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A Survey of Junior High School Industrial Arts in Selected Counties in Illinois

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A SURVEY OF JUNIOR HIGH SCHOOL INDUSTRIAL ARTS IN SELECTED COUNTIES IN ILLINOIS

(TITLE)

BY

Martin W. Pattin

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
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INTRODUCTION

The junior high school is the only American-conceived school planned to meet the needs of early adolescents in the United States. It has been from its inception an institution with an overall purpose of transition. The junior high school lies between the elementary grades (1-6), and the senior high school of general culture and special-interest learnings.

Various forms of the intermediate school organizations were experimented with in the twentieth century. Before 1920 there was rapid expansion spread throughout the nation. In the 1920's the junior high school was accepted. There were several influential professional books that appeared during the early twenties. Some of the important characteristics during this time included: attempted retention of pupils, recognition of instruction based on individual differences, exploration for guidance and prevocational education for some early school drop-outs. These outcomes were accomplished through marked changes in school and pupil organization.

Industrial arts was given the job of exploration and overview for education and vocational guidance in the trade, industry and handicraft vocations. This resulted in a greater breadth of manual coverage, and general industrial arts and various forms of the general shop were born. Also came the Social-Industrial Theory of Industrial Arts and its

emphasis upon certain categories of industries, as well as production of projects.

Following 1946 the junior high schools underwent some changes. The vocational purpose was no longer relevant. The purpose of retention of students was no longer applicable. Chief among the additional goals was that of greater emphasis on correlation and integration of subject matter, but differentiation between individuals.

The changes in industrial arts since World War II have been changes in degrees of emphasis on practices that already existed. Greater emphasis is placed upon problem-solving experiences. More attention is given to individual differences. There is a wider variety of content coverage, including new materials, tools and manipulative processes. Some shop areas have increased greatly in importance such as electricity, power mechanics and some handicrafts. The relationships between industrial arts and some phases of science for certain gifted children still needs to be resolved.

Today, industrial arts in the upper grades (7-8) or the junior high school (7-8-9) is usually a required subject by most of the states. Industrial arts is especially required in grades 7-8. Some schools require industrial arts in grade 9 also. The requirement of industrial arts in the junior high schools is a long cry from the many years in which it was considered a marginal or special subject.

Industrial arts has struggled and earned its way into the curriculum of the junior high school. Educators have discovered that desired learnings both in content and in learning procedures can be accomplished for many youths through these educational experiences in formal schoolwork.

The years of the junior high school coincide with the age level at which all adolescents are normally wanting to make and do an experiment with their physical surroundings including such things as trades, industries, technology and handicrafts.

Changes in industrial arts curriculums are evolving from current practices as creative teachers try out new ideas. These changes will help to make the industrial arts curriculum a valuable part of the general education for all youth. Throughout the United States new junior high schools are being built every year. These curriculum changes and more research and development of techniques used in the industrial arts programs of junior high schools, will be a great help to the new schools in developing an industrial arts program.

Research in the junior high school industrial arts was an item of interest to this writer and a survey concerning programs in industrial arts was made.

CHAPTER I

THE PROBLEM

Statement of the Problem. The problem that was selected was to survey, then ascertain information and compare the junior high school industrial arts progress in the northern, southern, eastern and western sections of Illinois.

Purpose of the Study. The purpose of the study was to gather data concerned with professional information, areas of instruction, techniques of teaching and physical equipment of the junior high school industrial arts instructors in the northern, southern, eastern and western sections of Illinois.

More specifically, the purpose was to gather data from teachers which would assist in answering the following questions.

1. What is your highest collegiate degree?
2. What is the date of last attendance at a university?
3. What is the name of university last attended?
4. What is the enrollment of your school?
5. What grades do you teach?
6. What is the average number of students in your classes?
7. Do you have a budget set up for your department?
8. Do you consider your budget adequate?
9. Do your students pay for materials they use?

10. Do you use the manufacturing technique to build projects?

11. What courses of instruction do you teach in your program?

12. Did you set up the curriculum or was it already set up when you assumed the position?

13. What type of laboratory do you use?

14. Do you provide a study guide or course syllabus?

15. Do you have a textbook for each course you teach?

16. Do you provide safety glasses in your laboratory?

17. What other safety devices are in use?

18. Do you use visual aids?

19. Do you use audio-visual aids?

20. Check the following visual and audio-visual aids you use.

21. What stationary power equipment do you have in your laboratory?

22. Do the students use stationary power tools?

23. What portable power equipment do you have in your laboratory?

24. Do the students use portable power equipment?

25. Do you have a dust collecting system in your laboratory?

Definition of Terms

Industrial Education. A generic term, according to Friese,[1] which includes the total educational activities concerning an individual with modern industry and crafts, their raw materials, products, machines, personnel, and problems. It includes both the terms, industrial arts and vocational industrial education.

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[1] John F. Friese, Course Making in Industrial Education (Illinois: Charles A. Bennett Company, Inc., 1946), p. 7.

Vocational Industrial Education. This term is described by Friese[2] as the preparation for entrance in, and for making progress in "trades" and industrial occupations of every kind.

Industrial Arts. According to Giachino and Gallington,[3] industrial arts is a phase of general education which serves to familiarize students with the tools, products, processes, and occupations of industry as well as the social and economic phenomena of the technological world in which they live and work. It is considered a part of general education, not only because it supports or fulfills many of the fundamental concepts of general education, but because it develops greater understanding of the significance of industry in the world today.

Curriculum. A curriculum is defined by industrial arts, vocational, or technical education teachers, as that group of subjects selected and arranged in a predetermined order to assist a student in the fulfillment of an educational goal.[4]

Laboratory. The laboratory is a place devoted to experimental study or a place where principles are verified or applied.[5]

General Area Laboratory. A laboratory so equipped as to provide

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[2] Ibid.

[3] J. W. Giachino and Ralph O. Gallington, Course Construction in Industrial Arts and Vocational Education (Chicago, Ill.: American Technical Society, 1961), p. 25.

[4] G. Harold Silvius and Ralph C. Bohn, Organizing Course Materials for Industrial Education (Bloomington, Ill.: McKnight and McKnight Publishing Company, 1961), p. 47.

[5] State of Illinois, Superintendent of Public Instruction, Guidelines for Industrial Arts Instruction, Subject Field Series-Bulletin D Six (1964), p. 3.

a variety of experiences with only one kind of industrial material or activity. Examples would be woods, metals, plastics, or electricity.[6]

Unit Area Laboratory. A laboratory so equipped that the breadth of experiences with one kind of industrial material or activity is limited. Examples of such would be a room equipped only for welding, machine metal, foundry, or sheet metal.[7]

Course Syllabus. A course syllabus is a teaching device used by the individual teacher to present to the students the learning experiences outlined in the course of study. Here he applies his specific methods of teaching to the subject matter to be taught.[8]

Visual Aids. Visual aids are those materials that appeal mainly to sight. For example, silent motion pictures, filmstrips, transparencies, opaque projections, and the overhead projector. Further materials that are chiefly concerned with the visual aspect are the chalkboard, the feltboard, and the bulletin board. Other examples are textbook illustrations, photographs, prints, charts, posters, and like products. Aids that appeal to the sense of hearing are the radio, phonograph records, and tape recordings.

Audio-Visual Aids. Audio-visual aids are those materials and machines that appeal to both sight and hearing senses. Examples of those would be sound motion pictures, sound filmstrips, and television which is under the experimental stage in education.

Woodworking. Any work done in or with wood objects or parts made

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[6] Ibid.

[7] Ibid.

[8] Ibid., p. 8.

from wood. Woodworking provides introductory and exploratory experiences for each student relative to the operations, procedures, and skills to woodworking.[9]

Electricity. Electricity is one of the fundamental qualities in nature, consisting of elementary particles, electrons, and protons.[10] For this study electricity is the science which treats of the phenomena and laws of electricity.

