

IMPROVING INDUSTRIAL ARTS FOR ELEMENTARY
SCHOOLS TEACHER EDUCATION PROGRAMS

By

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CHAPTER I

INTRODUCTION

Educators must remember the fact that they need to keep pace with the changing technology of today's industrialized society. Technology is proceeding at a faster pace than ever before. Yesterday's solutions are today's antiquities. Man must constantly broaden his base of awareness, lest he be left behind.

Industrial arts is one part of the school curriculum that is dedicated to teaching boys and girls about the technological aspects of their environment. To adequately teach the many concepts in today's advancing technology, industrial arts like all subjects, must start with the basic concepts and principles and build toward a full and complete comprehension.¹ Therefore, industrial arts must originate at the beginning of the child's education.²

Even at the kindergarten age there are aspects of technology that are appropriate for the child's understanding of his world. Children need the exhilaration of manipulating materials, the joy of accomplishment and personal discovery as a part of growth, development and mental health.³

¹William R. Hoots, Report of the National Conference on Elementary School Industrial Arts (ERIC Document ED 059 373, 1971), pp. 1-2.

²Ibid., p. 1.

³Ibid.

Elementary industrial arts is not a separate subject area; but, rather a teaching method available to the classroom teacher that would add relevance to each basic subject area. Again one is back to the old descriptive that industrial arts offers the "does-do" method of the "could-do" subjects. However, elementary industrial arts should include more; career education, psychomotor development and awareness are other areas considered an integral part.

Problem

Before elementary industrial arts programs can increase the elementary school teacher must be adequately prepared. To meet this need teacher education institutions are adding to their curriculum courses in industrial arts for elementary teachers.⁴ But are these courses adequately preparing elementary teachers with the knowledge and skills to realistically meet the problems that they might face in a classroom? Hopefully this study will provide teacher educators an opportunity to obtain feedback from elementary school teachers and give relevance to existing programs.

Purpose

The purpose of this study is to gain input from selected elementary school teachers in Oklahoma, to determine their opinions of the content an elementary teacher education course in industrial arts should contain.

⁴Carl Gerbracht and Robert J. Babcock, Industrial Arts for Grades K-6 (Milwaukee, 1959), p. iii.

The proper use of the findings of this study by industrial arts teacher educators, might help them review their existing course offerings to elementary school teachers and revise those courses accordingly.

Questions

This study attempts to answer the following questions:

1. Should the study of Industrial Arts for Elementary Schools be made a required part of the preservice professional education of all elementary education majors?
2. Are the use of handwork activities effective when incorporated in the teaching methods of the elementary school teacher?
3. Does Industrial Arts for Elementary Schools help the elementary teacher achieve the objectives of elementary education?
4. Are the skills being taught by teacher educators in Industrial Arts for Elementary Schools sufficient for the elementary school teacher?

Assumptions

The design of this study is based on the following assumptions:

1. The individuals selected to participate in the study responded sincerely to the opinionnaire.
2. The research instrument designed and administered for this study is adequate in determining the respondent's opinions toward industrial arts.

Limitations

Limiting factors that seem apparent are:

1. At the present time the number of teachers in Oklahoma who have received exposure to Industrial Arts for Elementary Schools is limited.
2. There is a dearth of previous research in this field.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Relatively little research has been conducted in the area of industrial arts for elementary schools. Research concerning elementary industrial arts teacher education courses at the graduate thesis or dissertation level is virtually non-existent. Staff studies are also lacking in this area. It was necessary to broaden the search of literature to adequately prepare background information pertaining to this study. Several reports were found which describe the current status of industrial arts at the elementary school level. These were included in this review of literature.

Included also in this review of literature is information obtained from the Oklahoma Plan for Industrial Arts (K-12).

