five years' teaching experience and observation, the writer believes that a majority of men teachers welcome most

athletic contests and accept these responsibilities as a part of their jobs as teachers.

No attempt will be made here to compare the campus duties of the industrial arts teachers and the academic teachers; but, in checking 625 questionnaires of Arizona high school teachers, similar duties and campus responsibilities appear to be about the same.

There is a consensus of opinion among teachers and administrators that certain duties are now considered a part of the job in order to promote the proper functioning of the school routine.

TABLE XXVI

Citation of Special School Duties

Duties	Frequencies
Duty at Athletic Games	32
Referee Athletic Games	3
Lunch Hour Duty	2
Study Hall	2
Hall Duty	10
Ticket Sales	4
Ground Duty	7
Noon Conferences	1
Athletic Committee	1
Community Entertainments	1
School Dances	8
School Plays	9
Intramural Contests	3
Pageants	7
Entertainment at Games	1
Sponsor Class Parties	1
Class Meetings	1
Training Cheer Leaders	1
Sponsor Student Health Committee	1
Class Sponsors	4
Sponsor for School Paper and Annual	2
Commencement Rehearsals	2
Total	103

Duty at athletic games includes selling and taking of tickets, seating spectators, refereeing games, time-keeping, and gate duty. During social activities, such as dances, plays and recreational activities, teachers function merely as supervisors and police.

TABLE XXVII

Miscellaneous Duties of Industrial Arts Teachers
Other Than Classroom Duties

Duties	Frequencies
Bus Driving and Trips	2
Project Visitations to Homes	1
Stage Settings and Stage Scenery	7
Checking Fuel Oil and Water	1
Lining Football Field	1
Building Athletic Equipment	1
General Repairs	2
Supervision and Care of Lockers	2
N.Y.A. Supervision	2
Home-Craftshop Visitations	1
Buying Supplies for Department	1
Printing Programs for Activities	1
Repairs on School Motors	1
Electric Repairs for Faculty	1
Community Entertainments	1
Caring for School Truck and Buses	1
Total	26

Miscellaneous Duties of Industrial Arts Teachers

All of the miscellaneous duties (Table XXVII) that the industrial arts teachers are doing do not seem to be necessarily work that a teacher should be called upon to do. Bus driving and trips are undoubtedly a part of the instructor's job. Electrical repairs for faculty members would seem to be merely a courtesy on the part of the teacher. Lining a football field could be done by student athletic managers. Checking fuel oil and

water appears to be a job for the janitor. Nevertheless, these and many others deserve consideration because they are performed by consent of the school administration.

TABLE XXVIII

Industrial Arts Teachers Who Coach Athletics

Answers	Frequency
Yes	23
No	33
Total	56

A total of 56 teachers answered the question. Forty per cent are coaching athletics in addition to their teaching loads. Twenty-three reported that they coached athletics but were not hired for that purpose only. This indicates that industrial arts teachers who perhaps participated in some form of athletics in college are willing to cooperate in the program when working in activities for which they are especially prepared. Thirty three reported that they did not coach athletics.

TABLE XXIX

Industrial Arts Teachers Having Regularly Scheduled Home Room or Activity Period

Frequency	Minutes Per Week	Frequency	Minutes Per Week
1	33	1	150
1	15	1	60
2	35	2	10
9	30	2	20
1	115	1	50
9	125	1	40
2	25	1	44
1	110	1	150
1	135		

Thirty seven industrial arts teachers reported that they had a regularly scheduled home room or activity period. Fifteen answered "no" to the question. One answered "yes" but gave no time. A total of 2477 minutes was given. This averages approximately 66 minutes used by each teacher for home room or activity period during the week. It is evident that the term, home room or activity period, was not clearly understood, since such a wide range of minutes per week appeared. Phoenix Union High School is the only school reporting a consistent period of time used for home room or activity period.

Class Teaching Loads

TABLE XXX

Class Periods per Day of
the Industrial Arts Teachers
in the Different Schools

Class Periods Per Day	Frequency
5	1
6	18
7	17
8	20
Total	56

The responses represent 34 high schools of Arizona having industrial arts teachers. Thirty six per cent of the schools reporting have eight periods per day of class teaching. One school reported having five periods per day.