Metalworking. Metalworking is the process or occupation of shaping things out of metal. Some areas of metalworking are sheet metal, forging, welding, machine operations, and metal forming with bending machines.[11]

Drafting. It is a precise and universal language used to transfer mental concepts into graphic interpretation. It encompasses all areas of drawing that are included in the phase of industrial arts education. These areas are in mechanical, electrical, structural, architectural, and general shop classes.[12]

Graphic Arts. It is the expression of ideas by means of lines, marks, words, or characters impressed on a surface. Graphic arts consists of principles of photography and enlarging, cutting linoleum blocks,

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[9]Arthur E. Burke, J. Ralph Dasall and Gilbert Townsend, Architectural and Building Trades Dictionary (Chicago: American Technical Society, 1955), p. 342.

[10]John L. Feirer and John R. Lindbeck, Industrial Arts Education (Washington, D.C.: The Center for Applied Research in Education, Inc., 1964), p. 32.

[11]Burke, Dasall and Townsend, op. cit., p. 206.

[12]Thomas E. French and Carl L. Svensen, Mechanical Drawing (New York: Webster Division, McGraw Hill Book Company, 1966), pp. 1-4.

making celluloid line engravings, type setting, repairing a book, using the California job case and studying types of printing.[13]

Power Mechanics. Power mechanics consists of the study of gasoline engine systems including the one cylinder two-cycle and four-cycle engines. It also involves the study of fuel sources, simple transmission theory, history of power, diesel engines and simple automotive electricity.[14]

Crafts. Crafts are those activities which provide a student the opportunity to apply knowledge gained in the fine arts to the use of industrial materials. Crafts include leatherworking, plastics, jewelry, ceramics, textiles, etc.[15]

Limitations of the Study. This investigation was limited to a survey of industrial arts programs related to the junior high school level. Four round tables plus one county in another round table were selected at random as the areas to cover with the questionnaire. The round tables that were selected are 1, 20, 13 and 14.* There was also one county selected from round table 4. Geographically seventeen counties were involved in the study. There were five counties in the north and four in the east, west and south sections of Illinois. The counties

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[13]Feirer and Lindbeck, op. cit., p. 32.

[14]Ibid., p. 34.

[15]Silvius and Bohn, op. cit., p. 299.

*See Appendix B for the location of round tables 1 and 4, 20, 13, and 14. p. 59.

selected in the north were Stephenson, Winnebago, Boone, Dekalb and Dupage. The counties in the south were Williamson, Jackson, Franklin and Perry. The counties in the east consisted of Champaign, Vermilion, Douglas and Edgar. The counties in the west were Hancock, Adams, Pike and McDonough.

The survey was also limited to specific items in the curriculum, namely: professional information, areas of instruction, techniques of teaching and physical equipment.

Sources of Data. A three page questionnaire was sent to seventy-five junior high school industrial arts instructors of the previously mentioned areas during the school year 1968-69. In view of acceptable and well guided advice, a questionnaire concerning the four areas already mentioned earlier was formulated, approved, and mailed to the instructors involved in this study.

Need for the Study. The need of this survey was to ascertain what was being offered in industrial arts at the junior high school level. The data that was collected will be used in helping to set up a curriculum for the industrial arts program at Charleston Junior High School in Charleston, Illinois.

Methods of Research. A review was made of several source materials including periodicals and texts pertaining to industrial arts at the junior high school level. From these sources, significant items were selected and formulated into a questionnaire.

Five round tables were selected at random to represent this study. In order to obtain the names and addresses of the junior high school industrial arts instructors, this writer went to the office of the

Coles County Superintendent of Schools and obtained a copy of the 1968-69 Illinois School Directory. Using this source, an information blank was formulated concerning the names of the junior high school industrial arts instructors; the name and addresses of the schools; and the zip codes; and was mailed to seventeen County Superintendents of Schools in Illinois.

After a five day period of time during which all of the information blanks were returned by mail, a total of seventy-five industrial arts instructors in forty-seven junior high schools were selected as participants.

Using this source, the formulated questionnaire was sent to every junior high school industrial arts instructor in the seventeen counties, a total of seventy-five industrial arts instructors.[16]

After an eighteen day period of time during which fifty-seven or seventy-six percent of the returns were received, follow-up letters were mailed to all instructors who had not replied.[17]

As shown in Table 1, sixteen percent or twelve of the eighteen respondents returned their questionnaires in reply to the follow-up letter. A total response of sixty-nine instructors or ninty-two percent was the final tabulation. All of the returned questionnaires were completed satisfactorily and were used as a basis for the study. The data collected from the respondents were classified, tabulated, and arranged in statistical order to better analyze and report the findings.

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[16]See Appendix A for a copy of the letter of introduction, follow-up letter, and questionnaire, p. 49.

[17]Ibid.

TABLE 1

DISTRIBUTION OF QUESTIONNAIRES SENT TO SEVENTY-FIVE JUNIOR HIGH SCHOOL INDUSTRIAL ARTS INSTRUCTORS

Type of Reply	Amount Sent	Amount Received	Percentage of Returns
Reply to original letter and questionnaire	75	57	76%
Additional reply received from follow-up letters	18	12	16%
Total reply of respondents	75	69	92%

CHAPTER II

REVIEW OF LITERATURE

Industrial Arts in the Junior High School

Definition and Purpose

Industrial arts for junior high school students has as its primary function the provision of industrial experiences of an exploratory or orientational nature. It differs from the elementary industrial program in its movement away from an emphasis upon enrichment units toward well-organized separate classes held in shops or laboratories and taught by competent instructors. Such courses offer a wide range of activities to enable youth to develop a clearer understanding of industrial materials and processes and to explore individual aptitudes and aspirations. The mission of industrial arts is two-fold: it introduces students to the world of industry and technology, and it guides them in terms of vocational interests and abilities.

At the junior high school level, the industrial arts program is characterized by breadth, rather than depth, of skill and understanding. The first experiences that a student has in industrial arts at the junior high school level can and must supply a firm foundation for further, more advanced industrial arts offerings in the senior high school. They must, however, be so organized as to delimit skill for the sake of broad

understandings and fundamental manipulative experiences.

The aim is not so much to train a skilled woodworker as it is to help the individual to know what woodworking is; to understand what wood is, where it comes from, and how it is used. The student learns these things best by becoming directly involved in making things of wood rather than through some more vicarious study-and-lecture means of instruction.

Industrial arts, at the junior high school level has many factors in common with other subject areas. It relates to the sciences in its opportunities for research and experimentation, and for the construction of scientific apparatus. It utilizes and reinforces many mathematics concepts in its extensive use in measuring devices and computational formulas. Accuracy is a requisite to good design and construction technique. Because industrial arts activities require the reading and writing of technical information and the study of reference data, they are related to the language arts. It is further allied to the social sciences in its studies of industrial production, and to recreation and health in its many hobby opportunities.

The entire program of industrial arts is predicted upon the factor of direct involvement with materials and tools and machinery. In the junior high school the adolescent needs experiences which will give him confidence and understanding and help him in planning his future. The adolescent also needs an opportunity to explore himself and the physical world around him. The activities of the industrial arts program are planned with this thought in mind.

Curriculum

In the great majority of the public schools of the United States, the junior high school provides the first opportunity for practical arts instruction. Consequently, the industrial arts program should be designed to encompass a wide variety of introductory experiences with the basic tools, materials, and processes of industry.

There are two types of schools which may offer industrial arts in grades 7-9. The first is the graded elementary school including grades K through 8 where industrial arts would be offered in grades 7 and 8 as a part of the required school curriculum.[1] Many Illinois schools are organized on this basis.

The following program should prove workable in a school of this type:[2]

Seventh Year: Several units of craft type activities on an exploratory basis, including such fields as woodcraft, art metal, keene cement, and leather.

Eighth Year: Several other units of craft type activities, including sketching and planning, graphic arts, plastics, and jewelry making or any of the areas suggested for seventh grade.

The number of units offered would depend upon the amount of time available for industrial arts instruction each week. There should be at least twenty minutes devoted to each unit. Therefore, in a school where students are to meet two or three days per week for the whole year, seventy-two to one hundred and eight class sessions would be available. The program

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[1] State of Illinois, Superintendent of Public Instruction, Guidelines for Industrial Arts Instruction, Subject Field Series-Bulletin D Six (1964), p. 29.

[2] Ibid.

would therefore consist of three to five units of work. In the school where classes meet five days per week for a semester, four or five units could be profitably offered.[3]

Suggested Industrial Arts Program for Schools
Organized on 8-4 Basis[4]

GRADE SEVEN (100 minutes per week)---May be required or elective.