The Status of Research

It was pointed out through the review of literature that industrial arts experiences in the elementary grades are closely correlated with the basic units of the elementary schools.¹ The result being that since the curriculum in the elementary school is not based on ground to be

¹Oklahoma State Department of Education, A Guide for Industrial Arts Education in Oklahoma (Oklahoma State Department of Vocational and Technical Education, 1972), p. 8.

covered or separate subjects; but rather on child growth and development, industrial arts at this level should be part of a physical amalgamation of all subject areas and should be considered perhaps as a method rather than a separate subject viewed in its own entity.²

The students work under the direction of an elementary teacher usually in their own classroom or in a special room, provided by some schools.³

The elementary school industrial arts program attempts:

1. To support, enrich, and vitalize the academic curriculum and make general educational experiences more meaningful to the students.
2. To develop cooperative attitudes and self-reliance through problem solving abilities.
3. To develop an understanding and appreciation of the dignity of honest work.
4. To learn how to modify materials to meet students' needs by using elementary tools and materials.
5. To manipulate tools and materials to construct projects and experiments which reinforce, enrich, motivate, and increase learning related to basic elementary subjects and personal needs.
6. To describe in general terms the technical development of man and the role of business and industry in contemporary society.
7. To identify and differentiate a wide variety of occupations.
8. To use correctly and safely basic hand tools as he constructs projects with a variety of appropriate materials.⁴

²Chris H. Groneman, ed., A Guide to Improving Instruction in Industrial Arts (Washington, D.C.: 1953), p. 8.

³Oklahoma State Department of Education, p. 8.

⁴Harold J. Polk, "A Project Designed to Define the Role of Industrial Arts in Career Education for the State of Oklahoma" (Unpub. evaluation report, Oklahoma State University, 1973), pp. 25-26.

It must be remembered that these objectives are to be applied through coordination with the basic subject areas by the elementary classroom teacher. These teachers must have a fundamental understanding of the technology from which the content of industrial arts is derived. This content needs to be thoroughly investigated in terms of what is appropriate for each grade level, how it can best be integrated into the curriculum of that particular grade, and what manipulative activities will best promote learning experiences.⁵

The elementary teacher must also possess a basic knowledge of the elementary tools and materials of industry and have basic skills in the use of those elementary tools and materials. An understanding of the broad range of tools and materials children at various stages of development are capable of using safely and successfully is essential to the teacher.⁶ Handwork skills and techniques for teaching can be developed by every teacher through reading, self-study, and experimentation or as part of formal teacher preparation, preservice instruction or inservice study.⁷

The role of the industrial arts teacher educator is parallel to the above demands on the teacher. He must help his students develop an understanding of the functions and methods of industrial arts activities in the elementary school and help those students develop skills and acquire useful knowledge concerning tools and materials.⁸

⁵Hoots, p. 19

⁶Ibid., p. 20.

⁷Marion L. Swierkos and Catherine G. Morse, Industrial Arts for the Elementary Classroom (Peoria, Illinois, 1973), p. 10.

⁸Gerbracht, p. iii.

The teacher educator should be a key in the preparation of elementary school industrial arts personnel, because of his far-reaching influence, he should bring to his position a background of educational qualifications and work experiences that include, especially, the fields of industrial arts, elementary education, and child growth and development.⁹

Summary

In summary industrial arts at the elementary school should be used as a method to aid the student through more effective learning. The program would enable the student to gain insight into the relevance of the basic subject areas. At the same time the student would be exposed to career awareness and the world of work.

To adequately meet the goals of elementary school industrial arts, the elementary teacher must possess a basic knowledge of technology and have basic skills necessary to use safely elementary tools and materials appropriate for the elementary student. This knowledge and acquisition of skills can be made available to the elementary school teacher through course offerings in teacher education institutions or by inservice teacher programs.

⁹Hoots, p. 24.

CHAPTER III

METHOD OF RESEARCH

The principal aim of this study is to gain input from selected elementary school teachers in Oklahoma and determine their opinions of the content of an elementary teacher education course in industrial arts.

The ideal population for this study would include each elementary school teacher in Oklahoma. However, the majority of classroom teachers in Oklahoma do not have sufficient background information that would provide a research instrument with validity. The findings would be inconclusive. Also, there are not yet enough elementary school teachers who have been exposed to Industrial Arts for Elementary Schools or related activities to provide an adequate sample. To meet this void, it was determined that the population include special education teachers and elementary school teachers in Oklahoma who have been enrolled in an Industrial Arts for Elementary Schools class.