TABLE XXXI

Periods per Day Taught by Each Teacher

Teachers Reporting	Periods per Day
15	7
14	5
20	6
3	8
2	2
1	4
Total 55	

Fifteen teachers reported teaching seven periods per day. Two teachers had two periods per day but also coached athletics. One part-time teacher taught only four periods. The average teaching load is six periods each day and compares favorably with the average teaching load in most high schools. It is evident that some teachers are part-time teachers, or that they are occupied in other work, such as study hall, administration, or supervision.

Table XXXII represents the number of industrial arts teachers in Arizona high schools who have adequate training, either by college courses or practical experience, to carry on satisfactorily the activities listed.

TABLE XXXII

Training of Teachers for Supervising Extra-curricular Activities

Activities	Frequency	Activities	Frequency
Agricultural Club	3	Interior Decorating Club	4
Archery Club	2	Kodak Club	5
Bicycle Club	1	Library Club	1
Boy Scouts	25	Latin Club	0
Bird Club	2	Magazine Club	1
Boatbuilding Club	4	Mathematics Club	5
Craftsman Club	28	Model Aircraft Club	7
Current History Club	0	Model Boatbuilding Club	6
Debating Club	5	Music Club	1
Dramatics Club	5	Outing Club	6
Floriculture Club	1	Printer's "Devil" Club	3
Factory Visit Club	3	Public Speaking Club	2
Glee Club	4	Radio "Hams" Club	5
Gym Club	15	Rifle Club	15
Gold Club	6	Stamp Club	1
Hobby Club	14	Stagecraft Club	3
Hiking Club	9	Student Police and Traffic Club	1
Home Workshop Club	27	Safety Club	11
Home Room Club	7	Travel Club	3
Health Club	8	Tennis Club	8
Hi-Y Club	2		
Honor Society Club	5		
Industrial Arts Club	39		

Two instructors responding found it necessary to add one activity each to this list to indicate their type of activities.

Of the 45 activities listed, eight, or 17.7 per cent, were checked by ten or more instructors. Thirty five, or 82.3 per cent of the activities, were checked by fewer than ten instructors. Eleven did not check a single activity, thus indicating that they did not feel fully qualified to handle any activity.

Forty five instructors responded to the question. The average number of clubs reported for each teacher is 6.7. This seems to indicate that industrial arts teachers, as a group, are well qualified to sponsor a wide variety of activities. DeSelle, (17:37) in his study of Oregon, found that 21, or 45.7 per cent of the activities, were checked by ten or more instructors. This would indicate that the Oregon industrial arts teachers are trained to sponsor a greater variety of activities than the teachers of Arizona. Industrial Arts Club was reported with 39 frequencies, followed by Craftsman Club, Home Workshop Club, Boy Scouts, Gym Club, Rifle Club, with frequencies of 28, 27, 25, and 15 respectively.

With a wide range of extra-curricular activities in Arizona, industrial arts teachers feel that they would profit from further training in certain fields. This is shown in Table XXXIII.

TABLE XXXIII

Activities in Which Industrial Arts Instructors Desire Additional Training

Activities	Frequency	Activities	Frequency
Agricultural Club	1	Interiod Decorating Club	1
Archery Club	3	Kodak Club	4
Bicycle Club	0	Library Club	0
Boy Scouts	2	Latin Club	0
Bird Club	0	Magazine Club	0
Boatbuilding Club	4	Mathematics Club	2
Craftsman Club	7	Model Aircraft Club	7
Current History Club	1	Model Boatbuilding Club	3
Debating Club	0	Music Club	0
Dramatics Club	1	Outing Club	0
Floriculture Club	1	Printer's "Devil" Club	2
Factory Visit Club	2	Public Speaking Club	1
Glee Club	0	Radio "Hams" Club	0
Gym Club	2	Rifle Club	5
Golf Club	2	Stamp Club	0
Hobby Club	5	Stagecraft Club	2
Hiking Club	0	Student Police and Traffic Club	2
Home Workshop Club	5	Safety Club	1
Home Room Club	1	Travel Club	1
Health Club	4	Tennis Club	3
Hi-Y Club	1		
Honor Society Club	0		
Industrial Arts Club	5		

Twenty two, or 39.3 per cent, of the industrial arts teachers indicated that they would like further training

in extra-curricular activities. DeSelle (17:40) showed 19 per cent not desiring further training. Model aircraft club, craftsman club, industrial arts club, hobby club, home workshop club, and rifle club had frequencies of five or more, indicating that industrial arts teachers desired further training in areas closely related to the industrial arts field.