Woodcraft-9 wks.	Art Metal-9 wks.	Keene Cement 9 wks.	Leather-9 wks.

GRADE EIGHT (100 minutes per week)---May be required or elective.

Planning and Sketching-9 wks.	Graphic Arts 9 wks.	Plastics-9 wks.	Jewelry-9 wks.

Other craft areas in grade eight may be substituted if desired. These are typical, however. It is important that the areas offered be of the crafts type.

Another type of school organization frequently encountered in Illinois is the junior high school instruction in grades seven, eight, and nine only. In these schools industrial arts is usually required in grades seven and eight, and is elective in grade nine.

This type of school often operates on a longer class period than the grade 1-8 organization, and frequently offers each subject for a specific block of time during the year. A subject might be offered for twelve weeks, eighteen weeks, or thirty-six weeks, depending upon the rotation of subjects which is in operation in the school. Whatever the

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[3] Ibid.

[4] Ibid.

time block used, this subject should be offered every day for this specified time period.

The type of areas included in the seventh and eighth year program should be very similar to those suggested for the corresponding years in the K through 8 organizations.

Suggested Industrial Arts Program for
Schools Organized on 6-3-3 Basis[5]

GRADE SEVEN (160-180 minutes per week)--Required of all seventh grade boys in school unit.

Planning and Sketching 6 wks.	Woodcraft 6 wks.	Plastics 6 wks.	Art Metal 6 wks.	Leather 6 wks.	Jewelry 6 wks.

Other craft areas than those above may be substituted if desired. These are typical, however. It is important that the areas offered be of the crafts type.

GRADE EIGHT (280 minutes per week)--Elective for any eighth grade student in school unit.

Mechanical Drawing 6 wks.	Woodwork 6 wks.	Metalwork 6 wks.	Electricity 6 wks.	Power Mechanics 6 wks.	Graphic Arts 6 wks.

An exploratory type program offering experiences in four to six different areas, six to nine weeks in each area.

The ninth year's work is normally set up on two units of work with eighteen weeks devoted to each. The units usually include at least two of the following: drawing, woodwork, electricity, metalwork, and graphic arts.

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[5] Ibid.

GRADE NINE (280 minutes per week)—Elective for any ninth grade student who has had the eighth grade course previously mentioned.

Woodwork-18 weeks	Metalwork-18 weeks

These are tryout courses which provide additional finding values and each course is one semester in length. This type will help the student gain information and experiences needed in choosing a full year course in later years.

In industrial arts at the junior high school level, one can find programs ranging from two to five fifty-minute periods per week, to one hundred-minute blocks of time weekly. Some courses are six weeks long; others run for as long as seventy-two weeks. The precise organizational pattern depends upon the place of the industrial arts in the curriculum, and upon the facilities and the instructional staff available in the school system.

The following lists according to Feirer and Lindbeck[6] describe the course content of traditional subjects taught in the junior high schools in terms of skills and knowledge. They are not exhaustive, but merely indicate the types of activities which may take place in junior high school industrial arts classes:

Graphic Arts

Studying simple principles of photography and of enlarging
Cutting linoleum blocks
Making celluloid line engravings
Wire-stitching booklets by side stitch and saddle stitch
Repairing a book
Using California job case
Setting simple straight matter
Studying methods of making silk-screen designs
Studying types of relief cuts for printing (with special emphasis on linoleum blocks and woodcuts)
Studying types of intaglio printing (line etching, line engraving, drypoint)

[6] Feirer and Lindbeck, op. cit., pp. 32-4.

Drafting

- Making oblique sketches using only horizontal, vertical, and slant lines parallel to oblique axes
- Studying measuring techniques
- Developing pictorial sketches around isometric axes
- Sketching lines not parallel to axes in additional isometric sketches
- Selecting, reading, and interpreting elementary forms of several graphic representations
- Studying isometric and angular or two-point perspective relationships
- Learning standards of bolts, screws, and other fastenings
- Studying basic principles of shading and accenting
- Learning abbreviations used in drawing
- Learning common symbols and conventions used for representing heating, plumbing, electrical wiring, building materials

Metalwork

- Laying out with scriber, combination square, center punch, dividers, and hammer
- Shearing sheet metal with snips and cold chisels
- Studying mathematics for areas, perimeters, circumference, volume, weight, guages
- Learning metal identification
- Studying types of saws and blades
- Forming threads with taps and dies
- Bending metal by hand or box and pan brake
- Soldering copper and tinplate
- Riveting metals
- Studying types of casting metals
- Studying types and applications of simple seams and folds
- Studying solders, fluxes, and their applications to copper and tinplate

Woodwork

- Cutting a board to length with a crosscut and a backsaw
- Identifying lumber (Douglass fir, sugar pine, redwood, Ponderosa pine)
- Studying grading and standard sizes of lumber
- Measuring stock with a rule
- Testing stock for squareness with a try square
- Sharpening plane bit on a sharpening stone
- Boring a hole with a brace and auger bit
- Countersinking a hole
- Joining wood with screws, nails and brads
- Discussing strengths and weaknesses of various wood joints
- Studying common types of finishes

Electricity

- Interpreting simple wiring and schematic diagrams
- Drawing basic wiring and schematic diagrams
- Testing magnetic properties of metals
- Creating magnetism with an electrical current

Wiring elementary electrical circuits in series and parallel
Learning meanings of fundamental electrical symbols
Interpreting a simple electrical circuit
Studying basic principles of series and parallel circuits
Studying properties of permanent and electromagnets and their magnetic fields
Studying generation of light and heat by an electric current
Learning safety code requirements for the installation of switches and outlets in the home

Power Mechanics

Studying gasoline engine systems (assembly and disassembly of small engines, trouble-shooting, engine servicing, lubrication)
Studying fuel sources, simple transmission theory, history of power
Studying diesel engines
Studying automotive electricity

These activities that have been listed are representative of those offered in junior high schools today. The precise methods of implementation are planned in terms of the group being taught. For the slow learner, the instruction may center around a set of well-conceived and well-described projects which the student has to construct.

The instructor's task would be to explain why the project is well designed in terms of function, materials, and appearance. He then demonstrates how the material is worked with various tools, how pieces are measured, and how they are assembled. He teaches the student to read the blueprint and to follow the steps outlined for them in the plan of procedure.

The student learns how to use fasteners and how to apply finishes. The instructor discusses these processes in relationship to the much broader scope of industry, and informs the students of the vocational opportunities in this line of work. He uses visual aids to help these youngsters to understand the demonstrations and the technical knowledge.

The instructor keys his whole program of instruction to the students level so that they may receive the full benefit of his services. He attempts to set examples and to provide situations which will provide such value patterns as tolerance, understanding, cooperation, resourcefulness, safety, and accuracy. The instructor also helps the students to understand their strengths and weaknesses and urges them to move ahead to a maximum utilization of their talents.

Of the many curricular problems faced by the junior high school industrial arts program, perhaps none is so onerous as the responsibility of providing a program for all students. At this level are found individuals in every sense of the word--students with wide ranges of talent and aspiration. A program in a low-income area may of necessity be one in which industrial skills, attitudes, and knowledge are transmitted in a very effective, though somewhat traditional way. The course here functions as a guidance program--one in which the skills learned are to form a firm base for high school prevocational or vocational programs. In high-income areas, the curriculum may be built to challenge the student of the highest capability in order to enrich his learning prior to his entering the professions.

In conclusion, there is no one curriculum for industrial arts. There instead must be an examination of the school's function, its staff, and its facilities in order to establish that type of program which will help the individual to live in this technological society.

CHAPTER III

PROFESSIONAL INFORMATION CONCERNING JUNIOR HIGH SCHOOL INDUSTRIAL ARTS INSTRUCTORS

This chapter is concerned with the highest collegiate degrees of instructors, the universities they last attended, the enrollment of the junior high schools, the grades taught by instructors, the average number of students in industrial arts classes, the factors concerning the budget, the payment of materials by students, and the techniques used in building projects. It is based on the information obtained from the questionnaire which was completed by the instructors from the junior high schools in the survey area.