In order to identify these teachers, it was necessary to visit four state universities which offer a course for elementary education majors in industrial arts. The universities which participated were: Oklahoma State University, Southwestern Oklahoma State University, East Central State University, and Southeastern Oklahoma State University. Names for the survey group were obtained from past class rolls. Cross references were then made to determine if each person had applied for an Oklahoma

teaching certificate. If the person had applied and been granted an Oklahoma teaching certificate, the certificate number was recorded.

The compiled list of certificate numbers was then cross referenced with computer print-outs of the Teacher Personnel Section, Oklahoma State Department of Education. In this manner the current school address and legal name of each person was obtained.

An opinionnaire was developed for the purpose of the study. The opinionnaire, along with a transmittal letter stating the purpose of the study and a self-addressed envelope, was mailed to the survey group.

After a period of ten days, a follow-up letter was sent to those not responding to the opinionnaire. Responses to the items of the opinionnaire were tabulated and analyzed.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The purpose of this study was centered around one general objective which was to determine the activities of elementary school teachers in Oklahoma concerning Industrial Arts for Elementary Schools teacher education programs. In order to achieve this objective four questions were presented. This chapter is devoted to presenting those opinions expressed by the elementary school teachers on the four questions. It is the purpose of this chapter to present the results of the investigation in logical sequence and in detail. It is hoped that through this presentation, the writer has accomplished the purpose of this study.

An opinionnaire, a letter of instruction, and a self-addressed, stamped, return envelope were sent to 110 elementary and special education teachers in Oklahoma. The opinionnaires were returned by 75 teachers, giving a response of 68.18 percent. Percentages reported have been rounded to the nearest whole percent.

To show the importance the respondents placed on listed activities for elementary school students, the teachers were asked to rate each activity as very important, important, or unimportant. Sixty-nine percent of the respondents felt handwork activities are very important for their students. Only one individual felt it unimportant.

Of the returned opinionnaires, forty-nine percent listed career awareness as an important element for the elementary school student. Forty-one percent noted awareness as an important activity, while less than one percent felt it was unimportant.

Psychomotor development was expressed by eighty-seven percent of the respondents as a very important part of elementary education. The remaining thirteen percent felt it was important.

Fifty-one percent of the reply voiced educational relevance as a very important ingredient for the elementary student. Forty-three percent felt it an important part of elementary education. (See Table I).

TABLE I
IMPORTANCE OF INDUSTRIAL ARTS ACTIVITIES

How important do you feel these activities are for elementary school students?			
Activity	Very Important	Important	Unimportant
a. Handwork activities	69.3%	29.3%	1.3%
b. Career awareness	41.3%	49.3%	9.3%
c. Psychomotor development	86.6%	13.3%	0
d. Educational relevance	50.6%	42.6%	5.3%

The respondents were asked their opinions on the frequency elementary industrial arts teaching methods can be used in the six elementary school subject areas. Responses were rated often, occasionally or seldom. Forty-five percent responded that industrial arts teaching methods can be occasionally applied to mathematics, while forty percent felt that they could be used often.

Concerning the use of elementary industrial arts as a teaching method to aid in the teaching of language arts, fifty-three percent responded occasionally.

Sixty percent of the respondents felt elementary industrial arts could be used often to aid in the instruction of elementary science classes. Thirty-three percent replied it should be used occasionally.

The response toward the use of elementary industrial arts teaching methods benefiting social sciences showed forty-seven percent felt they could be used often and forty-seven percent replied they should only be used occasionally.

Only thirteen percent of the respondents felt elementary industrial arts teaching methods could be used often in a music class. However, fifty-five percent felt that they should be used occasionally.

Ninety-two percent responded that industrial arts as a teaching method could be used often in an elementary art class; while six percent replied that it should only be used occasionally. (See Table II).

TABLE II
 FREQUENCY OF USE OF INDUSTRIAL ARTS TEACHING
 METHODS BY SUBJECT AREA

How frequently do you feel elementary industrial arts teaching methods can be used in these subject areas?

