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The Effects on Washington State Industrial Arts Program of Eliminating the Practical Arts Requirement for High School Graduation

James Walter Thiele
Central Washington University

THE EFFECTS ON WASHINGTON STATE INDUSTRIAL ARTS PROGRAM OF ELIMINATING THE PRACTICAL ARTS REQUIREMENT FOR HIGH SCHOOL GRADUATION

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by

James Walter Thiele

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George L. Sogge, COMMITTEE CHAIRMAN

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T. Dean Stinson

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Stanley Dudley

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

The high school graduation requirements for boys in the State of Washington were amended by the State Board of Education in June, 1954, to include one year or one unit of credit in Practical Arts. The Practical Arts Requirement was eliminated by the State Board of Education in April, 1958.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to determine the effects of the elimination of the Practical Arts Requirement for Graduation on the industrial arts program in the State of Washington; (2) to determine whether the industrial arts program in the State of Washington had been effected adversely by the elimination of the Practical Arts Requirement, and whether the recent wave of criticism of public school education and increased emphasis on mathematics, science, and foreign language had contributed to any change that has taken place.

Importance of the study. Before the Practical Arts Requirement came into effect, the average high school offered the boy student very little except wood shop. The Practical Arts Requirement specified instruction leading to elementary skills in the proper use of common wood and metal tools. Many high schools that had no previous industrial

arts program built new shops or incorporated them into existing facilities. As a result, at the start of the 1958-1959 school year only nineteen high schools out of two-hundred and twenty-three that answered the questionnaire did not have an industrial arts program. Other high schools that had industrial arts previously in their curricula, enlarged and strengthened their program to meet the Practical Arts Requirement.

The Practical Arts Requirement had, in effect, strengthened the industrial arts program in the State of Washington. The enrollment in industrial arts was greatly increased by requiring every boy to take one year of Practical Arts. The caliber of students also improved as the better student was required to take industrial arts. Before the Practical Arts Requirement was put into effect, many schools had the practice of literally dumping the poorer students into the industrial arts classes, thus keeping them out of the non-required academic classes. With the better students in industrial arts classes, the caliber of work became higher. Many industrial arts instructors and principals have commented on this improvement.

Since the Practical Arts Requirement has been eliminated, one high school indicated a tendency to return to the pre-practical arts status. The situation in this one high school raised a question as to whether this was a local or a state wide occurence. Many teachers of both academic and non-academic subjects, along with the principal of this one high school, seemed to think that the change was not due so much to the elimination of the Practical Arts Requirement as to a

combination of increased emphasis and publicity on the sciences and languages due to Dr. Conant's report, Sputnik, other scientific advances, and the higher entrance requirements of junior colleges, colleges, and universities.

The importance of the study, then, was to clarify the status of the industrial arts program in the State of Washington since the elimination of the Practical Arts Requirement for graduation. The study attempted to determine whether the detriments or gains to industrial arts are caused by the elimination of the Practical Arts Requirement or by other influences. The study was made to enable teachers of industrial arts, school administrators, and school boards to fit the industrial arts program of their schools to the changes caused by the elimination of the Practical Arts Requirement.

II. DEFINITIONS OF TERMS USED

Practical Arts Requirement for Graduation. This was interpreted as a graduation requirement for high school boys that would require every boy to have one year of practical arts before graduating from high school. Practical arts covers wood working, metal working, and mechanical drawing. The requirement, to become effective as of June, 1959, was first published in June, 1954. The complete Practical Arts Requirement may be found in Appendix A. In part, it states that:

> As a requirement for all boys, Practical Arts is part of the general education program. The objectives that are listed below are regarded as important for every male graduated. This general education requirement should serve as a minimum program upon which elective offerings of a more specialized and advanced nature should

be based. The objectives may be realized through a course in practical arts or through other programs of a similar nature which, in the judgment of the school district, provide the necessary components as indicated below.

Objectives of the Practical Arts Requirement.

The Practical Arts requirement has three general objectives:

1. An exploration of possible vocational choices.
2. Development of basic skills related to industrial use and increased competencies in the home.
3. Increased understandings related to the world of work and industrial processes.

A program of this type provides learning experiences in consumer knowledge, creative expression, home maintenance skills, manipulative skills, technical development, leisure time interests and similar outcomes of value to all students.[1]

Industrial Arts. "Those phases of general education which deal with industry--its organization, materials, occupations, processes, and products--and with the problems resulting from the industrial and technological nature of society."[2]

Vocational Education. "A generic term whose scope embraces all kinds of vocational purposeful education such as industrial homemaking, agriculture, commercial, mining, and so on."[3]

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[1] Pearl A. Wanamaker, State of Washington Superintendent of Public Instruction, "Practical Arts Requirement for High School Graduation." January 31, 1956, p. 1. (Mimeographed.)

[2] Gordon O. Wilber, Industrial Arts in General Education (Scranton: International Textbook Company, 1948), p. 2.

[3] John F. Friese, Course Making in Industrial Education

Questionnaire. "A questionnaire may be defined as a set of questions to be answered by the informant without the personal aid of an investigator, or enumerator. Usually the questionnaire is sent out by mail, but it may be distributed in person; in either case it is filled out by the person supplying the information."[4]

(Peoria: The Manual Arts Press, 1946), p. 7.

[4]Wilson Gee, Social Science Research Methods (New York, Appleton-Century-Crofts, Inc., 1950), p. 314.

III. ORGANIZATION

In the preceding pages, the problem, the importance of the study, and the definitions of terms used have been set forth. Chapter I also includes a statement of the sources of data, method of procedure, and a treatment of the findings.

Chapter II includes a review of the literature, explaining how the questionnaire on which this study was based was sent to the participating schools, the percentage of returns, and how the results were treated.

Chapter III includes the results of the questionnaire, presented in table form, with an explanation of the findings in each table.

Chapter IV includes a summary and conclusions drawn from the results of the questionnaire. No recommendations were made, as the study was intended to clarify but not solve a situation.

IV. METHODOLOGY

A questionnaire was sent to every high school principal in the State of Washington as listed in the School Directory for the 1957-1958 school year sent out by the Superintendent of Public Instruction of the State of Washington. The results of the returned questionnaires were the basis for the present study.

The questionnaire was pre-tested in Dr. T. Dean Stinson's Ed. 507 (Introduction to Graduate Study) class during the 1958 summer session at Central Washington College of Education. The questionnaire

was discussed and filled out by the students of the class.

Treatment of the Findings. The results of the questions were tabulated and put into table form. An explanation accompanies each table. The total findings were summarized in Chapter IV and conclusions drawn from the findings of the tables.

CHAPTER II

REVIEW OF THE LITERATURE

The only possible way to learn the effects eliminating the Practical Arts Requirement had on the industrial arts program in the State of Washington was to reach every high school in the state that has or has had an industrial arts program within the last year. Since it was impossible to interview personally every high school principal in the State of Washington, a questionnaire was used for interviewing purposes. The questionnaire was mailed to the principal of every three and four-year high school in Washington State.

The reason for choosing the principal as the recipient of the questionnaire was a belief that the principal would answer the questionnaire with less bias than the average industrial arts instructor. Secondly, the questionnaire deals with attendance figures which would be at the principal's disposal, but not easily accessible for the industrial arts instructor.

The questionnaire was designed with the idea of dealing almost entirely with basic facts. Three questions are based on the respondent's opinion. The respondent was also asked to comment on the Practical Arts Requirement, and this could also be an opinion.

A total of two-hundred and seventy-three questionnaires were mailed on December 14, 1958. A total of two-hundred and twenty-seven were returned. Of this number four were considered invalid: two answers involved high schools recently started, one was returned unanswered, and

the fourth school answering had discontinued its high school. This left a total of two-hundred and twenty-three valid answers on the first return, a very satisfactory 82.59 per cent. Given this high a percentage of return, it was decided to dispense with any follow-ups on the schools that had not returned the questionnaire. Eigelberner comments that often the percentage of replies from a questionnaire is discouragingly low. A return of between eight and ten per cent is considered good for those types of questionnaires sent out to dealers, consumers, and so forth, as a part of a market survey. In the case of special questionnaires sent to scientists, technicians, engineers, and so forth, a larger percentage of replies is often obtained. The writer, in a number of cases of this kind, has had as high as seventy per cent returns and knows of cases where even higher percentages have been received.[5]

Out of the two-hundred and twenty-seven answers, a total of one-hundred and forty-two principals wished for the results of this study. This gave some indication of the interest shown in the problem caused by the elimination of the Practical Arts Requirement.