Information Concerning Highest Collegiate Degrees of the Instructors

Thirty-one or 44.9 percent of all junior high school industrial arts instructors responded that they held a Master of Science in Education degree. Table 2 also shows that thirty-six or 52.2 percent of the instructors reported that they held a Bachelor of Science in Education degree. Two or 2.9 percent responded that they held an Advanced Degree in Education.

The majority of the instructors reported that they had last attended a university during the period from 1961 through 1969.

TABLE 2

INFORMATION CONCERNING HIGHEST COLLEGIATE DEGREE OF INSTRUCTORS

Type of Degree	Number	Percent
M.S.	31	44.9%
B.S.	36	52.2%
Other	2	2.9%
Total	69	100.0%

The majority consists of sixty-eight or 98.6 percent. Only one instructor attended a university prior to this time. Several instructors commented that they are presently attending a university for post graduate work.

Following is a list with the numbers and percentages of the universities that the instructors in this survey attended:

List of Universities Instructors Attended*

University	Number	Percent
Northern Illinois University	20	30%
University of Illinois	11	15.9%
Southern Illinois University	11	15.9%
Western Illinois University	3	4.3%
Northeast Missouri State University	3	4.3%
Eastern Illinois University	2	2.9%
Illinois State University	2	2.9%
Indiana State University	2	2.9%
Northern Iowa State University	1	1.4%
University of Illinois Extension	2	2.9%

*See Appendix B for the map concerning where junior high schools are located, p. 60.

University--Continued	Number	Percent
University of Missouri	1	1.4%
Oklahoma State University	1	1.4%
Bradley University	1	1.4%
Indiana University	1	1.4%
Northeastern Illinois University	1	1.4%
New Mexico State University	1	1.4%
Stout State University	1	1.4%
University of Nevada	1	1.4%

Fifty-three or 76.8 percent of the instructors in this study held degrees from ten universities in Illinois. Fourteen or 20.3 percent held degrees in out of state universities. Of all the universities, Northern Illinois University, Southern Illinois University, and the University of Illinois were schools with the largest number of graduates. A total of forty-two or 60.9 percent of the instructors in this study held degrees from these three universities.

Twenty or thirty percent of the instructors in the northern section of this study held degrees from Northern Illinois University. In the south, eleven or 15.9 percent of the instructors held degrees from Southern Illinois University. Eleven or 15.9 percent of the instructors in the eastern section held degrees from the University of Illinois. In the western section, three or 4.3 percent held degrees from Western Illinois University and three or 4.3 percent also held degrees from Northeast Missouri State University.

Enrollment of Junior High Schools

The majority of the sixty-nine respondents are teaching in the schools with 500-1000 enrollments. Twenty-six or 37.7 percent of the instructors are in this type of environment. Twelve or 17.4 percent of

the instructors come from the 0-500 pupil populated junior high schools and only nine or thirteen percent have more than one thousand enrolled.

In data tabulated from the instructors of forty-seven junior high schools, it was found that the enrollment varied from 60 to 9,500 with a mean of 946.

The average number of students in each of the instructors classes in this study ranged from 10 to 32 with a mean of 19.

TABLE 3

ENROLLMENT DISTRIBUTION OF JUNIOR HIGH SCHOOLS

School Enrollment		0-500	500-1000	1000
Percentage of school enrollment used in study	Number	12	26	9
	Percent	17.4%	37.7%	13%

Grades Taught by Instructors

The data collected concerning the grades taught by junior high school industrial arts instructors showed that forty-four or 63.8 percent of the instructors were teaching industrial arts at the seventh grade level. Table 4 shows that the majority, which is fifty-eight or 84.1 percent, of the instructors were teaching at the eighth grade level. Teaching at the ninth grade level involved thirty-six or 52.2 percent of the industrial arts instructors.

TABLE 4

DISTRIBUTION OF GRADES TAUGHT BY JUNIOR HIGH SCHOOL INDUSTRIAL ARTS INSTRUCTORS

Grade	Number	Percent
Seventh	44	63.8%
Eighth	58	84.1%
Ninth	36	52.2%
Other	3	4.2%

From the data collected, it was also found that three or 4.2 percent of the instructors were teaching such classes as adult education and classes of elementary handicapped students.

It was interesting to point out that quite a few of the instructors responded that they were teaching more than one grade. Several were teaching all three grades. Some were teaching only one grade but most of the instructors taught either two or three grades.

Factors Concerning Department Budget

The majority of the instructors in this study reported that they had a budget set up for their industrial arts departments. This was forty-six or 66.7 percent of the sixty-nine instructors involved in this survey. Only twenty-three or 33.3 percent responded that they did not have a budget set up for their industrial arts department.

Over half of the instructors responded that they considered their budgets adequate. This involves thirty-nine or 56.5 percent of the

instructors. Twenty-one or 30.4 percent felt that their budget was not adequate. A total of nine or 13.1 percent reported that they had no opinions.

TABLE 5

FACTORS CONCERNING DEPARTMENT BUDGET

Factor Category	Yes	Percent	No	Percent	No Opinion
Do you have a budget set up for your department?	46	66.7%	23	33.3%	0
Do you consider your budget adequate?	39	56.5%	21	30.4%	9

Factors Concerned with Payment for Materials and Techniques Used in Building Projects

The data in Table 6 shows that the majority of the instructors responded that their students pay for materials they use in class. The majority consists of fifty-six or 81.2 percent of the instructors. A total of nine or 13.1 percent of the industrial arts instructors reported that their students did not pay for materials used in the class or laboratory. There were thirty-four or 49.3 percent of the instructors who made comments concerning the students paying for materials they used in the laboratory or classroom.

TABLE 6

FACTORS CONCERNED WITH PAYMENT OF MATERIALS AND TECHNIQUES USED IN BUILDING PROJECTS

Factor Category	Yes	Percent	No	Percent	Comment
Do your students pay for materials they use?	56	81.2%	9	13.1%	34
Do you use the manufacturing technique to build projects?	28	40.6%	39	56.5%	2

These comments were typical of several written concerning the question of the payment of materials used in the classroom and laboratory by the student.

"Students in the ninth grade pay for materials they use in the laboratory."

"Students purchase a "fee card" at the beginning of the year."

"Course is required—no payment of materials."

"Costs plus 20% on all projects."

"Materials sold at school price."

"We try to break even—no profit for the school."

"We attempt to get 75% of material cost back."

"Included in the book fees."

"Students pay for only some of the more expensive items."

Table 6, which is concerned with the use of the manufacturing technique to build projects, shows that the majority of the instructors did not use this technique. This includes thirty-nine or 56.5 percent of the instructors. Twenty-eight or 40.6 percent responded that they were using the manufacturing technique to build projects.

CHAPTER IV

AREAS OF INSTRUCTION

This chapter is concerned with the subjects taught by the industrial arts instructors; the questions concerning curriculum development; and the types of laboratories used by the instructors. It is based on the information obtained from the questionnaire.

Courses of Instruction Taught by Junior High School Industrial Arts Instructors

In Table 7, the data collected shows that a great majority of the instructors in this study use the courses of instruction in their program. These courses consist of : woodwork, metalwork, electricity, drafting, graphic arts, power mechanics, and crafts.

From the data collected, it would appear that drafting is the most popular subject taught. Sixty-four or 92.8 percent of the instructors responded that they taught drafting in their program.

Next in order came woodwork. Fifty-nine or 85.1 percent of the instructors taught woodwork in their programs. Metalwork was next with fifty or 72.5 percent of the instructors teaching this subject in their programs. Electricity was taught by forty-seven or 68.1 percent of the sixty-nine instructors involved in this study. Graphic arts and power mechanics were taught about equally by the instructors. Crafts was a popular subject with forty-five or 65.2 percent of the teachers.

TABLE 7

DISTRIBUTION OF SUBJECTS TAUGHT IN THE CURRICULUMS OF JUNIOR HIGH SCHOOL INDUSTRIAL ARTS INSTRUCTORS

Courses of Instruction	Number	Percent
Woodworking	59	84.1%
Metalworking	50	72.5%
Electricity	47	68.1%
Drafting	64	92.8%
Graphic Arts	24	34.8%
Power Mechanics	26	37.7%
Crafts	45	65.2%

Forty-five or 65.2 percent of them responded that they used crafts in their program. The activities involved in crafts were: plastics, leather, art metal, keene cement, and jewelry. Plastics was the most popular craft with forty-three or 62.3 percent of the instructors using it in their curriculums. Keene's cement and jewelry were the least subjects taught by instructors. Only one instructor taught Keene's cement in his program. Four or 5.8 percent of the instructors taught jewelry in their programs.