Thirty-four teachers, or 60.7 per cent, indicated no desire to further their study in activities. Of particular interest is the fact that in Table XXXII, 45 instructors specified having had special training in or practical experience with an average of 6.7 activities for each teacher. It is plainly indicated in Table XXXIII that industrial arts teachers have had sufficient training; hence the large number who do not express a desire for further training in extra-curricular activities.

Attitudes of Teachers Toward Extra-curricular Duties

TABLE XXXIV

Attitude of Teachers Toward the Extra-curricular Program, Based on 56 Responses

Attitude of Teachers	No. of Responses	Yes	Per Cent	No	No Response
Serve as a matter of duty	49	25	51	24	7
Enjoy working with extra-curricular activities	53	48	90.5	5	3
Receive extra compensation for conducting extra-curricular activities	47	4	8.5	43	9
Took courses in college pertaining to extra-curricular activities	48	36	75	12	8
Required to direct extra-curricular activities	48	30	62.5	18	8

The response given to the extra-curricular program by the industrial arts teachers shows a willingness to serve in the promotion of the program. Approximately 51 per cent serve as a matter of duty and consider the extra-curricular program as a part of their school work. Twenty four, who stated that they do not consider that their services are given as a matter of duty, probably supervise

extra-curricular activities in which they are especially prepared, and which they enjoy.

Forty eight reported that they enjoy working with extra-curricular activities. Five did not enjoy extra-curricular activities. This may be due, in some degree, to the heavy teaching load or to a lack of special training to fit them for such activities. Three failed to answer, perhaps indicating that it made very little difference to them whether or not they took part in the extra-curricular program.

Four of the 47 teachers responding receive extra compensation. Table XXVIII shows that 23 industrial arts teachers coached some form of athletics but were not hired as coaches only. This would indicate that compensation was made for such specific jobs and also that industrial arts teachers have a favorable attitude toward the extra-curricular program. Of the teachers responding, 66.6 per cent took courses in college pertaining to some phase of extra-curricular work, indicating that they anticipated functioning in the program of extra-curricular activities. Twelve did not take courses in extra-curricular activities, and eight did not respond. Sixty two per cent of those responding answered that they were required to direct extra-curricular activites. Eighteen teachers were not required to participate in the program, and eight did not answer.

Interpretation of Table XXXIV is difficult, since the answers may be thwarted responses, due perhaps to the fact that the questionnaires were sent to the principals, and the teachers were requested to return them through the principal's office. There is, however, an indication that industrial arts teachers have a favorable attitude toward the extra-curricular program, as shown by the fact that 71 per cent directed or supervised 55 club activities.

Twenty nine per cent of the industrial arts teachers do not sponsor a club activity but take part in the extra-curricular activity program. This is shown by the fact that 23 teachers are engaged in coaching athletics, and 43 teachers reported a total of 7,925 hours used for extra-curricular activities.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

1. Of the industrial arts teachers in Arizona high schools, 75 per cent used industrial arts as their major preparation.
2. The baccalaureate degree was held by 94.6 per cent of the industrial arts teachers, while the master's degree was held by 30.3 per cent. Three teachers reported that they had completed all their work toward the master's degree except the thesis.
3. Five and three tenths per cent of the teachers did not have degrees but had specialized in highly technical work.
4. Fifty two per cent of the industrial arts teachers have been graduated from institutions of higher learning since 1934.
5. Industrial arts teachers compare favorably with academic teachers of Arizona in the amount of preparation, and especially so when one considers that industrial arts teachers are expected by many administrators to have had practical experience in fields of work related to their teaching areas, in addition to their college training.