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[5]J. Eigelberner, The Investigation of Business Problems (New York, McGraw Hill Book Company, 1926), pp. 150-151.

CHAPTER III

THE QUESTIONNAIRE RESULTS

Chapter III covers the questionnaire results, presenting the results or findings in table form. Not every question in the questionnaire resulted in a table. On several occasions, one or more questions were combined into one table.

Each table is accompanied by an explanation. The explanation was intended to convey to the reader the information that the table was specifically intended to give, plus any other interesting information that might be brought out.

In all, there are ten tables and explanations. These tables cover all the areas or questions found in the questionnaire, with one exception. This one area is the comments of the principals answering the questionnaire. The comments deemed to be of interest to the reader are to be found in the Appendices.

TABLE I

Table I presents the breakdown of enrollment figures for the participating schools. The high schools were grouped into categories by their enrollment figures for the school year of 1958-1959. The high schools with enrollments ranging from zero to one-hundred were put in the first group; schools ranging from one-hundred and one to two-hundred were placed in the second group. This grouping was continued until the schools with enrollments up to two-thousand were categorized. The schools of two-thousand and more were so few it was deemed better to place them in one category so as to obtain a better set of averages and percentages.

It is interesting to note the preponderance of smaller schools in the State of Washington. The high schools having an enrollment of three-hundred or less make up over sixty-two per cent of the participating high schools; and these three lower enrollment groups are the only ones that have high schools that do not have any industrial arts program. Those schools not having industrial arts compose eight and one-half per cent of the schools participating in the study.

Also to be noted is the fact that the larger school enrollment categories have fewer four-year high schools in ratio to their numbers. Out of the fifty-five schools in the zero to one-hundred group, only one school is a three-year high school.

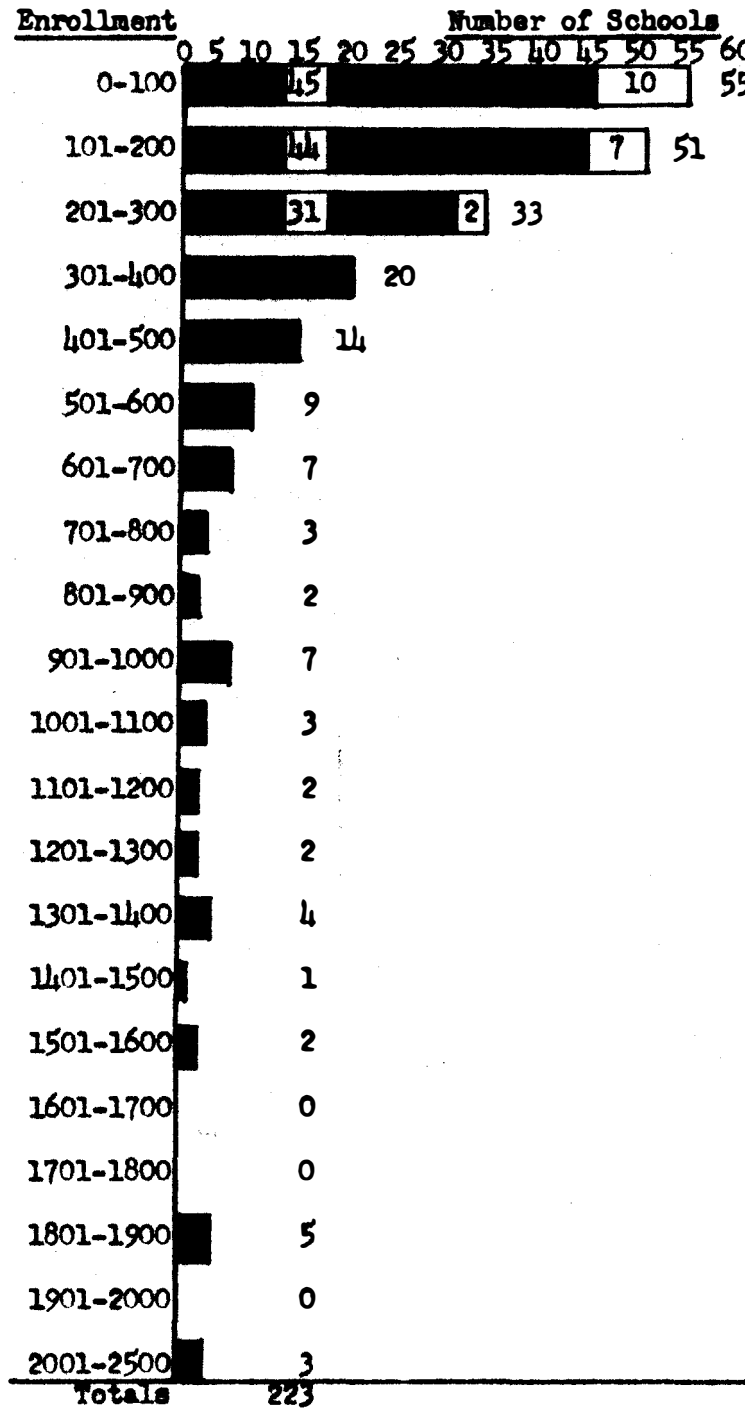
Of the nineteen schools not having an industrial arts program, nine were planning to establish such a course before the Practical Arts

Requirement was discontinued. Seven of these nine schools are continuing their plans to establish industrial arts.

The seven schools planning such courses for the near future reduce the number of schools not having industrial arts to five and four-tenths per cent. This is a sizeable gain in view of the fact that the pressure to establish the course has been eliminated. The effect of the eliminating of the Practical Arts Requirement on the establishment of new industrial arts courses has been negligible.

TABLE I

BREAKDOWN OF PARTICIPATING SCHOOLS



Enrollment	Per Cent	3 Year	4 Year
0-100	24.66	1	54
101-200	22.87	1	50
201-300	14.80	9	25
301-400	8.97	8	12
401-500	6.28	6	8
501-600	4.04	3	6
601-700	3.14	5	2
701-800	1.34	1	2
801-900	.90	2	0
901-1000	3.14	7	0
1001-1100	1.34	2	1
1101-1200	.90	2	0
1201-1300	.90	2	0
1301-1400	1.79	2	2
1401-1500	.45	1	0
1501-1600	.90	1	0
1601-1700	.00	0	0
1701-1800	.00	0	0
1801-1900	2.24	3	2
1901-2000	.00	0	0
2001-2500	1.34	2	1
Totals 223	100.00	58	165

■ Schools which have Industrial Arts programs.

□ Schools which do not have Industrial Arts programs.

TABLE II

Table II shows the planned expansion of industrial arts buildings or construction of new industrial arts buildings. It also refers to the question of whether planned-construction is being carried out after the Practical Arts Requirement was eliminated.

A total of sixty-one schools were planning expansion or construction of new industrial arts facilities when the Practical Arts Requirement was eliminated. This number constitutes slightly more than twenty-seven per cent of the two-hundred and twenty-three schools participating in this study.

Of the sixty-one schools planning expansion, fifty-eight are still going ahead with their building plans. This number constitutes twenty-six per cent of the participating schools. Using the figures of the schools that had planned construction and the figures of the schools that are continuing construction, there is a drop of five per cent in the number of schools planning new industrial arts facilities.

Using the preceeding figures to evaluate the effect of the elimination of the Practical Arts Requirement on the planning and construction of industrial arts facilities, it appears that the elimination of the requirement had very little effect on the over-all picture of the industrial arts building program. Many principals answering the questionnaire felt that there would be very little effect on the over-all industrial arts program.