Subject	Often	Occasionally	Seldom
a. Mathematics	40.0%	45.3%	14.6%
b. Language Arts	29.3%	53.3%	17.3%
c. Science	60.0%	33.3%	6.6%
d. Social Studies	46.6%	46.6%	6.6%
e. Music	13.3%	54.6%	30.6%
f. Art	92.0%	6.6%	0

The respondents were asked if the instruction they received in the class Industrial Arts for Elementary Schools provided them with the following skills and knowledge. The statements were rated very good, adequate or inadequate. Four percent of the return did not reply to these statements.

When asked if they acquired adequate skills for the use of elementary handtool operation, forty-nine percent of the respondents felt they had received adequate skills. Twenty-nine percent replied their instruction was very good, while seventeen percent felt they had received inadequate instruction.

Fifty-one percent of the respondents felt they received inadequate instruction in the use of elementary power tool operation. Adequate

instruction was received by thirty-five percent of the return, while only eleven percent stated their instruction was very good.

Concerning the use of elementary materials, fifty-three percent felt they had acquired adequate knowledge through their exposure to industrial arts for elementary schools. Forty-one percent felt this instruction was very good and fifteen percent replied their instruction was inadequate.

Forty-five percent of the respondents felt the instruction adequately covered the objectives of elementary school industrial arts. Twenty-four percent responded they had received very good instruction, while twenty-five percent felt it was inadequate.

Forty-five percent of the respondents considered their instruction in orientation to the world of work inadequate. Forty percent felt the instruction was adequate and eleven percent replied that it was very good.

When asked if the basic principles of career awareness were provided, forty-seven percent felt the instruction was inadequate. Forty-one percent replied their exposure was adequate, while eight percent considered it very good. (See Table III.)

The respondents were also asked to consider five statements by either agreeing or disagreeing. The statements were as follows.

When asked if a class in Industrial Arts for Elementary Schools should be required for all elementary education majors, sixty-five percent agreed. Thirteen percent disagreed with the statement, while twenty-one percent were undecided.

Eighty percent agreed that a class in Industrial Arts for Elementary Schools should be required for all special education majors. Seven percent of the reply disagreed and thirteen percent were undecided.

TABLE III
ADEQUACY OF INSTRUCTION

Did the instruction you received in the class Industrial Arts for Elementary Schools provide you with the following?				
	Very Good	Adequate	In- Adequate	No Response
a. Adequate skills for the use of elementary hand-tool operation	29.3%	49.3%	17.3%	4.0%
b. Adequate skills in the use of elementary power tool operation	10.6%	34.6%	50.6%	4.0%
c. Adequate knowledge in the use of elementary materials	29.3%	53.3%	13.3%	4.0%
d. Adequate safety procedures	41.3%	40.0%	14.6%	4.0%
e. The objectives of elementary school industrial arts	24.0%	45.3%	25.3%	5.3%
f. Orientation to the world of work	10.6%	40.0%	45.3%	4.0%
g. Basic principles of career awareness	8.0%	41.3%	46.6%	4.0%

Eighty-four percent of the respondents agreed that all industrial arts majors should be required to take a class in Industrial Arts for Elementary Schools. Only three percent disagreed, while again thirteen percent were undecided.

When asked if inservice training should be made available for elementary and special education teachers, seventy-nine percent agreed. Five percent disagreed and fifteen percent were undecided.

Sixty-seven percent of the respondents agreed that a course in career education would be of assistance to elementary education majors. Four percent disagreed, while twenty-nine percent were undecided. (See Table IV.)

TABLE IV
RESPONSE TO STATEMENTS CONCERNING
INDUSTRIAL ARTS EDUCATION

Should the following be considered?			
Statement	Agree	Undecided	Disagree
a. A class in industrial arts for elementary schools should be required for all elementary majors	65.3%	21.3%	13.3%
b. A class in industrial arts for elementary schools should be required for all special education majors	80.0%	13.3%	6.6%
c. A class in industrial arts for elementary schools should be required for all industrial arts majors	84.0%	13.3%	2.6%
d. Inservice training should be available for elementary and special education teachers	78.6%	14.6%	5.3%
e. A course in career education to be of assistance to elementary education majors	66.6%	29.3%	4.0%

The respondents were asked if they incorporate handwork activities in their teaching methods. Forty-one percent replied they often incorporated handwork activities in their teaching methods, while forty-four percent noted they use handwork activities occasionally. Fourteen percent responded they seldom use handwork activities in their teaching methods.

