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A Survey of Labor Unions, Industry, and Public School Representatives to Determine What Summer Employment Opportunities Are Available for Teachers, to Compare Opportunities Existing for the Purpose of Updating Knowledge and Skills, and to Determine the Need, Benefit, and Feasibility of an Industrial Training Program

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A Survey of Labor Unions, Industry, and Public School Representatives to Determine What Summer Employment Opportunities are Available for Teachers, to Compare Opportunities Existing for the Purpose of Updating Knowledge and Skills, and to Determine the Need, Benefit, and Feasibility of an Industrial Training Program. (TITLE)

BY

RICHARD D. HALLIBURTON

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

Master of Science in Education

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY CHARLESTON, ILLINOIS

1968

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING THIS PART OF THE GRADUATE DEGREE CITED ABOVE

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TABLE OF CONTENTS

	PAGE
PREFACE	iv
Chapter	
I. INTRODUCTION	1
Previous Studies in this Field	
Need for this Investigation	
The Problem	
The Thesis	
II. DEFINITION OF TERMS	4
III. METHOD OF APPROACH	5
Selection of Survey Area	
Selection of Industrial Representatives	
Selection of Union Representatives	
Selection of Public School Representatives	
IV. PREVIOUS RESEARCH ON THIS SUBJECT	12
Background	
Need	
Responsibility of Schools	
Responsibility of Industry	
Responsibility of Unions	
Remaining Question	
V. ANALYSIS OF RETURNS	19
VI. CONCLUSIONS	45
VII. RECOMMENDATIONS	53

	PAGE
APPENDIX A	55
Distribution and Rate of Returns of Questionnaires	
APPENDIX B	57
Cover Letter	
Copy of Questionnaire Sent to Industrial Representatives	
Copy of Questionnaire Sent to Union Representatives	
Copy of Questionnaire Sent to Public School Representatives	
APPENDIX C	71
Complete list of comments by Industrial Representatives	
Complete list of comments by Union Representatives	
Complete list of comments by Public School Representatives	
BIBLIOGRAPHY	94

PREFACE

It is doubtful that in the history of formal education there has ever been a time when schools have been able to keep pace with our industrial society. In fact, it is generally believed that schools should digest many of society's changes of concept for a period of years before they are integrated into the curricula. This procedure came into being in order to evaluate and study the effect that these changes might have on educational aims and objectives. Education has accepted proven ideas and has, through better methods and improved teacher education, reduced the time gap between education at practice and our industrial society.

In recent years these industrial processes and techniques have begun to change almost daily. The operations of today quite possibly will be obsolete tomorrow. The sophisticated new equipment of industry has already made many machines and operations in the industrial arts laboratory obsolete. It is time to reevaluate these changes, or run the risk of jeopardizing the role industrial arts now plays as the "informed" spokesman for industry in the schools.

A good way to learn these new techniques is by having applied experience in the field; however, in some cases it is difficult to apply because the initial financial outlay and increased cost of rapid replacement of equipment cannot be absorbed by the schools. It seems obvious that only

industry can provide some of this experience to the extent necessary to benefit teachers. The purpose of this study, therefore, was to research summer employment opportunities for industrial teachers, with special emphasis on determining the feasibility of a proposed "Industrial Training Program."

I. INTRODUCTION

Previous Studies in this Field

Numerous surveys, books, publications, interviews, etc. have pointed out the obvious gap that exists between what youth are prepared to do as a result of their academic training and what is expected of them by industry as new employees.

The U.S. Chamber of Commerce assembled a booklet which lists various surveys completed across the United States dealing with this problem and covering topics such as: high school dropouts, youth unemployed, adult unemployed, education officials, guidance counselors, employers, and the public. After some study we get an insight to some of the problems facing teachers today.¹

Need for this Investigation

Industrial arts, the program which has accepted the responsibility of teaching the basic concepts of industry and technology to students, is faced with a problem unique to the technological fields - that of "keeping abreast" of these constantly changing processes and techniques.