TABLE II

PLANNED EXPANSION OR CONSTRUCTION OF INDUSTRIAL ARTS FACILITIES

Enrollment	Planned Expansion		Continuing Expansion	
	Yes	No	Yes	No
0-100	10	45	9	1
101-200	14	36	14	0
201-300	14	19	13	1
301-400	7	13	7	0
401-500	5	9	5	0
501-600	0	9	0	0
601-700	3	4	3	0
701-800	1	2	1	0
801-900	0	2	0	0
901-1000	3	7	3	0
1001-1100	0	2	0	0
1101-1200	0	1	0	0
1201-1300	0	1	0	0
1301-1400	0	4	0	0
1401-1500	1	0	1	0
1501-1600	0	2	0	0
1601-1700	0	0	0	0
1701-1800	0	0	0	0
1801-1900	2	3	1	1
1901-2000	0	0	0	0
2001-2500	1	2	1	0
Totals	61	162	58	3

TABLE III

Table III pertains to the school districts that require industrial arts in high school for high school graduation. Of the two-hundred and twenty-three high schools in the State of Washington answering the questionnaire, seventy-two replied that they require industrial arts as a graduation requirement.

Eighty-one school districts have industrial arts for a high school graduation requirement, but nine of these districts have the requirement fulfilled in the junior high school rather than in the high school. The seventy-two high schools that still require industrial arts for high school graduation equal thirty-two and two-tenths per cent of the participating schools. A further breakdown of the industrial arts program in the junior high schools will be found in Table IV of this study.

The Practical Arts Requirement would have gone into effect in June, 1959, if it had not been eliminated. At that time boys graduating from high school would need one unit of industrial arts. Every high school in the State of Washington would have had to have some form of industrial arts or practical arts course.

Table III also shows that a great many of the smaller high schools still require industrial arts for graduation, while many more of the larger schools have dropped the requirement. Much of this can be attributed to the fact that the larger schools, providing a greater number of elective courses, do not have to restrict their curricula.

The larger high schools also offer more college preparatory courses, and judging by the principals' remarks in the questionnaire, stress them more than do the smaller high schools.

TABLE III

SCHOOL DISTRICTS REQUIRING INDUSTRIAL ARTS IN HIGH SCHOOL FOR HIGH SCHOOL GRADUATION

Enrollment	Industrial Arts Required		Fulfilled in Senior High
	Yes	No	
0-100	22	33	20
101-200	22	29	22
201-300	15	18	15
301-400	7	13	5
401-500	5	9	4
501-600	2	7	2
601-700	1	6	1
701-800	0	3	0
801-900	1	1	0
901-1000	1	6	1
1001-1100	1	2	1
1101-1200	0	2	0
1201-1300	0	2	0
1301-1400	2	2	0
1401-1500	0	1	0
1501-1600	0	2	0
1601-1700	0	0	0
1701-1800	0	0	0
1801-1900	1	4	1
1901-2000	0	0	0
2001-2500	1	2	0
Totals	81	142	72

TABLE IV

Table IV tabulates the school districts that require industrial arts in junior high school for high school graduation--a relatively small group. A total of nine, or four per cent of the two-hundred and twenty-three schools in the study are in this category.

A much larger number of junior high schools in the State of Washington do require industrial arts as a junior high school requirement, but not as a high school graduation requirement. Seventy-four schools in the study, or thirty-three and two-tenths per cent, have industrial arts as a junior high school requirement.

Many of the schools listed as having industrial arts as a junior high school requirement are not in the true sense of the word junior high schools, but the seventh and eighth grades of the four-year high school districts. Most of these schools are found in the lower enrollment groups.

It is interesting to compare Tables III and IV to see how closely they compare in numbers throughout the attendance groups, with the exception of the lower attendance groups that have fewer junior high schools.

TABLE IV

SCHOOL DISTRICTS REQUIRING INDUSTRIAL ARTS IN JUNIOR HIGH SCHOOL FOR HIGH SCHOOL GRADUATION

	Industrial Arts Required in Junior High School		High School Graduation Requirement Fulfilled in Junior High School
Enrollment	Yes	No	
0-100	10	44	2
101-200	15	36	0
201-300	11	22	0
301-400	7	13	2
401-500	8	6	1
501-600	4	5	0
601-700	1	6	0
701-800	1	2	0
801-900	2	0	1
901-1000	4	3	0
1001-1100	1	2	0
1101-1200	2	0	0
1201-1300	1	1	0
1301-1400	3	2	2
1401-1500	1	0	0
1501-1600	1	1	0
1601-1700	0	0	0
1701-1800	0	0	0
1801-1900	1	4	0
1901-2000	0	0	0
2001-2500	1	2	1
Totals	74	149	9

TABLE V

Table V compares industrial arts enrollment between the years of 1957-1958 and 1958-1959. The purpose of this table is to show changes in industrial arts enrollment which might be due either to the elimination of the Practical Arts Requirement or to other factors.

As in the previous tables, the schools are divided by enrollment groups of one-hundreds. Upon observing Table V, one can see that there is no apparent pattern of enrollment gain or loss. One enrollment group may show a very strong industrial arts enrollment gain, such as group 201-300, and the next group will show almost an equally strong loss.

Totaling the figures for both the loss and gain columns, it is found that while the enrollment gains in industrial arts total four-hundred and six, high schools having an enrollment loss total five-hundred and twenty-one. The losses in enrollment are one-hundred and fifteen more than the gains. While one-hundred and fifteen fewer students in industrial arts does not seem much considering the total number of high schools students enrolled, when one takes into consideration that the State of Washington high school population has risen to new heights, the loss seems much greater.

Mr. George A. Glenn, Statistician for the Washington State Department of Public Instruction, furnished statistics on the enrollment increase of the school year 1958-1959 compared to 1957-1958. No breakdown of male and female students was given. The number of high school students in the State of Washington has risen from 134,827 as of

October 1, 1957, to 144,333 as of October 1, 1958, an increase of 9,506 students for the school year of 1958-1959.

Figuring that fifty per cent of this increase are boys, this means that the high schools in the State of Washington have gained 4,758 boy students. At the same time, the industrial arts enrollment has lost 115 boys. These figures show that while on the surface the loss was slight, when the additional enrollment is taken into consideration the loss is substantial. If the Practical Arts Requirement were still in effect the enrollment might well be 4,758 larger rather than 115 smaller.

Many principals attributed the loss in industrial arts enrollment not to the elimination of the Practical Arts Requirement, but to the increased emphasis on the sciences, mathematics, English, and foreign language bought about by the recent comparisons with Russian and European schools. Dr. Conant's recent study of high school education and the attention it has gained has certainly increased the emphasis on college preparatory courses, even though Dr. Conant insisted that vocational courses were needed. There is reason to believe that this also contributed to the industrial arts enrollment loss.[6] The entrance requirements of the University of Washington effective autumn quarter, 1961, for example, have been increased to one additional semester of English or three semesters of foreign language, and one year of

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[6] James B. Conant, The American High School Today (New York: McGraw Hill Book Company, 1959), p. 54.

mathematics or laboratory science. Of the thirty-two high school credits needed for admission, twenty-two are specifically required. When a high school student has to enroll in courses required either by the legislature or by the State Board of Education in addition to these twenty-two credits for college entrance, he has very few elective courses left.