Factors Concerning Curriculum Development

In Table 8 the data collected shows that a total of thirty-four or 49.3 percent of the instructors indicated that they had set up the curriculums in their industrial arts programs.

TABLE 8

CURRICULUM DEVELOPMENT

Question	Number	Percent
Did the teacher set up the curriculum?	34	49.3%
Was the curriculum already set up?	35	50.7%
Comment	29	42%

Thirty-five or 50.7 percent of the instructors replied that the curriculums in their schools were already established when they assumed the teaching position. There were comments about the development of curriculums from twenty-nine or forty-two percent of the sixty-nine instructors in this survey.

Following is a brief list of the typical comments that were written by the instructors:

"The curriculum was roughly determined but the teacher shaped the course to fit his own viewpoints."

"The areas were chosen and we developed them."

"The curriculum is extremely flexible and can be modified to meet individual differences."

"Committee of industrial arts teachers set up the curriculum."

"We have added lower mechanics for remedial and elementary handicapped students."

Data Concerning Type of Laboratory

A question was asked about the two types of laboratories used in the industrial arts program. These are the general and unit shops. They have already been defined in this study. Twenty-one or 30.4 percent of the instructors replied that they operated a unit laboratory in their industrial arts program. A total of forty-five or 65.2 percent of the instructors responded that they were using the general area laboratory. Three or 4.3 percent reported that they used both the general and unit laboratories.

One teacher replied that in the seventh grade program the boys and girls switched home economics and industrial arts for the first nine weeks of the year. It was interesting to note that the instructor felt there was no carry-over value to adult life because the switching of programs was not continued at any other grade level.

CHAPTER V

TEACHING TECHNIQUES AND PHYSICAL EQUIPMENT

This chapter is concerned with the data related to the use of a course syllabus and textbooks; the factors concerned with safety in the laboratory and classroom; the use of visual and audio-visual aids; the use of stationary and portable power tools in the laboratory; the data concerned with student use of stationary and portable power equipment; and the information pertaining to dust collecting systems in the laboratory.

Data Related to Course Syllabus and Use of Textbooks

Thirty-three or 47.8 percent of the industrial arts teachers responded that they provided a course syllabus in their industrial arts curriculums. A greater number responded that they did not provide a course syllabus. This was a total of thirty-six or 52.2 percent of the instructors.

One comment pertaining to the use of a course syllabus was of interest to this writer. The instructor responded in this manner, "If you have success with one fine, I never have. The students lose them."

In regard to the use of textbooks, forty-four or 63.8 percent of the instructors replied that they had textbooks for each course they

taught. A total of twenty-five or 36.4 percent of the instructors indicated that they did not have textbooks for each course they taught. Following is a list of some of the basic comments pertaining to the use of textbooks in the industrial arts curriculums:

"Use various texts in some cases."

"Textbooks are kept in the shop and are used by each class as we haven't enough for each student to have a copy."

"Course consists mostly of practical application."

"Textbooks are hard for us to get and they become out dated to quick."

"No texts at all."

"One general shop text covering all units."

TABLE 9

TEACHING TECHNIQUES

Questions	Yes	Percent	No	Percent	Comment
Do you provide a study guide of course syllabus?	33	47.8%	36	52.2%	1
Do you have a textbook for each course you teach?	44	63.8%	25	36.4%	

Safety in the Laboratory

The data collected concerning the use of safety glasses in the laboratory revealed that all but three instructors provided safety glasses

for their students. The total number was sixty-six or 95.7 percent. The three instructors who did not provide safety glasses made comments as to what they did do concerning them. One instructor responded that the students in his class must provide their own safety glasses. Another replied that safety glasses were provided if students could not afford to buy them. One teacher commented that safety glasses were only provided for each machine.

Following is a list of some other safety devices that are in use by the instructors in this study:

"All equipment properly guarded and fire protected."

"Color coding or safety lanes or strips around all machines."

"Instruction on proper conduct in laboratory on use of equipment and materials."

"Safety signs and posters."

"Power tool and safety devices."

"Separate control for electrical power."

"Student-machine use limits."

"Safety instructor who works with hand tools in the junior high school."

"Shop lifting mirror to keep an eye on the circular saw."

"Safety helmets for power tools."

"Chuck key for drill press—key must be in unit before drill will operate.

TABLE 10

SAFETY IN THE LABORATORY

Question	Yes	Percent	No	Percent	Comment
Do you provide safety glass in your laboratory?	66	95.7%	3	4.3%	3

Data Concerning Use of Audio and Audio-Visual Aids

The majority or 63.8 percent of the instructors replied that they used visual aids frequently in their programs. Twenty-four or 34.8 percent of the instructors used visual aids infrequently in their programs and only one teacher replied that he never used visual aids.

Thirty-two or 46.4 percent of all instructors used audio-visual aids frequently while thirty-five or 50.7 percent were using audio-visual aids infrequently. Again, one instructor responded that he never used audio-visual aids.

TABLE 11

FACTORS PERTAINING TO THE USE OF VISUAL AND AUDIO-VISUAL AIDS

Question	Frequently	Percent	Infrequently	Percent	Never	Percent
Do you use visual aids?	44	63.8%	24	34.8%	1	1.4%
Do you use audio-visual aids?	32	46.4%	35	50.7%	1	1.4%

Data Concerning Visual and Audio-Visual Equipment

The use of the movie projector involved the largest number of the instructors in the study. Sixty-three or 91.3 percent of the instructors use the movie projector in their classes. The overhead and filmstrip projectors were about equal in use by the instructors. Fifty-three

or 76.8 percent of the instructors used the overhead projector while forty-nine or 70.9 percent use the filmstrip projector. The opaque projector was used by sixteen or 23.2 percent of the instructors. There were seventeen other audio and visual aids mentioned.

The list of visual and audio-visual aids that were mentioned other than the basic ones were the 3-D mock-ups, safety charts, flannel boards and bulletin boards, tape recorders, constructed teaching aids, stereos, Stanley educational charts, and models, pictures and diagrams.

TABLE 12

DISTRIBUTION OF VISUAL AND AUDIO-VISUAL EQUIPMENT

Equipment	Number	Percent
Overhead Projector	53	76.8%
Filmstrip Projector	49	70.9%
Movie Projector	63	91.3%
Slide Projector	28	40.6%
Opaque Projector	16	23.2%
Other	17	24.6%

Stationary Power Equipment

The data that was collected in Table 13 shows the number and percentages that stationary power tools were used by the instructors in this survey. Some of these tools are the table saw, jointer, drill press, wood lathe, metal lathe, and other power tools that were listed by the instructors.

TABLE 13

DISTRIBUTION OF STATIONARY POWER EQUIPMENT

Equipment	Number	Percent
Table Saw	57	82.6%
Jointer	41	59.4%
Band Saw	56	81.2%
Scroll Saw	56	81.2%
Wood Lathe	44	63.8%
Surface Planer	8	11.6%
Metal Lathe	17	24.6%
Drill Press	63	91.3%
Tool Grinder	61	88.4%
Spindle Sheper	5	7.2%
Other	39	56.5%

A total of ten major stationary power tools were listed in Table 13. The data collected revealed that the drill press was used by sixty-three or 91.3 percent of the instructors. The table saw, band saw, scroll saw, and the tool grinder were used from eighty-one percent to eighty-eight percent by the instructors. The spindle sheper and the surface planer were used least by the instructors. The jointer was used by forty-one or 59.4 percent of the instructors. The metal lathe was used by seventeen or 24.6 percent of the instructors.

Several of the teachers listed other stationary power tools that they were using. These are the power hacksaw, welder, milling machine,

metal band saw, shaper, 10" radial arm saw, nibbler for metal, vertical belt sander, disc sander, buffers, and the spindle sander.

A question was asked in the questionnaire concerning the students using stationary power tools. From the data collected it was found that, at the seventh grade level, thirty-three or 47.8 percent of the instructors allowed their students to use stationary power tools. Fourteen or 20.3 percent did not let their students use stationary power tools.