6. The teaching experience of teachers in Arizona averages 11.11 years, indicating that very few leave the field of teaching.
7. Of the teachers having completed their work for the master's degree, 75 per cent have done so within the past eight years.
8. Arizona institutions supplied 58 per cent of all the industrial arts teachers. Forty two per cent of the teachers have come from sixteen other institutions outside the state.
9. Twenty three teachers coach athletics but were not hired for that purpose only.
10. Sixty eight per cent of the teachers found it necessary to teach other subjects in order to fill their schedules. This is the weakest factor for success in the industrial arts program of Arizona.
11. Twenty four per cent of the industrial arts teachers do not sponsor an organized activity club, but all of them reported that they assumed other school duties. Thirty seven per cent of the industrial arts teachers in Arizona high schools carry 67 per cent of the total extra-curricular load reported by all the teachers.
12. The average teaching load is six periods per day. Eighteen teachers reported teaching more than six periods per day.

13. Activities in which industrial arts teachers desire additional preparation are directly related to the curriculum.
14. Indications are that many teachers have adequate preparation for sponsoring clubs outside their field, such as kodak club and rifle club, but most of the teachers sponsor clubs closely related to industrial arts.
15. Arizona teachers show a willingness to serve in the promotion of the extra-curricular program. Fifty per cent serve as a matter of duty and consider extra-curricular activities as a part of their school work.
16. Courses pertaining to extra-curricular activities were taken in college by 66.6 per cent of the teachers.
17. Arizona industrial arts teachers give an average of 202.5 hours per school year for handling extra-curricular activities and compare favorably with the non-industrial arts teachers.
18. The industrial arts teachers of Arizona high schools rank with the upper one third of the best prepared teachers in the nation.
19. Arizona teachers are well prepared to carry out the program of extra-curricular activities.

The writer does not believe that the teacher who repairs motors for the school, lines a football field, or repairs school furniture can do justice to his teaching load. However, all these jobs take time and do increase the total working hours. It is doubtful if repairing of school furniture and electric motors can be done efficiently in a class, since most students do not possess the required skill and would rather work upon their own projects.

It is recommended that a further study be made of the time used for extra-curricular activities and adjustments made to equalize the load.

It is recommended that teachers take some courses in college pertaining to the organization, direction, and supervision of extra-curricular activities.

It is recommended that teachers with special training should be encouraged to take part in the extra-curricular program.

It occurs to the writer that in all fairness to those teachers who give unstintingly of their time and energy in promoting and supervising student extra-curricular activities, adjustments should be made in regard to this total extra-curricular load. It hardly seems just that 37 per cent of the teachers should carry more than 67 per cent of the load of the upper quartile, with one

teacher alone reporting a maximum of 500 hours spent on extra-curricular activities.

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APPENDIX

April 15, 1941

Fellow Teachers:

May we impose upon your good nature to the extent of asking you to cooperate in a study in which we are collaborating with Mr. Heidenreich?

Extra-curricular activities in the high schools have experienced an unprecedented growth during the past ten or fifteen years. The value of these activities is not questioned, but undoubtedly they have increased tremendously the load placed upon the teacher.

In all fairness to those teachers who give unstintingly of their time and energy in promoting and supervising these desirable student extra-class activities we have felt for sometime that a study should be conducted to determine what adjustments should be made for these teachers as regards their total teaching load. Mr. Heidenreich of our faculty is undertaking such a study.

We hope that he may be able to determine how great this increased load has become, what per cent of the teaching staff is involved, what adjustments in the teaching load should be made, and what adjustments the various schools in Arizona have made for individual teachers.

Will you assist Mr. Heidenreich by filling out the attached questionnaire and returning to the telephone desk or to the Registrar's Office by the Attendance Collectors.

We will greatly appreciate your cooperation.

Sincerely yours,

L. A. Eastburn

PHOENIX UNION HIGH SCHOOLS
and
JUNIOR COLLEGE
Phoenix, Arizona

May 12, 1941

Mr. C. S. Fox, Principal
Benson High School
Benson, Arizona

Dear Sir:

Realizing that the school year is rapidly drawing to a close, and that everyone is busy, I am asking that you make a final effort to have the questionnaires filled out and returned to me. Over forty schools have responded thus far and we are hopeful that you will help us make it 100%. May I impose again?