When asked if the incorporation of handwork activities in their teaching methods was effective, sixty-three percent replied it was often effective, twenty-eight percent responded it was occasionally effective, while five percent felt it was seldom effective.

Seventy-six percent of the respondents felt that handwork activities often stimulated their students. Seventeen percent thought handwork activities occasionally stimulated their elementary students, while three percent felt they seldomly stimulated the learner. (See Table V.)

TABLE V
RESPONSE TO HANDWORK ACTIVITIES

Question	Often	Occasionally	Seldom
a. Do you incorporate handwork activities in your teaching methods	41.3%	44.0%	14.6%
b. If you incorporate handwork activities in your teaching methods are they effective?	62.6%	28.0%	5.3%
c. Do you find that handwork activities stimulate your students?	76.0%	17.3%	2.6%

The respondents were asked if they felt elementary industrial arts helped the elementary school teacher achieve the objectives of elementary education. Eighty-eight percent replied that elementary industrial arts did help the elementary teacher achieve the objectives, while nine percent answered negatively. (See Table VI.)

TABLE VI
RESPONSE TO INDUSTRIAL ARTS IN MEETING
ELEMENTARY EDUCATION OBJECTIVES

Question	Yes	No
Do you feel elementary industrial arts helps the elementary teacher achieve the objectives of elementary education?	88.0%	9.3%

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Presented in this chapter are a summary review of the study, the design and conduct of the study and the major findings. Also presented are conclusions and recommendations based upon the analysis and summarization of the data collected.

The stated purpose of this study was to gain input from selected elementary school teachers in Oklahoma to determine their opinions of the content an elementary education course in industrial arts should contain.

The proper use of the findings of the study by industrial arts teacher educators might help them review their existing course offerings to elementary school teachers and revise those courses accordingly.

This study seeks to answer the following questions:

1. Should the study of Industrial Arts for Elementary Schools be made a required part of the preservice professional education of all elementary education majors?
2. Are the use of handwork activities effective when incorporated in the teaching methods of the elementary school teacher?
3. Does Industrial Arts for Elementary Schools help the elementary teacher achieve the objectives of elementary education?

4. Are the skills being taught by teacher educators in Industrial Arts for Elementary Schools sufficient for the elementary school teacher?

The data used in this study was obtained by the use of an opinionnaire. The instrument was mailed to Oklahoma elementary and special education teachers who had completed a course in Industrial Arts for Elementary Schools while in college. There were 110 opinionnaires mailed and 76 teachers participated in the study. The percentage of opinionnaires returned was 69.09 percent.

The general findings were presented by the use of tables showing the percentage of responses for each statement. These percentages were then analyzed and compared so that conclusions could be made concerning the attitudes of elementary school teachers.

Summary

In reflecting on the importance of basic objectives of industrial arts for the elementary school student, the respondents believe hand-work activities, psychomotor development and educational relevance are very important. Career awareness, the survey respondents felt, was another objective of importance to the elementary school student.

In evaluating the responses, the majority of the sample felt the study of Industrial Arts for Elementary Schools should be made a required part of the preservice professional education of all elementary education majors. A high percentage of respondents felt the course should be required of all special education and industrial arts majors as well.

The respondents also indicated that a course in the concepts of career education would be of assistance to elementary education majors.

The responses showed there is an interest in the use of industrial arts as a teaching method in the elementary schools. The majority of the respondents indicated they incorporate handwork activities in their teaching methods. A high percentage of the survey replied that when these teaching methods were used they were effective. The great majority of the elementary teachers acknowledged that the use of handwork activities often stimulated their students.

The research instrument asked the sample if they felt elementary industrial arts helps the elementary teacher achieve the objectives of elementary education. The vast majority replied that elementary industrial arts does help the elementary teacher achieve those objectives. The respondents also indicated that elementary industrial arts, as a teaching method, could be used in each of the elementary subject areas.