At the eighth grade level, it was found that fifty-two or 73.9 percent of the instructors allowed their students to use stationary power tools. Only eight or 11.6 percent did not let their students use stationary power tools.

In the ninth grade twenty-eight or 40.6 percent of the instructors allowed their students to use stationary power machines. Only three or 4.3 percent did not let their students use the machines.

Portable Power Equipment

There is listed in Table 14 six major portable power tools. These are the circular saw, electric drill, belt sander, router, vibrating sander, and the sabre saw. There were other portable power tools listed by the instructors. These are the spot welder, metal shears, paint sprayers, electric buffer for plastics and art metal, and an electric soldering gun.

The data collected showed that the electric drill was used by sixty-two or 89.9 percent of the instructors in their laboratories. The belt sander, router, vibrating sander, and the sabre saw were used from sixty-two to sixty-nine percent by the instructors in their laboratories.

TABLE 14

DISTRIBUTION OF PORTABLE POWER EQUIPMENT

Portable Power Equipment	Number	Percent
Circular Saw	19	27.5%
Electric Drill	62	89.9%
Belt Sander	48	69.6%
Router	43	62.3%
Vibrating Sander	44	63.8%
Sabre Saw	45	65.2%
Other	10	14.5%

Nineteen or 27.5 percent of the instructors responded that they used the circular saw in their laboratories.

The same question was asked concerning the students using portable power tools. At the seventh grade level, thirty or 43.5 percent of the instructors allowed their students to use portable power tools. Seventeen or 24.6 percent of the instructors at this level responded that they did not let students use portable power tools.

At the eighth grade level fifty-three or 76.8 percent of the instructors allowed their students to use portable power tools. Only seven or 10.0 percent replied that their students did not use portable power tools.

In the ninth grade thirty-three or 47.8 percent of the instructors allowed their students to use portable power tools while there were none who said no.

There were quite a few comments concerning the students using portable and stationary power tools. Following is a typical list of their comments:

"Students can use certain machines with the teachers approval."

"Processes limited by grades."

"Grade levels are limited to various tools."

"Certain machines used with teacher supervision."

"All tools and machines except table saw and jointer."

"Can use after proper instruction and safety testing."

"Sometimes in production."

"Limited with ability level with certain tools."

Data Concerned with a Dust Collecting System

In Table 15 the question was asked concerning dust collecting systems for junior high school industrial arts laboratories. The majority of the instructors did not have a dust collecting system in their laboratories. This was sixty-one or 88.4 percent. Only eight or 11.6 percent replied that they had dust collecting systems.

From the data it was learned that most of the smaller schools did not have dust collecting systems. It appears that the larger schools where several areas are taught at the same had most of the dust collecting systems that was used in this study.

TABLE 15

DUST COLLECTING SYSTEMS

Question	Yes	Percent	No	Percent
Do you have a dust collecting system in your laboratory?	8	11.6%	61	88.4%

CHAPTER VI

SUMMARY AND CONCLUSIONS

This study was undertaken to survey, then ascertain information and compare the junior high school industrial arts programs in the northern, southern, eastern, and western sections of Illinois. Four round tables plus one county in another round table were selected at random to represent this study. Geographically, seventeen counties were involved in the study. There were five counties in the north, and four in the east, west, and south.

The purpose was to gather data concerned with professional information of instructors, areas of instruction taught, techniques of teaching, and physical equipment and facilities of the junior high school industrial arts programs in the four sections of Illinois.

A questionnaire concerning these four items was formulated and mailed to seventy-five industrial arts instructors in forty-seven junior high schools in Illinois. A total response of sixty-nine instructors or ninety-two percent was the final tabulation of all the returns.

The industrial arts instructors of the forty-seven junior high schools represented in this study indicated that approximately fifty-two percent of them held a Bachelor's degree and 44.9 percent held a Master's degree.

They further indicated that the majority of them had attended a university from the period of 1961-1969. Fifty-three or 76.8 percent of the forty-seven instructors held degrees from ten universities in Illinois. Fourteen or 20.3 percent held degrees in out of state universities.

From the data collected it was found that the majority of the sixty-nine instructors are teaching in the schools with 500-1000 enrollments. This involved twenty-six or 37.7 percent of the instructors. In data tabulated from the questionnaire, it was found that the enrollment of students in the study varied from 60 to 9,500 with a mean of 946.

The average number of students in each class in the study ranged from 10 to 32 with a mean of 19.

The data collected concerning the grades taught by junior high school industrial arts instructors showed that the majority of the instructors were teaching eighth grade which is fifty-eight or 84.1 percent. Forty-four or 63.8 percent were teaching grade seven and thirty-six or 52.2 percent were teaching ninth grade. Other classes, such as adult education and elementary handicapped classes were being taught.

The majority of the instructors in this study reported that they had a budget set up for their industrial arts departments. Only twenty-three or 33.3 percent did not have a budget set up. Over half of the instructors considered their budgets adequate.

The data concerned with student payment of materials revealed that the majority of the students pay for materials they use. It was

also learned from this study the majority of the instructors did not use the manufacturing technique to build projects. This included thirty-nine or 56.5 percent of the instructors. Twenty-eight or 40.6 percent used the manufacturing technique to build projects.

The next step, in answering the questions raised by the purpose of this study, was to answer questions concerned with the areas of instruction. The areas of instruction that were mentioned in this study were: woodworking, metalworking, electricity, drafting, graphic arts, power mechanics, and crafts. Drafting appeared to be the most popular taught. Sixty-four or 92.8 percent of the instructors used it in their program. Next in order came woodworking. Fifty-nine or 84.1 percent of the instructors taught woodworking in their programs. Graphic arts and power mechanics were taught about equal by the instructors.

Crafts was taught by forty-five or 65.2 percent of the instructors. The data collected concerning curriculum development revealed that a total of thirty-four or 49.3 percent of the instructors indicated that they had set up the curriculums in their industrial arts programs. Thirty-five or 50.7 percent of the instructors replied that the curriculums were already established when they assumed the position. There was also several comments of instructors concerning curriculum development.

The data concerned with the type of laboratories in use by the instructors revealed that twenty-one or 30.4 percent used the unit laboratory and a total of forty-five or 65.2 percent used the general laboratory. Three or 4.3 percent of the instructors used both the general and unit laboratories.

The information concerned with the use of a course syllabus revealed that thirty-three or 47.8 percent of the instructors provided them for his classes. Thirty-six or 52.2 percent did not provide a course syllabus.

In regard to the use of textbooks, forty-four or 63.8 percent of the instructors used textbooks for each course and twenty-five or 36.4 percent did not provide any. There was also several comments by instructors concerning the use of the textbook.

Sixty-six or 95.7 percent of the instructors indicated that they furnished safety glasses in the laboratory. Other safety devices were listed by this writer from the data collected from the instructors.

The use of visual and audio-visual aids was also one of the factors discussed in this study. The majority or 63.8 percent of the instructors replied that they used visual aids frequently. Twenty-four or 34.8 percent used visual aids infrequently and one never used them at all.

Thirty-two or 46.4 percent used audio-visual aids frequently while thirty-five or 50.7 percent were using them infrequently. Again one instructor responded that he never used audio-visual aids.

Movie projectors were used most by the instructors in this study. They were used by sixty-three or 91.3 percent of the instructors. Fifty-three or 76.8 percent of the instructors used the overhead projector while forty-nine or 70.9 percent used the filmstrip projector.

A total of ten major stationary power tools were listed in Table 13. These consisted of the: table saw, jointer, wood lathe, band saw, drill press, shaper (spindle), surface planer, tool grinder, metal lathe, and the scroll saw.

The drill press was used by the majority of the instructors and the spindle shaper and surface planer were used least by instructors. Several teachers listed other stationary power tools in use. Some of these were, the power hacksaw, milling machine, metal band saw and the shaper.

From the data collected concerning student use of stationary power tools, it was found that at the seventh grade level, thirty-three or 47.8 percent of the instructors allowed their students to use stationary power tools. Fourteen or 20.3 percent were not allowed.

In the eighth and ninth grades, the instructors allowed their students to use the stationary power tools more than in the seventh grade.

Table 14 lists six major portable power tools. These are the circular saw, electric drill, belt sander, router, vibrating sander, and the sabre saw. Student use of portable power tools is about the same as for stationary power tools except for grade seven.