Due to the constant changes occurring within these fields, teaching skills soon become dated or obsolete. Many teachers lack knowledge of

¹Target: Employment! Chamber of Commerce of the United States, Washington, D.C. (March 1964)

the latest processes or techniques, which is necessary in order to present current information. A thorough knowledge of these changes is needed in order to generate enthusiasm and interest for students who will be entering these fields and in facing our responsibility of developing adequate educational programs to prepare for coming generations.

The Problem

The problem, then, is to determine if sufficient opportunities exist for industrial arts and trade teachers to keep abreast of these constantly changing processes and techniques. Specifically, we need to answer these questions:

1. Are summer employment opportunities available to industrial arts and trade teachers in factory or manufacturing areas of local industries?
2. Would an "Industrial Training Program," designed to upgrade the technical knowledge and skills of these teachers, be a possible solution to this problem?

The Thesis

In general, it is believed that summer employment opportunities are insufficient for teachers to become fully acquainted with all of the latest industrial processes and techniques in their fields.

It is also believed that these teachers could benefit immensely by having more direct contact with industry. An "Industrial Training Program," designed to meet specific needs, would stimulate participation and involvement with industry and would allow these teachers to communicate more effectively

and intelligently concerning industry and the important role it plays in our society. It would also be an invaluable aid in developing parent-teacher and teacher-student relationships, as well as being a step toward solving the problem of obtaining competent personnel.

II. DEFINITION OF TERMS

Industrial Arts as used in this study refers to the "area concerned with tools, materials, and processes of industry, which is offered as a part of a general education curriculum."²

Trade refers to "the area of vocational education which deals with development of basic manipulative skills, safety habits, technical knowledge and related occupational information necessary to secure initial employment in industrial occupations."³

Industrial Training Program refers to a training program set up under the auspices of the university, but conducted in factories or places of business for the purpose of retraining, upgrading, or improving teachers' industrial knowledge and skills.

²The University of Missouri Bulletin, Vol. 56, Number 44 (December 22, 1955)
(See footnote #1, page 5)

³Ibid.

III. METHOD OF APPROACH

In order to collect usable data, questionnaires were mailed to 300 selected representatives of labor unions, industries, and public schools in the central Illinois area.