TABLE V

ENROLLMENT COMPARISON IN INDUSTRIAL ARTS BETWEEN THE SCHOOL YEARS 1957-1958 AND 1958-1959

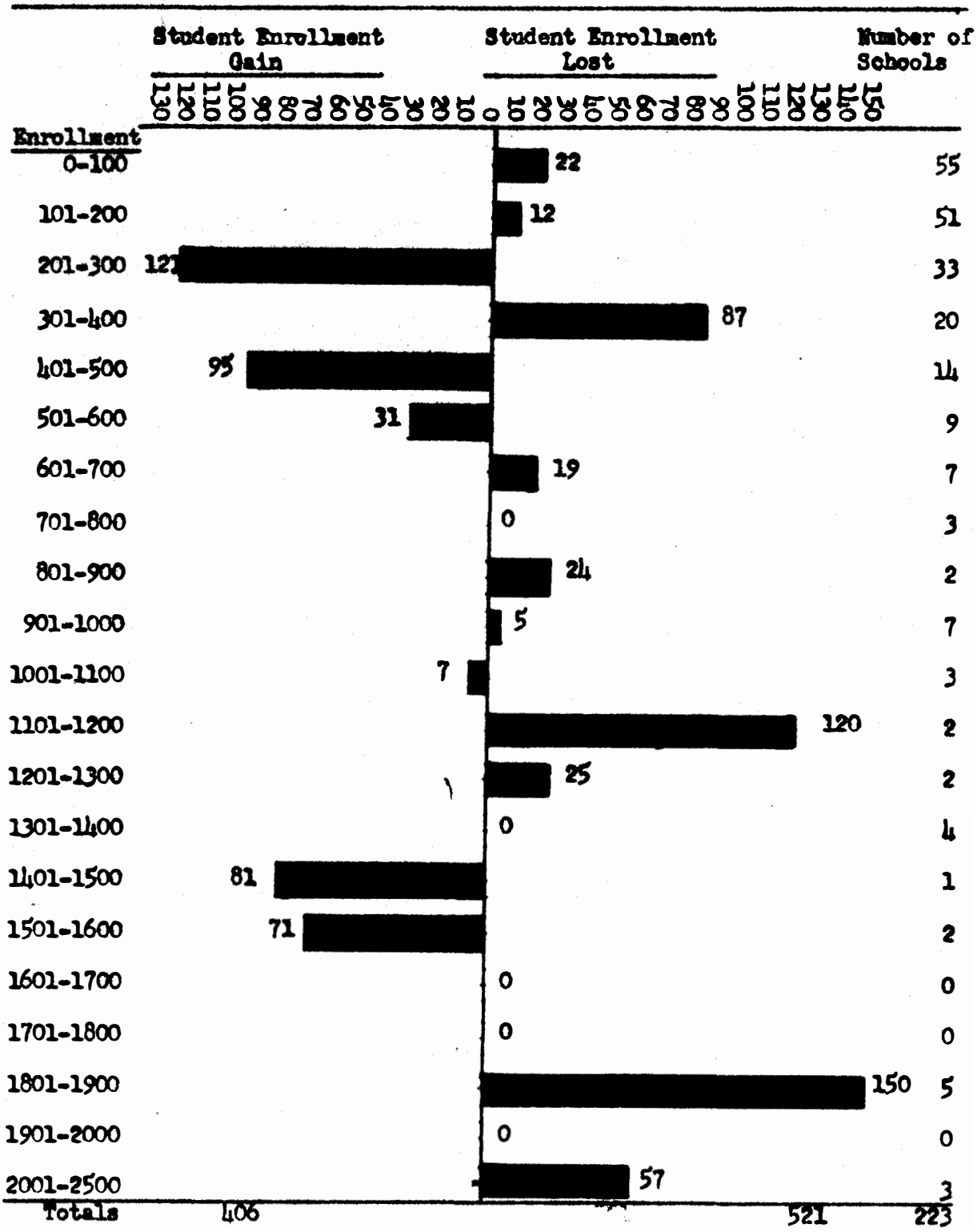

TABLE VI

Table VI presents information on the high schools that offer vocational courses for male students. This table includes the number of schools of each attendance level having Smith-Hughes subsidized vocational courses. Also included in the table are the attendance figures showing how many schools gained or lost attendance, or whether attendance remained the same.

When the Washington State Office of Public Instruction came forth with the Practical Arts Requirement, it stated that vocational courses in some cases might serve the need of fulfilling the Practical Arts Requirement. This led many schools, particularly the smaller ones, to use the vocational agricultural courses to fulfill the requirements of the Practical Arts Requirement rather than to establish a new industrial arts course. In many cases, this was a matter of economy for the smaller school. It was deemed necessary, therefore, to get information as to the number of schools that had vocational courses, and their comparative attendance figures for the school years of 1957-1958 and 1958-1959. The majority of the schools with vocational courses answered question six in the questionnaire (pertaining to enrollment figures) by check marks, rather than by number of students enrolled. This limited the comparison in the gained, lost, and remained-the-same attendance to the number of schools, rather than the number of students, in each category.

Of the two-hundred and twenty-three schools participating in the study, one-hundred and fifty-five offer some type of vocational course

to their male students. This number constituted a percentage of sixty-nine and five-tenths per cent of the total schools.

One-hundred and thirty-one schools of the one-hundred and fifty-five that offer vocational courses are subsidized by the Smith-Hughes program. These one-hundred and thirty-one schools equal eighty-four and fifty-five hundreths per cent of all the schools offering vocational courses in this study.

Thirty-five of the one-hundred and fifty-five schools offering vocational courses gained in attendance in the 1958-1959 school year over the 1957-1958 school year. This number comprises twenty-two and fifty-eight hundreths per cent of the total number of schools having vocational courses.

Twenty schools lost attendance in 1958-1959. This number constitutes twelve and nine-tenths per cent of the total number of schools having vocational courses.

One-hundred schools, or sixty-four and fifty-two hundreths per cent of the one-hundred and fifty-five schools having vocational courses, had attendance figures basically the same for both the 1957-1958 and 1958-1959 school years.

Using the figures shown in Table VI, one can see that the vocational courses were not greatly affected by the elimination of the Practical Arts Requirement. Some gain could be attributed to the growing school population.

TABLE VI

INFORMATION ON SCHOOLS OFFERING VOCATIONAL COURSES

Enrollment	Vocational Courses Offered			Vocational Attendance (Schools)		
	Yes	Smith-Hughes	No	Gained	Lost	Same
0-100	29	13	26	5	3	21
101-200	36	32	15	11	4	21
201-300	28	28	5	6	3	19
301-400	15	14	5	4	1	10
401-500	12	11	2	4	1	7
501-600	6	6	3	1	1	4
601-700	7	7	0	0	3	4
701-800	3	3	0	2	0	1
801-900	2	2	0	0	1	1
901-1000	6	6	1	1	2	3
1001-1100	1	1	2	0	0	1
1101-1200	2	2	0	1	0	1
1201-1300	2	2	0	0	1	1
1301-1400	3	1	1	0	0	3
1401-1500	0	0	1	0	0	0
1501-1600	0	0	2	0	0	0
1601-1700	0	0	0	0	0	0
1701-1800	0	0	0	0	0	0
1801-1900	2	2	3	0	0	2
1901-2000	0	0	0	0	0	0
2001-2500	1	1	2	0	0	1
Totals	155	131	68	35	20	100

TABLE VII

Table VII shows the alteration of the industrial arts programs due to the elimination of the Practical Arts Requirement.

Of the two-hundred and twenty-three schools participating in this study, one-hundred and seventy-six schools did not change their industrial arts program. Forty-seven schools changed or altered their industrial arts programs. This number constitutes twenty-one and eight-hundreths per cent of the total number of participating schools.

Breaking down the forty-seven schools that did alter their industrial arts program, it is found that fifteen schools eliminated some industrial arts classes, for a total of six and sixty-four hundreths per cent of the total number of schools. Thirty-two schools added courses to their industrial arts programs, for a percentage of fourteen and thirty-nine hundreths per cent.

An interesting note is that the majority of the changes is found in schools with an attendance of five-hundred or less. Eleven schools of the fifteen that eliminated courses, and twenty-five of the thirty-two that added courses, came in this group.

Eight of the fifteen schools dropped a course labeled "Practical Arts," designed specifically to meet the Practical Arts Requirement. When the Practical Arts Requirement was eliminated, there was no need for such a course. Many of these Practical Arts courses were established for the student that had no interest in the regular industrial arts courses, according to some of the principals answering the

questionnaire.

A tabulation of the thirty-two schools adding new industrial arts courses show forty-four new classes added. This means that twelve schools added more than one course. Of the new courses added, there were thirteen new metal shop courses, ten mechanical drawing, nine crafts, five auto shop, three electricity, two boat building, and one each of practical carpentry and radio. Several principals stated that when the Practical Arts Requirement was eliminated, not as many boys enrolled in industrial arts classes and, as a result, girls enrolled in those classes. The majority of the classes with girls in them were Crafts and Art Metal. This might show why some schools listed in Table V were able to have such large increases in industrial arts enrollment while others had lost enrollment.