Table 15 is concerned with the dust collecting systems. The majority of the instructors replied that they did not have one. This was sixty-one or 88.4 percent. Only eight or 11.6 percent of the instructors replied that they had dust collecting systems in their laboratories.

APPENDIX A

EASTERN ILLINOIS UNIVERSITY
SCHOOL OF INDUSTRIAL ARTS AND TECHNOLOGY
CHARLESTON, ILLINOIS 61920

December 17, 1968

Mr. John Smith
County Superintendent of Schools
Freeport, Illinois 61032

Dear Mr. Smith,

As a graduate student in Industrial Arts and Technology at Eastern Illinois University, I am interested in the curriculums used by the Junior High School Industrial Arts teachers in Stephenson County.

It is sincerely hoped that you will find a few minutes in your busy schedule to fill out the enclosed information blank.

Your assistance in listing the teachers, the names of the schools in which they teach, the address of the schools, and the zip codes of each school, will be greatly appreciated.

Please accept my thanks for your cooperation.

Sincerely,

Marty Pattin
Graduate Student
Eastern Illinois University

APPROVED

Robert Sonderman
Graduate Advisor
Eastern Illinois University

INFORMATION BLANK

Directions: In the information blank below list the names and addresses of the Junior High Schools, the Industrial Arts Teachers and the zip codes for each school.

County ______________________

Name of Jr. High School	Address of School	Name of I.A.Teacher	Zip Code

EASTERN ILLINOIS UNIVERSITY

SCHOOL OF INDUSTRIAL ARTS AND TECHNOLOGY

CHARLESTON, ILLINOIS 61920

January 9, 1969

Dear Mr.

As a graduate student in Industrial Arts and Technology at Eastern Illinois University, I am writing a thesis comparing the Industrial Arts curriculums used by Junior High Schools in four sections of the state. Your school is in one of the sections that was selected.

It is sincerely hoped that you will take a few minutes from your busy schedule to fill out the enclosed questionnaire.

Your assistance in helping make this study will be greatly appreciated. I have enclosed a stamped, self addressed envelope for your convenience.

Sincerely,

Marty Pattin
Graduate Student
Eastern Illinois University

Approved
Robert Sonderman
Graduate Advisor
Eastern Illinois University

JUNIOR HIGH SCHOOL INDUSTRIAL ARTS QUESTIONNAIRE

INSTRUCTOR _____ SCHOOL _____

SCHOOL ADDRESS _____

PROFESSIONAL INFORMATION

1. Check highest collegiate degree: B.S. ( ) M.S. ( ) Other _____
2. Date of last attendance at a university. _____
3. Name of university last attended. _____
4. What is the enrollment of your school? _____
5. What grades do you teach? 7th ( ) 8th ( ) 9th ( ) Other _____
6. What is the average number of students in your classes? _____
7. Do you have a budget set up for your department? Yes ( ) No ( )
8. Do you consider your budget adequate? Yes ( ) No ( )
9. Do your students pay for materials they use? Yes ( ) No ( )

   Comment: _____

10. Do you use the manufacturing technique to build projects. Yes ( ) No ( )

AREAS OF INSTRUCTION

11. Check the following courses of instruction that you teach in your program:

A. Woodworking	( )	E. Graphic Arts	( )	2. Leather	( )
B. Metalworking	( )	F. Power Mechanics	( )	3. Art Metal	( )
C. Electricity	( )	G. Crafts:	( )	4. Keene Cement	( )
D. Drafting	( )	1. Plastics	( )	5. Jewelry	( )

12. Did you set up the curriculum or was it already set up when you assumed the position?

    A. You set up curriculum ( ) B. Curriculum already set up ( )

    Comment: _____

13. Check type of laboratory used. A. Unit ( ) B. General ( )

    C. Other: _____

TEACHING TECHNIQUES

14. Do you provide a study guide or course syllabus? Yes ( ) No ( )

15. Do you have a textbook for each course you teach? Yes ( ) No ( )

Comment: _____

16. Do you provide safety glasses in your laboratory? Yes ( ) No ( )

17. What other safety devices are in use? _____

18. Do you use visual aids? A. Frequently ( ) B. Infrequently ( ) C. Never ( )

19. Do you use audio visual aids? A. Frequently ( ) B. Infrequently ( ) C. Never (

20. Check the following visual and audio visual aids you use:

A. Overhead Projector ( ) D. Slide Projector ( )

B. Filmstrip Projector ( ) E. Opaque Projector ( )

C. Movie Projector ( ) F. Other: _____

PHYSICAL EQUIPMENT

I. STATIONARY POWER EQUIPMENT

21. Check the following stationary power equipment that you have in your laboratory:

A. Table Saw ( ) E. Wood Lathe ( ) I. Tool Grinder ( )

B. Jointer ( ) F. Surface Planer( ) J. Spindle Shaper ( )

C. Band Saw ( ) G. Metal Lathe ( ) K. Other: _____

D. Scroll Saw ( ) H. Drill Press ( )

22. Do the students use stationary power tools?

A. 7th Yes ( ) No ( ). B. 8th Yes ( ) No ( ). C. 9th Yes ( ) No ( ).

Comment: _____

II. PORTABLE POWER EQUIPMENT

23. Check the following portable power equipment that you have in your laboratory.

A. Circular Saw ( ) C. Belt Sander ( ) E. Router ( )

B. Electric Drill ( ) D. Vibrating Sander( ) F. Sabre Saw ( )

G. Other _____

24. Do the students use portable power equipment?

A. 7th Yes ( ) No ( ) B. 8th Yes ( ) No ( ) C. 9th Yes ( ) No ( )

25. Do you have a dust collecting system in your laboratory? Yes ( ) No ( )

THANK YOU FOR YOUR RESPONSES

EASTERN ILLINOIS UNIVERSITY

SCHOOL OF INDUSTRIAL ARTS AND TECHNOLOGY

CHARLESTON, ILLINOIS 61920

January , 1969

Dear Mr.

Recently I sent you a questionnaire concerning the Industrial Arts curriculums used by Junior High Schools in four sections of the state.

As of yet, I have not received your reply. My time is very limited, and it is sincerely hoped that you will take a few minutes from your busy schedule to fill out the questionnaire and send it back to me as soon as possible.

I have enclosed another questionnaire for your convenience.

Your assistance in helping make this study will be greatly appreciated.

Sincerely,

Marty Pattin
Graduate Student
Eastern Illinois Univ.

Approved
Robert Sonderman
Graduate Advisor
Eastern Illinois Univ.

APPENDIX B

COUNTIES INCLUDED IN THIS STUDY

Northern Section
(Round Table 1 and One County in Round Table 4)

Counties Included in this Section

Boone	Dupage
Dekalb	Stephenson
Winnebago	

Southern Section
(Round Table 20)

Counties Included in this Section

Franklin	Perry
Jackson	Williamson

Eastern Section
(Round Table 13)