Selection of Survey Area

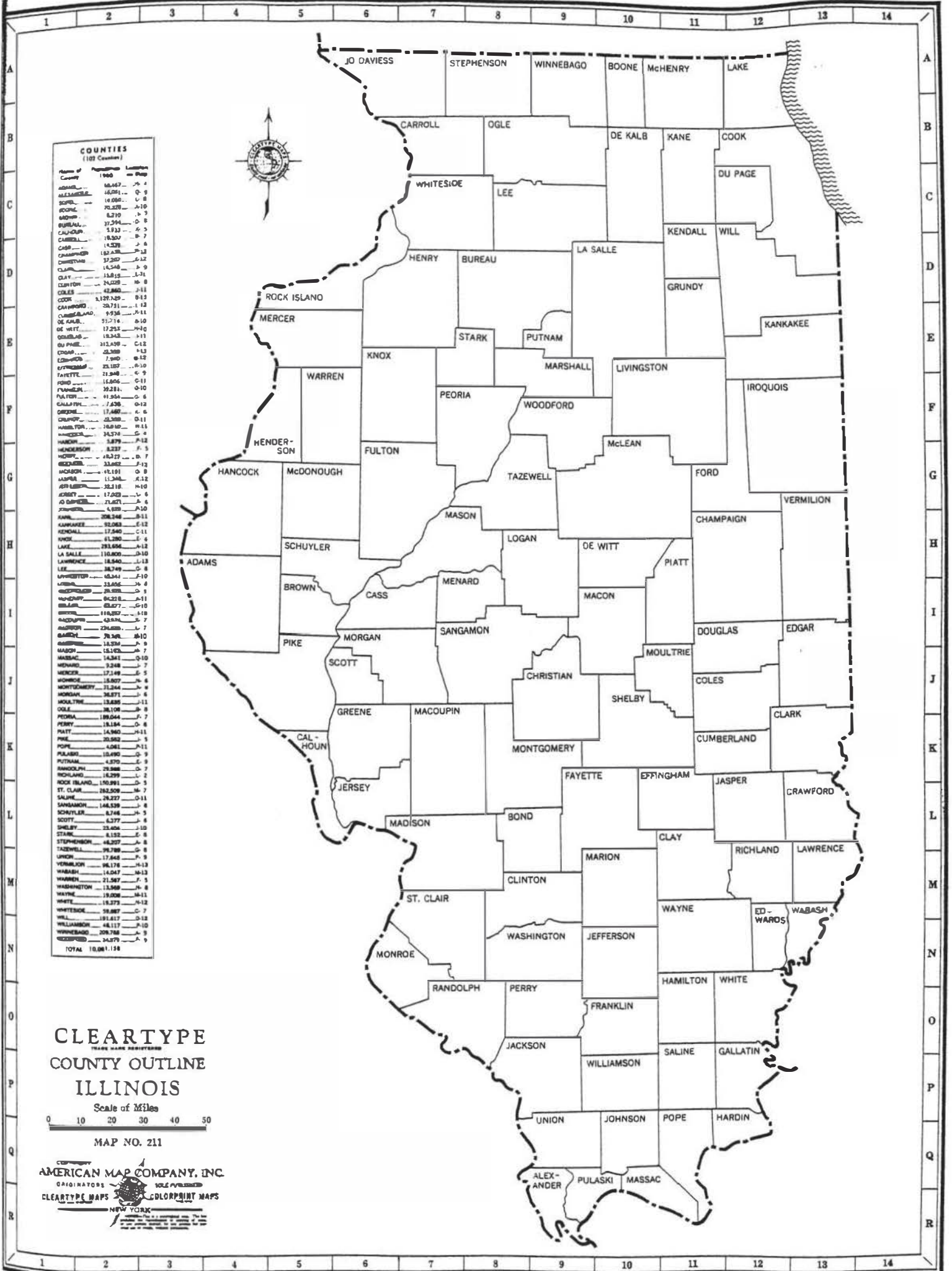
The original survey area was to have centered within the area covered by Region 8 of the Allied Industrial Workers. This area was familiar to the writer because of his past presidency of Local 186, a member union of AIW.

Following an interview with the Regional Director, it was found that this region covered an area larger than was needed, so an attempt was made to locate the main industrial center in central Illinois.

Using a map and compass, with Clinton as the center point, it was decided that a radius of sixty-five miles would cover adequate industrial areas. Therefore, the survey covers all of the area in any direction sixty-five miles from Clinton, Illinois.

The counties located within this survey area are listed below:

Champaign	Ford	Peoria
Christian	Livingston	Sangamon
Coles	Logan	Shelby
DeWitt	Macon	Tazwell
Douglas	McLean	



COUNTIES
(102 Counties)