The respondents were asked if the instruction they received in the class Industrial Arts for Elementary Schools provided them with the necessary knowledge and skills. The majority of the sample indicated they were provided adequate instruction in the use of elementary hand-tool operation. However, a high percentage replied they had received inadequate training in elementary power tool operation. The respondents felt the instruction given them in the use of elementary materials was adequate.

The responses indicated 41.3 percent of the sample felt they had received very good instruction in safety procedures, while forty percent replied that this instruction was only adequate.

The majority of the respondents felt they had been provided adequate instruction of the objectives of elementary school industrial arts. However, a high majority felt they had received inadequate exposure to the basic principles of career awareness and orientation to the world of work.

Comments added by many of the respondents suggested several ideas worth consideration by teacher educators. The theme most widely expressed points out that many of the hands-on activities taught by college instructors were not suitable for the average classroom situation. They cited the cost of tools, equipment and materials as being deterrent to the program. The teachers also expressed that many of the hands-on activities were not suitable for children in the primary grades. The respondents expressed the need for more projects that cost less while appealing to a wide range of age groups.

Several teachers expressed their lack of exposure to the concepts of career awareness. The comments by the respondents emphasized there is a vital need for career awareness at the primary level. Several teachers also noted the use of professional people visiting their classrooms as a means of exposing students to the world of work.

One teacher summarized her comments by stating there is a definite need for the exposure of industrial arts, in elementary education, as a part of teaching the whole child.

Conclusions

Based upon an analysis of data presented in this study, the following conclusions have been drawn regarding the questions of this study.

1. The study of Industrial Arts for Elementary Schools be made a required part of the preservice professional education of elementary and special education majors.
2. The use of handwork activities are effective when incorporated in the teaching methods of the elementary school teacher.
3. Industrial Arts in Elementary Schools helps the elementary teacher achieve the objectives of elementary education.
4. Teacher educators of Industrial Arts for Elementary Schools need to review their course instruction in view of the findings of this study. The concepts of career awareness should be an integral part of the course content. Handwork activities that are less expensive and more adaptable to a wider age group should also be explored.

Recommendations

On the basis of the findings and analysis of the opinionnaire of this study, the following recommendations are proposed.

1. The study of Industrial Arts for Elementary Schools be made a required part of the preservice professional education of elementary and special education majors.
2. Industrial arts teacher educators need to evaluate their current course offerings for elementary and special education majors and revise those offerings accordingly.
3. The concepts of career awareness should be included in the instruction of Industrial Arts for Elementary Schools.

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APPENDIX A

TRANSMITTAL LETTER

(OKLAHOMA STATE UNIVERSITY LETTERHEAD)

March 29, 1977

Dear Fellow Teachers:

I need your help! The number of school districts in Oklahoma that are offering their elementary school students exposure in industrial arts is increasing. However, many elementary school teachers are not adequately prepared and lack the necessary knowledge and skills to provide this type of activity in their classrooms. To meet this void among elementary teachers many teacher education institutions are adding to their curriculum courses in industrial arts for elementary teachers. While in college you were enrolled in a course of this type. I am conducting a study in an attempt to gain your opinion of the content of that class and how it relates to a classroom situation.

You were selected to participate in this study by having received exposure to elementary industrial arts practices through either an elementary arts and crafts or, handwork for elementary schools class while in college. As you can see few elementary teachers have had this exposure; therefore, I need your response to successfully complete this survey.

The help I ask is for you to complete the attached opinionnaire and return it to me. The return envelopes are numbered solely for the purpose of insuring maximum return for a follow-up program if necessary. Upon receipt your number will be checked off and the envelope destroyed. The contents of the completed opinionnaire will be kept in the strictest confidence. It is not my intention nor desire to identify any individual or school participating in this study.

I recognize your busy schedule and will appreciate your efforts in responding to this survey. You are one of a very few elementary teachers in the state of Oklahoma who can provide the information needed.