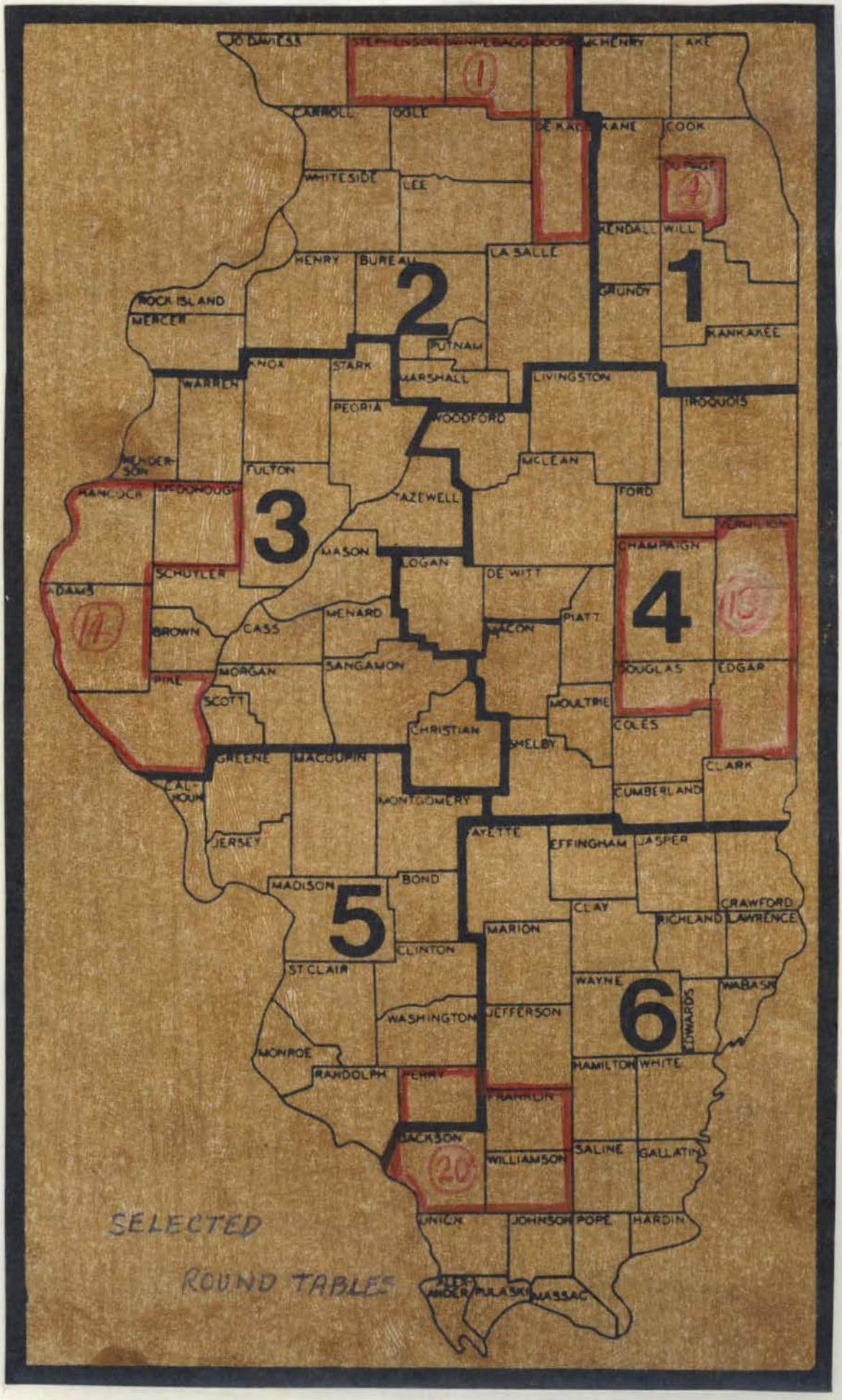
Counties Included in this Section

Champaign	Edgar
Douglas	Vermilion

Western Section
(Round Table 14)

Counties Included in this Section

Adams	McDonough
Hancock	Pike


JO DAVIESS
STEPHENSON
WINNEBAGO
BOONE
MCHENRY
LAKE
CARROLL
OGLE
DE KALB
KANE
COOK
WHITESIDE
LEE
KENDALL
WILL
HENRY
BUREAU
LA SALLE
GRUNDY
ROCK ISLAND
MERCER
PUTNAM
KANKAKEE
KNOX
STARK
MARSHALL
LIVINGSTON
WARREN
PEORIA
WOODFORD
IROQUOIS
HENDERSON
FULTON
MCLEAN
HANCOCK
MCDONOUGH
TAZEWELL
FORD
VERMILION
CHAMPAIGN
MASON
LOGAN
DE WITT
SCHUYLER
ADAMS
MENARD
PIATT
BROWN
CASS
MACON
PIKE
MORGAN
SANGAMON
DOUGLAS
EDGAR
SCOTT
MOULTRIE
CHRISTIAN
COLES
SHELBY
GREENE
MACOUPIN
CLARK
CALHOUN
MONTGOMERY
CUMBERLAND
FAYETTE
JERSEY
EFFINGHAM
JASPER
MADISON
BOND
CRAWFORD
CLAY
MARION
RICHLAND
LAWRENCE
CLINTON
ST CLAIR
WAYNE
WABASH
WASHINGTON
JEFFERSON
EDWARDS
MONROE
HAMILTON
WHITE
RANDOLPH
PERRY
FRANKLIN
JACKSON
WILLIAMSON
SALINE
GALLATIN
UNION
JOHNSON
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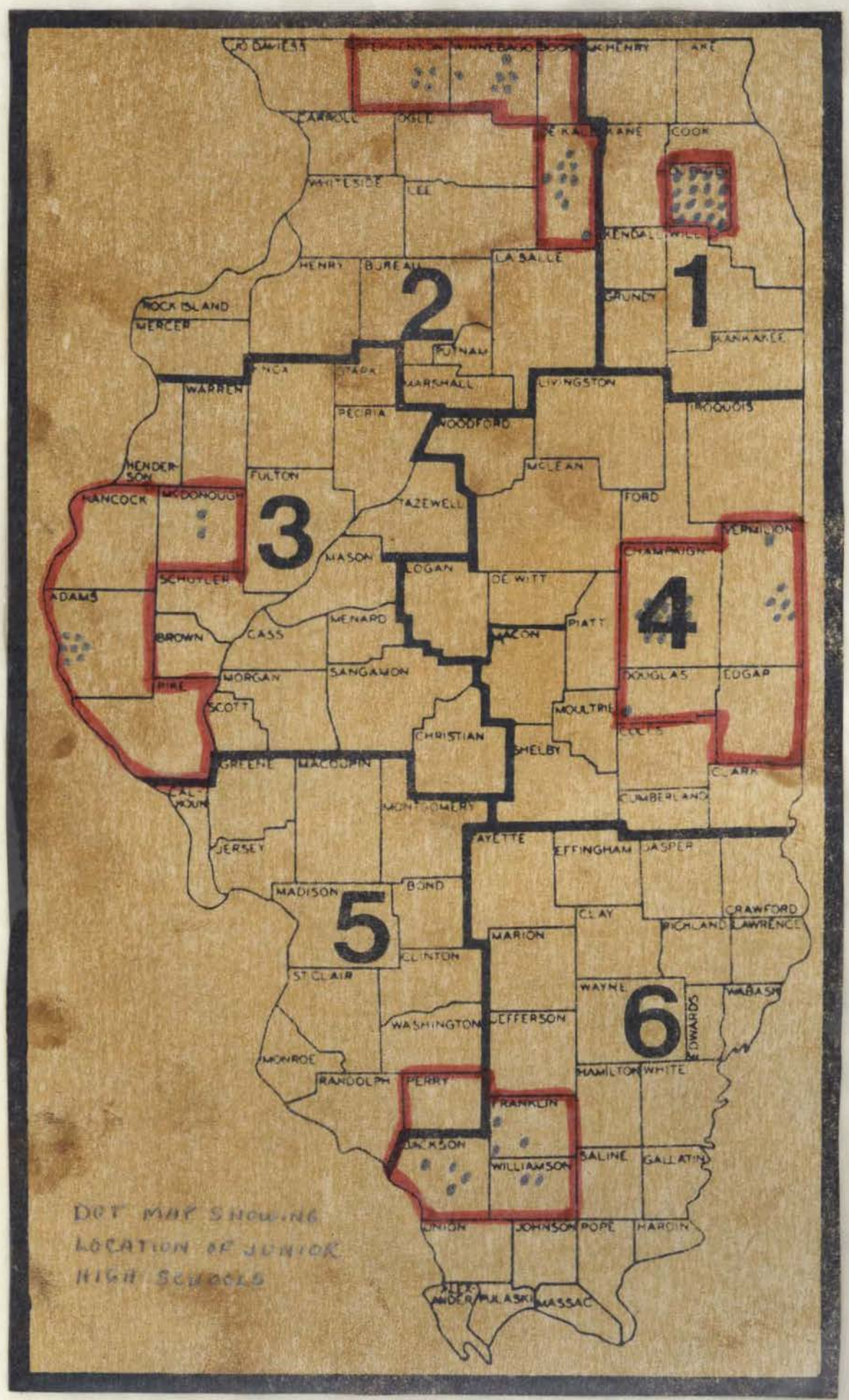
SELECTED
ROUND TABLES



DOT MAP SHOWING LOCATION OF JUNIOR HIGH SCHOOLS

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