Name of County	Population 1900	Location Map
ADAMS	68,467	A-4
ALEXANDER	16,091	Q-9
ALTON	16,956	C-8
ANDREW	70,328	J-10
ANGUS	6,219	J-3
BUREAU	37,594	D-8
CALHOUN	5,937	A-5
CAMDEN	18,500	B-7
CASS	14,578	J-4
CHAMPAIGN	182,438	A-12
CHRISTIAN	37,267	A-12
CLAY	14,544	J-9
CLINTON	15,818	L-11
COLES	24,028	H-8
COOK	42,860	A-11
COOPER	3,129,325	D-10
CRAWFORD	20,751	L-12
CUMBERLAND	9,936	A-11
DE KALB	37,714	B-10
DE WITT	17,233	H-10
DECATUR	18,348	H-11
DEKALB	212,450	C-12
DECATUR	23,589	A-13
EDWARDS	7,900	B-12
EFFINGHAM	25,107	B-10
FAYETTE	21,848	E-9
FORD	16,604	C-11
FULTON	39,214	C-10
GALLATIN	11,554	O-6
GALATIEN	7,438	O-12
GRUNDY	17,460	A-6
HANCOCK	23,309	O-11
HANCOCK	24,810	H-11
HANCOCK	24,574	C-4
HANCOCK	5,879	A-12
HENDERSON	8,237	F-5
HENRY	112,121	F-7
HENRY	33,662	F-12
HENRY	41,191	O-8
HENRY	11,348	K-12
HENRY	32,318	H-10
HENRY	17,023	L-6
HENRY	21,621	A-6
HENRY	4,659	A-10
HENRY	208,246	A-11
HENRY	52,063	E-12
HENRY	17,540	C-11
HENRY	61,290	E-4
HENRY	23,456	A-12
HENRY	110,800	D-10
HENRY	18,840	L-13
HENRY	38,749	D-8
HENRY	10,344	A-10
HENRY	23,004	A-4
HENRY	28,928	A-5
HENRY	64,211	A-11
HENRY	62,657	H-10
HENRY	116,957	A-10
HENRY	43,554	S-7
HENRY	294,638	L-7
HENRY	78,508	A-10
HENRY	14,374	A-9
HENRY	15,163	A-7
HENRY	14,341	O-10
HENRY	3,248	J-7
HENRY	17,148	E-5
HENRY	15,807	A-8
HENRY	31,244	A-9
HENRY	36,573	A-6
HENRY	13,638	A-11
HENRY	38,109	A-8
HENRY	189,044	J-7
HENRY	18,184	O-4
HENRY	14,960	A-11
HENRY	20,582	S-5
HENRY	4,081	A-11
HENRY	10,490	O-9
HENRY	4,570	E-9
HENRY	28,588	O-7
HENRY	14,299	L-2
HENRY	150,991	A-5
HENRY	282,509	M-7
HENRY	28,227	O-11
HENRY	146,539	A-8
HENRY	6,746	A-5
HENRY	6,377	A-6
HENRY	33,404	J-10
HENRY	8,153	A-8
HENRY	44,207	A-8
HENRY	96,789	G-8
HENRY	17,645	A-9
HENRY	96,174	A-13
HENRY	14,041	A-13
HENRY	21,587	F-5
HENRY	13,569	A-8
HENRY	19,008	A-11
HENRY	18,373	A-12
HENRY	58,667	C-7
HENRY	191,617	D-12
HENRY	48,117	A-10
HENRY	208,788	A-9
HENRY	34,579	A-9
TOTAL	10,081,158	

CLEARTYPE
TRADE MARK REGISTERED
COUNTY OUTLINE
ILLINOIS

Scale of Miles
0 10 20 30 40 50

MAP NO. 211

AMERICAN MAP COMPANY, INC.
ORIGINATORS
SOLE PUBLISHERS
CLEARTYPE MAPS
GOLDPRINT MAPS
NEW YORK

Selection of Industrial Representatives

In order to obtain equal coverage of the entire area, major cities were selected from each county. The size and number of industries located in each city was determined, and a proportional number of questionnaires was assigned to each. The original listing included:

<u>City</u>	<u>County</u>	<u>Total # of Industries</u>	<u># of Allotted Questionnaires</u>
Bloomington	McLean	67	5
Champaign	Champaign	49	9
Clinton	DeWitt	13	2
Decatur	Macon	144	10
Gibson City	Ford	7	2
Lincoln	Logan	19	5
Mattoon	Coles	45	10
Normal	McLean	8	2
Pana	Christian	12	5
Paxton	Ford	10	2
Pekin	Tazwell	31	5
Peoria	Peoria	230	10
Pontiac	Livingston	23	10
Springfield	Sangamon	133	11
Taylorville	Christian	21	5
Tuscola	Douglas	10	2
Urbana	Champaign	17	5

According to labor organizing rules, any company with five or more employees may form a union, so this number was used to determine the smallest company to be covered in the survey. The list was further refined so that industries included would be involved in one or more of the major areas of industrial arts. These areas include printing, woodworking, drafting, metals, and electricity-electronics. The finalized list included:

<u>City</u>	<u>#Industries</u>	<u>#Surveys</u>	<u># of Major Fields*</u>				
			<u>Print</u>	<u>Metals</u>	<u>Woods</u>	<u>Elect</u>	<u>Draft</u>
Auburn	8	1	1	-	-	-	-
Atwood	7	1	1	-	-	-	-
Bloomington	67	16	5	5	5	8	8
Champaign	49	8	3	6	4	4	5
Clinton	13	2	1	1	-	-	-
Decatur	144	15	8	12	9	10	10
Gibson City	7	4	1	1	2	1	1
Lincoln	19	5	4	3	3	3	3
Mattoon	45	7	4	4	3	3	4
Mt. Zion	5	1	-	-	1	-	1
Pana	12	2	-	1	1	1	-
Paxton	10	3	-	-	1	2	1
Pekin	31	5	4	3	3	2	3
Peoria	230	12	10	7	9	6	7
Pontiac	23	6	3	3	4	4	2
Springfield	133	10	4	6	7	8	5
Taylorville	21	1	1	-	-	1	1
Tuscola	10	1	-	-	1	1	1
Total	834	100	50	52	53	54	52

*Number of fields are out of proportion to number of questionnaires because some companies are involved in more than one field.

Approximately thirty percent of the companies surveyed employed from five to ninety-nine people, fifty-seven percent employed 100 - 999, and thirteen percent employed 1,000 or over. The minimum gross output or capacity for the group surveyed was \$10,000 to \$25,000 and the maximum was over \$1,000,000.

Selection of Union Representatives

Due to the fact that drafting is generally a salaried job, it is acknowledged that adequate union coverage could not be made.

It was also decided that adequate union coverage of the electricity-electronics and woodworking areas could not be made through the industrial unions. Therefore, trade unions have also been included in this survey.

Again, much cooperation was accorded in compiling the following list by international union representatives, business agents, presidents of area trade and industrial unions, and especially, by the Director of Region 8 AIW-AFL.

An attempt was made to cover the same areas, in the same proportions, as those selected for industry.

<u>City</u>	<u>#Surveys</u>	<u>Major Areas of Industrial Arts Field</u>				
		<u>Print</u>	<u>Metals</u>	<u>Woods</u>	<u>Elect</u>	<u>Draft</u>
Argenta	1	1	-	-	-	-
Bartonville	1	-	1	-	-	-
Bloomington	7	1	3	2	1	-
Champaign	13	2	3	4	4	-
Decatur	24	2	19	17	17	1
Forsyth	1	-	1	1	1	-
Lincoln	2	-	1	2	1	1
Mattoon	3	1	2	2	2	-
Moweaqua	1	-	1	1	1	-
Mt. Zion	1	-	1	1	1	-
Pekin	3	-	2	1	2	-
Peoria	20	3	16	10	12	2
Pontiac	3	1	1	2	1	-
Springfield	14	2	10	8	6	1
Stonington	1	-	1	1	1	-
Taylorville	1	-	1	1	1	-
Tuscola	2	-	1	2	1	-
Urbana	1	-	-	1	1	-
Warrensburg	1	-	1	1	1	-
Total	100	13	65	57	54	5

These totals may be of little value in evaluating the survey due to the following reasons:

International Unions - Many printing groups belong to or are a part of one Typographers International.

Inclusive Locals - Many local unions, especially industrial, have members from more than one area of industrial arts, i.e., carpenters, electricians, metal workers all in same local.

Combination of Unions - Some companies have more than one union, i.e., one for plant operations and another for maintenance, electrical, etc.

Selection of Public School Representatives

Representatives from public schools were selected from the "Industrial Arts Teachers Directory" dated 1967-68. The number of small schools in outlying or feeder areas have been lumped together with the schools in the large industrial area near them in order not to violate the confidence of these respondents.

As in the previous listings, a proportional amount of teachers was chosen from each of the five major areas of industrial arts.