Respectively yours,

Wade Walling
Research Assistant

Approved:

Dr. John B. Tate
Industrial Arts Education

APPENDIX B

OPINIONNAIRE

IMPROVING INDUSTRIAL ARTS FOR ELEMENTARY SCHOOLS
TEACHER EDUCATION PROGRAMS

Would you please give your opinion of the following statements pertaining to industrial arts for elementary schools?

INFORMATION:

1. From what college or university did you graduate? _____
2. While in college were you enrolled in an industrial arts for elementary schools class? _____
3. Was this class activity-oriented as opposed to a lecture method? _____
4. Were you enrolled in an arts and crafts type class? _____
5. What size school district do you teach in?
4A _____, 3A _____, 2A _____, A _____, B _____
6. What grade level do you teach?
K _____, 1 _____, 2 _____, 3 _____, 4 _____, 5 _____, 6 _____
7. How many years of teaching experience do you have? _____

Please check the appropriate answer:

- I. How important do you feel these activities are for elementary school students?

	Very Important	Important	Unimportant
a. Handwork activities	_____	_____	_____
b. Career awareness	_____	_____	_____
c. Psychomotor development	_____	_____	_____
d. Educational relevance	_____	_____	_____

- II. How frequently do you feel elementary industrial arts teaching methods can be used in these subject areas?

	Often	Occasionally	Seldom
a. Mathematics	_____	_____	_____
b. Language Arts	_____	_____	_____
c. Science	_____	_____	_____
d. Social Studies	_____	_____	_____
e. Music	_____	_____	_____
f. Art	_____	_____	_____

III. Did the instruction you received in the class Industrial Arts for Elementary Schools Provide you with the following?

	Very Good	Adequate	Inadequate
a. Adequate skills for the use of elementary handtool operation	_____	_____	_____
b. Adequate skills in the use of elementary power tool operation	_____	_____	_____
c. Adequate knowledge in the use of elementary materials	_____	_____	_____
d. Adequate safety procedures	_____	_____	_____
e. The objectives of elementary school industrial arts	_____	_____	_____
f. Orientation to the world of work	_____	_____	_____
g. Basic principles of career awareness	_____	_____	_____

IV. Should the following be considered?

	Agree	Undecided	Disagree
a. A class in industrial arts for elementary schools should be required for all elementary education majors	_____	_____	_____
b. A class in industrial arts of elementary schools should be required for all special education majors	_____	_____	_____
c. A class in industrial arts for elementary schools should be required for all industrial arts majors	_____	_____	_____
d. In-service training should be made available for elementary and special education teachers	_____	_____	_____
e. A course in career education to be of assistance to elementary education majors	_____	_____	_____

- | | Often | Occasionally | Seldom |
|---|-------|--------------|---------|
| V. Do you incorporate hand-work activities in your teaching methods? | _____ | _____ | _____ |
| VI. If you incorporate hand-work activities in your teaching methods are they effective? | _____ | _____ | _____ |
| VII. Do you find that hand-work activities stimulate your students? | _____ | _____ | _____ |
| VIII. Elementary industrial arts can be included as a teaching method in the following grades:
K____, 1____, 2____, 3____, 4____, 5____, 6____ | | | |
| IX. Do you feel elementary industrial arts helps the elementary teacher achieve the objectives of elementary education? Yes_____ | | | |
| | | | No_____ |

APPENDIX C

FOLLOW-UP LETTER

(OKLAHOMA STATE UNIVERSITY LETTERHEAD)

April 14, 1977

Dear Teachers:

Several days ago you received an opinionnaire entitled "Improving Industrial Arts for Elementary Schools Teacher Education Programs." Your returned response is greatly needed to better represent the actual situation which exists in our elementary schools in Oklahoma.

Would you please complete and return the opinionnaire as soon as possible? Thank you for your assistance.

Sincerely,

Wade Walling
Research Assistant
Oklahoma State University

WW/tal

VITA²

Robert Wade Walling

Candidate for the Degree of

Master of Science

Thesis: IMPROVING INDUSTRIAL ARTS FOR ELEMENTARY SCHOOLS TEACHER
EDUCATION PROGRAMS

Major Field: Industrial Arts Education

Biographical:

Personal Data: Born in Waurika, Oklahoma, March 15, 1954, the
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