TABLE VII

ALTERATION OF INDUSTRIAL ARTS PROGRAMS DUE TO THE ELIMINATION OF THE PRACTICAL ARTS REQUIREMENT

Enrollment	Courses Altered		Courses Eliminated	Courses Added
	Yes	No		
0-100	6	49	4	2
101-200	13	38	4	9
201-300	9	24	1	8
301-400	6	14	2	4
401-500	2	12	0	2
501-600	0	9	0	0
601-700	1	6	0	1
701-800	1	2	1	0
801-900	1	1	0	1
901-1000	1	6	0	1
1001-1100	0	3	0	0
1101-1200	1	1	0	1
1201-1300	0	2	0	0
1301-1400	1	3	0	1
1401-1500	0	1	0	0
1501-1600	0	2	0	0
1601-1700	0	0	0	0
1701-1800	0	0	0	0
1801-1900	3	2	2	1
1901-2000	0	0	0	0
2001-2500	2	1	1	1
Totals	47	176	15	32

TABLE VIII

Table VIII contains a compilation of the principals' opinions as to whether changes in industrial arts were due to the recent wave of criticism of the public schools.

Thirty-seven principals out of the two-hundred and twenty-three who answered the questionnaire thought that the criticism of public schools had brought about changes in industrial arts. This number amounts to sixteen and fifty-nine hundreths per cent of the total number of principals.

As one principal wrote, in the comment section of the questionnaire, "There has been so much written recently in the papers and magazines about Science and Math. and what it means to the child's future that many parents will not allow their children to enroll in a so-called non-academic class." Many of the other principals who thought that the wave of criticism had affected industrial arts believed that the criticism had caused colleges to raise their entrance requirements and that this, in turn, had affected the industrial arts program. More mathematics, science, English, and foreign language had the effect of directing the college-bound student away from courses in industrial arts.

TABLE VIII

PRINCIPALS' OPINIONS AS TO WHETHER THE CHANGES IN INDUSTRIAL ARTS WERE DUE TO THE RECENT WAVE OF CRITICISM OF THE PUBLIC SCHOOLS

Enrollment	Yes	No
0-100	8	47
101-200	7	44
201-300	5	28
301-400	5	15
401-500	2	12
501-600	1	8
601-700	1	6
701-800	0	3
801-900	0	2
901-1000	1	6
1001-1100	2	1
1101-1200	0	2
1201-1300	0	2
1301-1400	2	2
1401-1500	0	1
1501-1600	1	1
1601-1700	0	0
1701-1800	0	0
1801-1900	1	4
1901-2000	0	0
2001-2500	1	2
Totals	37	186

TABLE IX

Table IX shows the changes contemplated by the participating schools for the school year 1959-1960. The table shows that very few schools are contemplating any changes due to the elimination of the Practical Arts Requirement. Out of the two-hundred and twenty-three schools that answered the questionnaire, only ten schools are making changes caused by the elimination of the Practical Arts Requirement, a percentage of four and forty-eight hundreths per cent.

A surmise that could be made from these figures is that most schools that had to make changes due to the elimination of the Practical Arts Requirement made them during the school year of 1958-1959. The figures for the schools that made changes in the school year 1958-1959 are found in Table VII. These schools constituted twenty-one per cent of the schools in this study.

TABLE IX

FUTURE PLANNED CHANGES IN INDUSTRIAL ARTS CAUSED BY THE ELIMINATION OF THE PRACTICAL ARTS REQUIREMENT

Enrollment	Changes in 1959-1960	No Changes in 1959-1960
0-100	0	55
101-200	3	48
201-300	1	32
301-400	1	19
401-500	0	14
501-600	1	8
601-700	0	7
701-800	0	3
801-900	0	2
901-1000	1	7
1001-1100	0	3
1101-1200	0	2
1201-1300	0	2
1301-1400	0	4
1401-1500	0	1
1501-1600	0	2
1601-1700	0	0
1701-1800	0	0
1801-1900	2	3
1901-2000	0	0
2001-2500	1	2
Totals	10	213

TABLE X

Table X records the views or opinions of the principals who answered the questionnaire. The tabulation was based on those opinions stated in the comment section of the questionnaire. Sixty-eight principals out of the two-hundred and twenty-three that answered the questionnaire stated definite opinions, either for or against the elimination of the Practical Arts Requirement. The sixty-eight principals commenting constitute thirty and forty-nine hundreths per cent of the two-hundred and twenty-three principals answering the questionnaire.

Breaking down the sixty-eight comments, it is found that fifty principals were definitely in favor of the elimination of the Practical Arts Requirement, for a total of seventy-three and fifty-three hundreths per cent. Eighteen were definitely against the elimination, for a percentage of twenty-six and forty-seven hundreths.

This percentage of comments is not large enough to be considered a valid figure for consideration of the effects of the elimination of the Practical Arts Requirement. The table is inserted to give the reader some idea of the feelings of some of the principals participating in the study. Their comments can be found in the Appendices section of this study.

TABLE X

PRINCIPALS VIEW'S ON THE ELIMINATION OF THE PRACTICAL ARTS REQUIREMENT

Enrollment	In Favor of Elimination	Not in Favor of Elimination
0-100	12	6
101-200	7	3
201-300	6	2
301-400	6	1
401-500	6	1
501-600	3	0
601-700	1	1
701-800	1	0
801-900	1	0
901-1000	3	1
1001-1100	0	1
1101-1200	0	0
1201-1300	0	0
1301-1400	1	1
1401-1500	1	0
1501-1600	0	0
1601-1700	0	0
1701-1800	1	0
1801-1900	0	0
1901-2000	0	0
2001-2500	1	1
Totals	50	18

CHAPTER IV

SUMMARY AND CONCLUSION

Summarizing the tables in Chapter III, that show the findings of the questionnaire, many factors come to the forefront.

Ninety-one and five-tenths per cent of the schools that participated in the study had industrial arts as part of their curriculum. Even with the elimination of the Practical Arts Requirement, that every male take a year of Practical Arts, in schools having industrial arts there will be an increase to a percentage of ninety-four and six-tenths per cent in the school year 1959-1960. If the Practical Arts Requirement had gone into effect in June, 1959, every high school in the State of Washington would have been required to have some form of industrial arts or practical arts program, and every high school male would have had some shop experience.

The twelve high schools that will not have industrial arts all have enrollments of three-hundred or less, with the majority being schools with enrollments of less than one-hundred.

Very few high school boys will have to go through high school without having shop experiences and the benefits that industrial arts courses have to offer.

At the time that the Practical Arts Requirement was eliminated, twenty-seven per cent of the participating schools were planning expansion of their industrial arts facilities. At the present time,

twenty-six per cent of the schools are going ahead with their expansion plans, a decrease of one per cent.

Over one-third of the high schools in the State of Washington still require industrial arts for graduation for males. While in many districts the high schools do not require industrial arts, their junior high schools do require it. Although there are no exact figures on the number of junior high schools requiring industrial arts, it is believed that the number is quite substantial.

Industrial arts attendance on a state-wide basis took a drop of one-hundred and fifteen from the school year 1957-1958 to 1958-1959. At first glance this does not seem to be too much decrease, but when one considers the growth in high school population an approximate increase of 4,758 boy students, the decrease must be considered much greater. Many principals thought the drop was not due primarily to the elimination of the Practical Arts Requirement, but to the higher entrance requirements that colleges and universities are instituting. These higher requirements, along with parental direction, prevent the college-bound student from taking industrial arts courses. Many of these principals did not think that this was good; they stated that it prevented the student from learning skills enabling him to put some of his academic knowledge to practical use.

Many schools used vocational courses to fulfill the Practical Arts Requirement. Table VI showed that thirty-five high schools gained in vocational course attendance and twenty showed a loss. Vocational

attendance of one-hundred high schools stayed about the same for the school years of 1957-1958 and 1958-1959. In general, there was some gain, but this could very easily be the result of total attendance increase, unrelated to the elimination of the Practical Arts Requirement.