<u>City</u>	<u>#Surveys</u>	<u>Major Areas of Industrial Arts Field</u>				
		<u>Print</u>	<u>Metals</u>	<u>Woods</u>	<u>Elect</u>	<u>Draft</u>
Bloomington	9	3	5	5	4	3
Champaign	12	6	9	7	7	7
Decatur	15	7	7	6	7	6
Lincoln	7	6	6	6	6	5
Mattoon	8	7	7	7	7	7
Peoria	16	5	7	5	6	7
Pontiac	8	5	4	5	5	5
Springfield	15	12	13	11	11	10
Taylorville	10	9	9	9	9	10
Total	100	60	67	61	62	60

IV. PREVIOUS RESEARCH ON THIS SUBJECT

Background

The economy of the United States "has been influenced not only by changes in the demand for goods and services, but also by the continuing process of technological change, a process which has been accelerating in recent years."⁴

In 1850, twenty-three percent of the power supplied was by the muscles of man, fifty-one percent by the muscles of animals, and twenty-six percent by electrical and mechanical energy. Also in 1850, 10,000,000 employees worked seventy hours a week, and their goods and services were valued at twenty-seven cents per hour. It is estimated that in 1980, one and one-half percent will be supplied by the muscles of man, one-half percent by the muscles of animals, and ninety-eight percent by electrical and mechanical energy. At that time it is estimated that 95,000,000 people will work thirty-five hours a week, and that their goods and services will be worth three dollars and twenty-five cents per hour.⁵ "The success of the nation's economy depends in no small part on the proficiency of the nation's workers."⁶

⁴Target: Employment! Chamber of Commerce of the United States, Washington, D.C., p. 58

⁵Statistics taken from mechanical display prepared by Leighton Wilke, Do-All Company, Des Plaines

⁶Roy W. Roberts, Vocational and Practical Arts Education, 2nd Edition (Harper and Row Publishers, New York, Evanston, and London), p. 14

It is also recognized that the education of workers is becoming more important and, at the same time, more difficult due to this highly mechanized process of present-day industry. Consequently, society cannot leave the provision of this training that is so vital to the general welfare to chance. This task has been assigned to the schools.⁷

Need

It is believed that a close working relationship between schools and industry would aid the schools in performing this task. "With more active participation of industry in the industrial arts program, students, who hold the future of business and industry in their hands, will be appraised of the varied needs of industry."⁸ Colleges and universities are presently doing what they can to provide this information, but "the pace is so rapid that educational institutions removed even one step from the reality of production are frequently lacking in both equipment and experience."⁹

"Industrial arts has a special function in relation to the total program of education. It serves to arouse interest and to aid in the discovery of aptitudes that relate to special preparation for industrial employment."¹⁰ Industrial arts teachers, therefore, must find methods of keeping abreast of this rapid progress in order to inform students of jobs currently available

⁷Vocational and Practical Arts Education, p. 14

⁸"Washington Report" (Chamber of Commerce of the United States, Washington, D.C., April 16, 1965) p. 4

⁹H.F. Clark & H.S. Sloan, Classrooms in the Factories (Institute of Research, Fairleigh Dickinson University, 1958) p. 9

¹⁰OpCit., p. 1

and of requirements necessary to qualify for these positions. It has been suggested that business and industry should make jobs available to teachers which will acquaint the teacher with new industrial developments in his field.¹¹

Colleges and universities should develop cooperative work study programs organized in such a manner that the prospective teacher is sent to different departments and serves in different capacities to learn about the total responsibility of his instruction. "They may be titled industrial internship or industrial training and they should have as their primary goal the education of the prospective teacher."¹²

Such a program is already in operation in Kenosha, Wisconsin. In order to become certified, teachers "must have certain practical or work experience in their field, in addition to educational training. In the Kenosha program, many teachers go back to school during the summer, "but many also go back into industry during the vacation period."¹³ Although the Kenosha program is set up for a vocational education program, it seems reasonable that it could work as well for industrial arts teachers.

"It is imperative, therefore, to find ways and means to familiarize these teachers, regardless of their past training, with current content, methods and techniques."¹⁴

¹¹"Washington Report" (April 16, 1965) p.4

¹²Ibid.