With many thanks.

Sincerely yours,

Heinrich Heidenreich

PHOENIX UNION HIGH SCHOOLS

Phoenix, Arizona

April 4, 1941

Mr. E. A. Row, Principal
Tempe Union High School
Tempe, Arizona

Mr dear Mr. Row:

May I impose upon your good nature and friendship to the extent of asking you to cooperate in a study which we are making here at the Phoenix Union High School?

The growth of extra-curricular activities in the high schools has experienced an unprecedented growth during the past ten or fifteen years. The value of the activities is not questioned, but undoubtedly they have increased tremendously the load placed upon the teacher. At least this is true in the case of some teachers.

In all fairness to those teachers who give unstintingly of their time and energy in promoting and supervising these desirable student extra-class activities we have felt for sometime that a study should be made to determine what adjustments should be made for these teachers as regards their total teaching load. Mr. Heinrich W. Heidenreich of our faculty has agreed to undertake such a study. We hope that he may be able to determine how great this increased load has become, what per cent of the teaching staff is involved, what adjustments in the teaching load should be made, and what adjustments the various schools have made for individual teachers.

Under separate cover I am sending you a questionnaire for each member of your staff. May I ask that you have each teacher fill out the questionnaire and return to you. Then will you return them to me in the envelope provided? In return for this favor we will be very glad to send you a report of Mr. Heidenreich's findings.

Please accept my thanks for this favor.

Yours sincerely,

L. A. Eastburn
Director Research and
Guidance

OFFICE OF RESEARCH AND GUIDANCE
PHOENIX UNION HIGH SCHOOL

Fellow Teachers:
Arizona is proud of her Schools.

As a progressive educator you will be interested in knowing what Arizona Educators are doing in the field of Extra Curricular Activities.

This study is being made under the direction of Dr. Lacey A. Eastburn, Director of Research and Guidance of the Phoenix Union High School, and we believe that it will be of value to the present teaching staff and to prospective teachers.

Answers to this questionnaire are being sought from every high school teacher in the State of Arizona. Replies will be confidential and all data will be presented impersonally.

This study can be successful only through the generous and thoughtful co-operation of the total high school teaching population of Arizona.

It will be of decided help if you will answer this questionnaire and hand it to your principal as soon as possible.

Very truly yours,

Henry W. Heidenreich

18. Do you receive extra compensation for sponsoring Extra Curricular Activities?_____

19. Did you take any courses in college pertaining to the theory of conducting Extra-Curricular Activities?_____

20. Are you required to direct an Extra-Curricular Activity?_____

1. Place an (x) in column 1 after those Extra-Curricular Activities in which you have had special or practical training.
2. In column 2 check activities you are now directing or supervising.
3. In column 3 check those in which you would like special training to better qualify you for directing or supervising Extra-Curricular Activities.

	1	2	3		1	2	3
Agricultural Club				Industrial Arts Club			
Archery Club				Interior Decorating Club			
Bicycle Club				Kodak Club			
Boy Scouts				Library Club			
Bird Club				Latin Club			
Boat Building Club				Magazine Club			
Craftsman Club				Mathematics Club			
Current History Club				Model Aircraft Club			
Debating Club				Model Boat Bldg. Club			
Dramatics Club				Music Club			
Florisculture Club				Outing Club			
Factory Visit Club				Printers "Devil" Club			
Glee Club				Public Speaking Club			
"Gym" Club				Radio "Hams" Club			
Golf Club				Rifle Club			
Hobby Club				Stamp Club			
Hiking Club				Stagecraft Club			
Home Work shop Club				Student Police and Traffic Club			
Home Room Club				Safety Club			
Health Club				Travel Club			
Hi Y Club				Tennis Club			
Honor Society Club							

4. List any other activities not mentioned above that you are now directing or supervising.

_____

_____

_____

5. Give total time in minutes per week that you give to this activity._____

_____

_____

6. Please recommend any courses in college that you feel would better qualify teachers for directing or supervising Extra-Curricular Activities._____

_____

_____

P.U.H.S. PRINT SHOP