Forty-seven of the schools altered or changed their industrial arts programs due to the elimination of the Practical Arts Requirement. Fifteen of the forty-seven schools dropped an industrial arts course, mainly a Practical Arts course. Thirty-one of the forty-seven added one or more courses to their industrial arts program. A total of forty-four courses were added for the school year of 1958-1959.

The principals answering the questionnaire were polled as to whether they thought the recent wave of criticism of the public schools had been responsible for the changes in industrial arts. Sixteen per cent of the principals thought that it had. Many thought that it had indirectly, inasmuch as the criticism had made the institutions of higher learning raise their entrance requirements, there-by forcing more students to drop industrial arts in order to meet such higher requirements.

Ten of the participating schools, contemplating changes in their industrial arts program in the future, stated that the changes were due to the elimination of the Practical Arts Requirement. Many of the schools that had to change their industrial arts courses did so during the school year of 1958-1959, hence the small number of schools that are changing in the future.

The principals who favored the elimination of the Practical Arts

Requirement out-numbered the principals not in favor of the elimination by a margin of four to one. Most of the principals in favor of the elimination were in favor because the elimination would ease the scheduling of classes. Most of them also favored the elimination of the other legislated requirements. The principals not in favor of eliminating the Practical Arts Requirement were mainly concerned about where the student would develop understandings and skills that would help him in later life and, in some cases, train him for some future job.

Viewing all of the facts obtained from the questionnaire, several factors are quite evident. The first is that even though the industrial arts program has suffered losses in attendance, its status in the State of Washington is still healthy and strong. This is illustrated by the fact that there are new industrial arts facilities being built or enlarged, with more building being contemplated in the future. In addition, new classes are being started or have been started since the Practical Arts Requirement was eliminated.

Second, industrial arts has not suffered directly, to a great extent due to the criticism of public schools, but rather indirectly due to the raising of entrance requirements of the higher institutions caused by the criticism of the public schools.

Third, the majority of the high school principals is in favor of the elimination of the Practical Arts Requirement. The main reason for this is that the curriculum is too binding with other requirements for good scheduling.

The general status of industrial arts since the elimination of

the Practical Arts Requirement is that the program in the State of Washington, while it has suffered to a certain degree, has not been seriously weakened. In most cases, the industrial arts program is just as strong now as when the Practical Arts Requirement was eliminated.

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APPENDIX A

PRACTICAL ARTS REQUIREMENT FOR GRADUATION

State of Washington

SUPERINTENDENT OF PUBLIC INSTRUCTION

Olympia

January 31, 1956

To: School Administrators

From: Pearl A. Wanamaker, State Superintendent of Public Instruction

Practical Arts Requirement for High School Graduation (Boys)

The High School Graduation Requirements were amended by the State Board of Education in June, 1954, to include one year's work in Practical Arts for boys. This bulletin has been prepared to outline the objectives and procedures for meeting this new requirement.

As a requirement for all boys, Practical Arts is part of the general education program. The objectives that are listed below are regarded as important for every male graduate. This general education requirement should serve as a minimum program upon which elective offerings of a more specialized and advanced nature should be based. The objectives may be realized through a course in practical arts or through other programs of a similar nature which, in the judgment of the school district, provide the necessary components as indicated below.

Objectives of the Practical Arts Requirement

The Practical Arts requirement has three general objectives:

1. An exploration of possible vocational choices.

2. Development of basic skills related to industrial use and increased competencies in the home.

3. Increased understandings related to the world of work and industrial processes.

A program of this type provides learning experiences in consumer knowledge, creative expression, home maintenance skills, manipulative skills, technical developments, leisure time interests and similar outcomes of value to all students.

Components of a One-Year Course in Practical Arts

1. Sufficient mechanical drawing, sketching, and print reading to portray the components of a project and to interpret various kinds of drawings and charts. This work should preferably be incorporated with projects that the students are developing.

2. Instruction leading to elementary skills in the proper use of the common wood and metal tools. It is desirable that students receive some of this instruction as they are working on suitable projects of interest to them. Instruction in the use of common power tools may be included in this course though it should not be considered as a requirement for all students.

3. Instruction in the basic principles of safety. Efficient work habits should be emphasized throughout as a basic safety principle.

4. Emphasis upon the method of solving problems to be found in the student's practical environment.

5. Provision for study of related guidance materials and occupational information.

How the One-Year Practical Arts Requirement May Be Met

It is the intent of the State Board of Education that schools be given considerable latitude in developing instructional offerings in the area of industrial and practical arts which meet the needs of youth in particular communities.

School districts may proceed in either of two ways in meeting this requirement: (a) Reviewing the content and instructional methods in existing industrial arts course offerings and designating those courses which encompass the recommended elements, or (b) developing a new course if existing programs are not adaptable. In many cases existing industrial arts and vocational programs include some or all of the recommended elements. Individual districts should evaluate the adequacy of these programs in meeting the practical arts requirement in the light of the objectives stated above and the needs of individual students.

APPENDIX B

THE QUESTIONNAIRE

5520 East Drive
Everett, Washington

Dear Sir:

The attached questionnaire is being sent to each of the High School Principals in the State of Washington. The purpose of the questionnaire is to determine what effect the elimination of the Practical Arts Requirement for High School Graduation has had on Industrial Arts programs in the State of Washington. From the data derived from this questionnaire an attempt will be made to determine if the elimination of the Practical Arts Requirement was detrimental to Industrial Arts programs.

This questionnaire is being requested as partial fulfillment for a Masters Degree from the Central Washington College of Education.

Your cooperation is sincerely appreciated.

Sincerely,

James W. Thiele

Enclosures 2

AN INQUIRY INTO THE EFFECTS OF THE ELIMINATION OF THE PRACTICAL ARTS REQUIREMENT FOR HIGH SCHOOL GRADUATION ON THE INDUSTRIAL ARTS PROGRAM IN THE STATE OF WASHINGTON

General Information

Your name:_____ Title:_____

School District:_____ City:_____

School Enrollment:_____ 3 or 4 Year High School:_____

---

1. Does your school have an established Industrial Arts program? Yes___ No___
   Junior High School_____ Senior High School_____

   If not, is your school planning on establishing an Industrial Arts program? Yes___ No___

2. Were you planning an Industrial Arts program when the Practical Arts program was eliminated? Yes___ No___

   If so, are you continuing your planning? Yes___ No___

3. Was your school planning any new Industrial Arts buildings, or expansion of present facilities, when the Practical Arts program was eliminated? Yes___ No___

   Is your school going ahead with its building or expansion plans? Yes___ No___

4. Does your school require any Industrial Arts as a graduation requirement for boys? Yes___ No___

   Is it required of boys in Junior High School? Yes___ No___
   What grade level?_____

   Is it required of boys in Senior High School? Yes___ No___
   What grade level?_____

5. What is the Industrial Arts enrollment in your school for 1958-59 compared to 1957-58?

Junior High School		Senior High School	
1957-58	_____	1957-58	_____
1958-59	_____	1958-59	_____

6. Does your school offer any Vocational Courses: Yes___ No___

   Are they federally (Smith-Hughes) subsidized? Yes___ No___

Have your Vocational courses gained or lost any appreciable enrollment from 1957-1958 to 1958-59?
Gained ____ Lost _____ Same _____

7. Has your Industrial Arts program been altered due to the elimination of the Practical Arts program? Yes ____ No ____

Have you eliminated any courses? Yes ____ No ____
Name of courses _____

_____ Yes ____ No ____
Have you added any courses?
Name of courses _____

_____

8. Do you attribute changes in Industrial Arts to the recent wave of criticism of the Public Schools? Yes ____ No ____

9. Are you contemplating any changes in your Industrial Arts program for next year that were caused primarily by the elimination of the Practical Arts program? Yes ____ No ____

10. If possible, would you please state briefly what changes will be made in your school next year due to the elimination of the Practical Arts requirement?

_____

_____

_____

_____

_____

11. If you have any comment to make on the elimination of the Practical Arts program, would you please do so on the remainder and the other side of this page.

Do you wish the results of this study sent to you? Yes ____ No ____

APPENDIX C

THE COMMENTS OF HIGH SCHOOL PRINCIPALS

THE COMMENTS OF HIGH SCHOOL PRINCIPALS

Lester: "Sputnik and the recent wave of criticism (especially Dr. Conant's writing) I feel have had something to do with minimizing the value or placement of Industrial Arts as a required subject in the school curriculum.

On two occasions I have heard ministers of high rank state that Home Economics, Shop, and Driver Education are subjects that should be taught in the home."

Anatone: "Our chief use of shop classes are to accomodate students who would not profit from advanced science or mathematics courses. Admittedly, not all such people like, or have marked ability in, such courses but our experience to date has been satisfactory. A Practical Arts course would simply force some science or mathematics offering out of our schedule so we are heartily in favor of its elimination as a REQUIRED course. My parenthetical observation is that under such circumstances the term "practical arts" is most certainly a misnomer."

Lamont: "Elimination of program by state gives the school a chance to set up its own goals in Industrial Arts."

Matlock: "I believe that the Liberal Arts program should be left on an elective basis. The guidance program should take care of most pupils by counseling with them to go into these courses."

Molson: "I am sorry to see this course eliminated from the state requirement, however the school board can rectify this as they do many other fields of curriculum."

Lopez: "Believe pressure was put on State Dept. - P. A. should not be eliminated."

Bickleton: "It let us off the hook as we were not doing a good job with the facilities we have at the present time."

Marlin: "To many courses are required now in high school without adding requirements of a Practical Arts."

Creston: "Good idea - I prefer students who are interested and have some ability, hence voluntary."

The present writer has made no attempt to correct obvious errors in the following and above responses.

Skykomish: "We still feel that Practical Arts is an important part of the high school program. So we have made very little changes."

Sprague: "I believe it is unrealistic to eliminate the Practical Arts Program in view of the variety of interests and abilities in one school."

Thorp: "I think it is fine that it is eliminated as a requirement and that it is an elective. All students should no more be required to take advanced shop, than to require them all to take Advanced Math."

Washtucna: "I feel that the elimination was beneficial. Especially to schools in our similar situation, small and in rural areas. We have so many requirements now that it is sometimes difficult to meet the more basic needs of our students."

Curlew: "It has not affected us except for those who definitely plan to go to college. It enables them to have a year or two more of "academics"."

Hoquiam: "Do not agree that it should be compulsory."

Klickitat: "It seems to me that the elimination of Practical Arts from the required list is a detriment to the all around education of both male and female students. The P. A. programs that are set up now can very well become the dumping ground for the poor students as it was in the past. Also this offers the Practical Arts teacher none of the better students with which to work and has a tendency to kill teacher initiative. It is true that we need scientists, mathematicians, and other trained, well trained personnel but The Scientists could never have built a guided missle without the help of men who work with metal, wood, plastics, and other materials. Many of our students are not scholars, won't become scientists but they will have to pay taxes. Some provision should be in the school program to help these students attain manual dexterity so that they may be able to work at some task to earn their living and pay the taxes.

Personnally I feel the removal of Practical Arts from the required list wasn't a very good move and I think we will feel the effects of it in years to come -- unless schools and Practical Arts people will fight enough to keep it in the program and continue the fine work they have been doing."

Toutle: "A small school like ours is definitely affected as it eliminates such a class completely. Some boys that are unable due to lack of interest and reading ability cannot master the solids, but were fair students in the Industrial Arts classes. Now our Juniors and

Seniors are unable to take shop courses due to change in our program. These are the boys that a shop teacher likes to have."

Quilcene: "As an Industrial Arts instructor for a number of years, Principal, Superintendent, parent and tax payee I am convinced that Industrial Arts should be taught but not required. The course should be constructive and not one for credit only as it is in many schools."

Pateros: "I am very glad requirement was dropped. Hard enough to run small High School as is. If we are forced to curtail program even this dropping of Ind. Arts gives us a place. (We don't plan to do this though)."

Tekoa: "Should not have been required. Is a very good elective for those who believe in it."

Warden: "The elimination of the Practical Arts program as a legislative requirement has made it easier to schedule. We are still offering the program to those who wish to take it.

I feel it is a good move to eliminate the program as a requirement for graduation. We have enough legislative courses now to fit into our program."

Reardan: "I have found that in our school where we have to maintain a Vocational Agriculture department, the Practical Arts program if it had been maintained, would have caused serious scheduling problems.

Personally, I am glad the requirement was withdrawn."

Odessa: "Present trend to eliminate the program as a requirement meets my personal sympathy."

Peshastin-Dryden: "I am in accord with its elimination as a requirement inasmuch as it does not fit the needs of all students. The Industrial Arts program is an important part of the general curriculum, however."

Menlo: "I am opposed to so many required courses for graduation. I like to see them offered as electives but not required. Why make a prospective English or History teacher take shop? Rather by good counselling, we can steer students into courses where they can receive the most benefit. Some courses, of course, must be required. But why load them down?"

Morton: "Many other areas could have been cut. We here feel Practical Arts is a very important program. We have it for the full 4 yrs. of high school. 1st and 2nd years required boys and girls."

Mossyrock: "Our school has met the needs of the Practical Arts program for a number of years. I could see no advantage of the program as prescribed by the State Board."

Ritzville: "I feel that the requirement was legitimate and certainly very practical. We have had no difficulty in working it into our schedule and virtually require it for boys in the Freshman class if they are not enrolled in Vocational Ag. I am not happy that a change in the requirement was done so quickly without a good test of the program and its merit."

Forks: "I was very happy to learn that the Practical Arts requirement was dropped. The high school curriculum is becoming so rigid with required courses that I believe many of our better students are actually hurt. I have nothing against Practical Arts if the better student has time for advanced math, science, foreign language, English, and social studies. Unfortunately, some do not have time for everything now."

Chewelah: "We feel the Ind. Arts requirement was very foolish and ill advised and were glad to see it dropped."

Castle Rock: "Making a specific course or unit a graduation requirement has just one effect in my mind; it results in "watering down" the course so that all students can pass it. Requiring the practical arts course makes no more sense than the contemporary world problems course that should also be eliminated."

Tonasket: "Just don't get excited about State requirements. Figure out how to obtain adequate revenue and have a real educational program at the local level."

Concrete: "It will be beneficial to numerous schools where enrollments are crowded, also will eliminate the student who has no desire to participate in an industrial arts program. We require certain prerequistes such as mechanical drawing before a boy can enroll in an advanced program."

Tenino: "I feel that it was something worth continuing."

Maple Valley: "The requirement should have been removed."

Raymond: "I do not think the elimination of the Practical Arts program has had too much effect compared to the effect caused by the publicity given Science and Math. Shop has been required in Raymond for some time, but our enrollment has fallen off noticably caused by the publicity."

Omak: "No course should be legislated."

Montesano: "I do not favor making Industrial Arts a required course but most boys should take some."

Prosser: "I believe we have too many requirements we are "saddled" with. With this requirement in our program many students who have ability to do math and science work would have been unable to take them."

Mead: "Elimination of the P. A. requirement has made time and space available for more advanced courses for students who are interested. It also made space available for girls who want to take an IA course. None of this would be possible under the required program. Student interest is up because there is no longer a requirement. They elect the course because they want it."

Quincy: "A good thing. We have too many requirements from State level. Now students enrolled in Ind. Arts are there because they want to be."

Elma: "With colleges constantly increasing academic requirements, a rather large group finds no time for non-academic courses. Practical and fine art is bound to suffer."

Port Townsend: "I hope it shows a trend toward eliminating more requirements from the State level. Such a move would allow a better and broader curriculum as well as one suited to local needs."

Mercer Island: "The change was brought about by School Administration protesting legislated curriculum.

Naturally the Industrial Arts program will be a smaller program with the eliminating of the requirement. However, the program will be stronger based on counselling for individual needs."

Winslow: "In the past year the elimination of the Practical Arts requirement has had no effect but I do believe it should be re-established."

Vancouver: "We feel the change is giving interested students a better opportunity to advance in Industrial Arts."

Federal Way: "I favored the elimination."

Tacoma (Fife High): "We've required one year of Industrial Arts for a number of years and plan to continue to do so regardless of State requirements. We feel Industrial Arts is necessary even to the gifted and college-bound student."

Arlington: "Very pleased they eliminated Practical Arts as a requirement."

Pullman: "I am opposed to any required subjects in this high school. When we have taken off requirements students have taken the work anyway and they have taken it with far better attitude and spirit. We need guidance - not requirement."

Silverdale: "I was in favor of the elimination of the requirement but not the course. The requirement was an enforced conformity that had no logical basis in education. I believe in a good program of Industrial or Practical Arts as I do in Mathematics - but no rigid requirement in either."

Wapato: "The eliminating of the Practical Arts requirement eliminated those who did not care for the part of the program. In my opinion it is a good thing to have those out of this class into something they want to do.

We feel our program will operate very well as an elective subject.

I feel that putting subjects into a school curriculum by legislation is not the way it should be done."

Poulsbo: "I personally think it was a good move to eliminate the Practical Arts requirement, but for the reason that we are getting so many required courses that a youngster has very little choice of exploring fields that he may be interested in or have talent in."

Sedro-Woolley: "I am happy that it was eliminated, it never should have been a requirement."

Enumclaw: "Although the elimination of the required course cut down in the class number of 9th graders, it has made little change in any other phase. If anything, we approve of the action."

Snohomish: "I think it was a good move. I would rather offer a good program to boys who really want it than a watered down course to a captive audience. I think we have a fine Industrial Arts program and an excellent teacher."

Bothell: "There are many schools that would like to have a larger program except for 2 reasons principally:

1. Expense of enlarging or building such a program (public pressure).
2. Recent demand for more money and effort in behalf of science, math, foreign language, etc."

Kennewick: "Was there real value in making the course required? If so why was it eliminated in such a short time."

Kent: "I think such is a step in the right direction. Flexibility is always good in a Senior High situation and our counsellors and administration working with the student and parents should be permitted to select the program best designed to meet the needs of the individual student."

Olympia: "The Practical Arts requirement meant little as practically any course qualified - examples are Mechanical Drawing, Wood, Agriculture, Metals, Electricity, Home Mechanics. The requirement just like the world understanding was announced without proper communication with secondary educators and was unpopular partly for that reason. The same is true when the colleges add requirements. Educators agree Practical Arts has value but it should be elective not required."

Seattle (Highline): "Good idea to eliminate requirement at Senior hi level. This allows for individual program patterning which is usually desirable."

Seattle (School District #1): "It is my opinion that more students on the Senior High level would enroll in Industrial Arts courses if there were less current pressure for more academic requirements. The big influence on Industrial Arts enrollment has been the recent changes in college entrance requirements and increased emphasis on Science, Math, Foreign Languages."

Everett: "We thought the requirement was good. We have a similar requirement for girls in Home Ec. so we thought the move was good."

Spokane: "The idea was good in intention; encouraging students to broaden their high school program is recommended. I am in favor, however, of accomplishing this through the guidance and counselling process rather than an inflexible requirement for graduation. We have our curriculum overcrowded with "requirements" now."

Ferndale: "This is one requirement that I feel we are better off without."

Aberdeen: "The only significant change is that we are now able to offer more elective subjects to our students since this requirement is no longer in effect."

APPENDIX D

PARTICIPATING HIGH SCHOOLS

PARTICIPATING HIGH SCHOOLS LISTED
BY ENROLLMENT NUMBERS

0-100

Lester	7	Prescott	52
Anatone	21	Curlew	54
Easton	22	Glenwood	54
Kahlotus	25	Spangle	55
Hartline	26	Hoquiam	56
Lamont	26	Inchelium	60
Matlock	27	Klickitat	60
Bickleton	30	Wishkah Valley	60
Lopez	30	Edwall	65
Marlin	30	Colton	69
Molson	30	Winthrop	69
Almira	35	Fairfield	70
Skykomish	38	Klaber	70
Wishram	38	Lyle	70
Wilson Creek	40	Valley	70
Brooklyn	45	Quilcene	73
Sprague	46	Burbank	75
Thorp	47	Northport	75
Washtucna	47	Asotin	77
Neah Bay	49	Garfield	77
Clallam Bay	50	Pateros	80
Creston	50	Tekoa	82

Amanda Park	85
Metaline Falls	85
Oakville	88
Coulee City	89
Coupeville	90
Waitsburg	90
La Crosse	91
Palouse	95
Marcus	100
Toutle	?
101-200	
Bridgeport	104
Entiat	105
Granite Falls	107
Pe Ell	108
Warden	108
Kittitas	110
La Conner	110
Cusick	114
St. John	119
Davenport	120
Reardan	123
Chimacum	125
Waterville	125
Darrington	127
Republic	127
Mabton	128
La Center	130
Soap Lake	130
Twisp	130
Kalama	131
Odessa	132
Rosalia	133
Brewster	140
Manson	140
Moclips (Approx.)	140
Orting	140
Peshastin-Dryden	140
Wilbur	140
Connell	142
Onalaska	145
Otis Orchards	145
Joyce	150
Westport	150
Zillah	155
Menlo	158
Coulee Dam	160
Morton	165
Freeman	170
Medical Lake	170

Cathlamet	172
Milan	175
South Bend	176
Mossyrock	180
Touchet	180
Pomeroy	182
Toledo	186
Kettle Falls	195
Ritzville	195
Winlock	196
Forks	197
Chelan	200
201-300	
Randle	205
White Swan	206
Cashmere	210
Rochester	210
Eatonville	214
Chewelah	216
Okanogan	225
Monroe	226
Castle Rock	228
Yelm	230
Sequim	233
Langley	235
Moxee	236
Goldendale	240
Tonasket	240
Concrete	245
Tenino	250
Cowiche	252
Dayton	260
Deer Park	260
Maple Valley	260
Raymond	268
Woodland	270
Lake Stevens	271
Stevenson	272
Omak	282
Cle Elum	286
Lynden	288
Colfax	295
Buckley	300
Montesano	300
Nooksack	300
Othello	300
301-400	
Prosser	301
Oroville	305
Colville	308

Mead	325
Stanwood	325
Quincy	335
Burton	340
Elma	340
Toppenish	350
Grandview	358
Ephrata	359
Port Townsend	360
Blaine	364
Washougal	367
Cheney	370
Mercer Island	370
Winslow	370
Ferndale	386
Naches	400
North Bend	400
401-500	
Vancouver (Evergreen)	412
Issaquah	420
Chehalis	440
Federal Way	450
Oak Harbor	450
Tacoma (Fife)	466
Pullman	474
Camas	475
Arlington	478
Silverdale	483
Wapato	485
Clarkston	486
Burlington	500
Gig Harbor	500
501-600	
Deming	510
Poulsbo	516
Sedro-Woolley	535
Yakima (West Valley)	535
Battle Ground	545
Sumner	550
East Wenatchee	560
Enumclaw	585
Anacortes	600
601-700	
Marysville	610
Snohomish	630
Centralia	640
Bothell	670
Sunnyside	670
Lacey	675
Moses Lake	675

701-800	
Auburn	720
Bremerton	742
Mount Vernon	746
801-900	
Kent	835
Veradale	866
901-1000	
Port Angeles	908
Aberdeen	915
Kirkland	915
Seattle (Highline)	936
Kennewick	940
Wenatchee	960
Longview	990
1001-1100	
Vancouver (Fort Vancouver)	1050
Spokane (West Valley)	1050
Yakima	1100
1101-1200	
Walla Walla	1115
Bellevue	1200
1201-1300	
Richland	1230
Tacoma (Stadium)	1300
1301-1400	
Olympia	1358
Edmonds	1370
Seattle (Shoreline)	1400
Puyallup	1400
1401-1500	
Renton	1440
1501-1600	
Seattle	1528
Spokane (Shadle Park)	1572
1601-1700	
None	
1701-1800	
Seattle (Highline)	1800
1801-1900	
Seattle	1840
Spokane	1860
Spokane (North Central)	1900
Seattle	1900
1901-2000	
None	
2001-2500	
Everett	2188
Seattle (Queen Anne)	2496
Spokane	2500