¹³"Washington Report" (February 8, 1963)

¹⁴John I. Goodlad, Renata Von Stoephasius, and M. Frances Klein, The Changing School Curriculum (The Fund for the Advancement of Education, New York)

Responsibility of Schools

Improve "Employability" - A study conducted by the Decatur Chamber of Commerce in 1961 indicated that the greatest lack in too many of our high school graduates is the lack of desirable attitudes and habits. This study also indicated that only twenty-eight percent of the respondents felt that high school graduates possessed adequate proficiency in the academic skills.¹⁵

"Someone has a responsibility to teach the students that these academic skills that are presented from age 10 to age 18 are going to be the skills which will enable him to get a job, are the skills which will provide him success on the job."¹⁶

More "Direct Contact" Between Industry and Schools - "It is a basic crime for our educational system to 'grind' everyone through our educational mills on a curriculum designed for those going on to higher education, when less than 1/3 will ever take a college exam. Some provision and a lot of attention should be directed to the 2/3 who are going to start life with a high school diploma, earned not by ability, but by being able to breathe long enough to reach graduation age."¹⁷

In some areas schools conduct a "Future Planning Day" which is designed to counsel students who do not plan to attend college on opportunities available in industry, the results being that "students are eager to learn -- and are surprised to learn -- about the training industry has to offer."¹⁸

¹⁵"A Personnel Man Looks at our High School Graduates" - A report by a special committee of the Association of Commerce Education Committee, Decatur, 1961, p. 1

¹⁶Ibid., Appendix B, Question 8, Remark 2

¹⁷Ibid.

¹⁸Target: Employment!, p. 38

Improved Guidance Programs and Counseling Services - "It is a fact that our modern society does not place proper emphasis on and, in too many cases, does not even recognize the important part craftsmen and technicians play in this technological age."¹⁹

"Oftentimes, young people poorly equipped to carry a heavy academic load are prodded into attempting to do so by sincere, but misinformed adults."²⁰

In 1965, the Statistical Department of the U.S. Office of Education predicted that 900,000 students would drop out before completing high school that year. It was stated that "many of these students would fulfill their potential if education would show them the ideas and concepts which give life meaning."²¹

In Modesto, California, a study was conducted to find a solution to the school dropout problems. A program was set up whereby local businessmen served as advisors to potential dropouts. "Students got a 'dollar and cents' look at why they should continue their education. Case histories showed that many students' lives were changed by these simple contacts, due to the fact that someone took an interest at a critical time."²²

Kenosha, Wisconsin, who has a dropout rate of less than ten percent, has as its goal "to train all its youth, and not merely those who are qualified for college. Thus it is avoiding the error made by so many American communities

¹⁹"Washington Report", August 14, 1964

²⁰Ibid.

²¹"Washington Report", April 16, 1965

²²Target: Employment!, p. 47

that slant their high school programs entirely - or almost entirely - toward equipping graduates for college."²³

As stated in the Decatur study, "it appears that many of these average students not going on to college could do better with more guidance."²⁴

Industrial arts can be helpful in keeping potential dropouts in school by creating interest and enthusiasm in school life and in providing guidance to students who have aptitudes and interest in industrial subjects.

Responsibility of Industry

"Business and industry should acquaint themselves with the industrial arts programs in their communities. Since these programs identify their principle objective as 'teaching industry and technology,' local business and industry personnel should express a vital interest in these programs."²⁵

Recommendations made on a study which was conducted in the Pittsburgh area, but which are general enough to apply to all industries, included:²⁶

Employers must become more familiar with current and proposed school courses and curricula, particularly in the various areas of vocational and technical education.

Industries on an individual or on an association basis must make definite arrangements with schools of all levels for the addition and modification of curricula as required.

All industries must increase their knowledge of the continuing education and training which are being completed by employees. Such information should be utilized

²³"Washington Report" dated April 10, 1964

²⁴"A Personnel Man Takes a Look at High School Graduates"

²⁵"Washington Report" dated April 16, 1965

²⁶Target: Employment!, p. 21

in evaluation and promotion, and must be coordinated with educational institutions and industrial training departments.

Greater and continuing coordination with the schools must be arranged. Industries should train staff to conduct cooperative studies of the schools' programs.

Industries of the area should take the initiative in establishing an Industry-Education Council which would coordinate employment and training needs with present and proposed school programs. Coordination should involve all levels of education and companies of all sizes.

Larger companies must offer programs in specialized skill training, professional training and supervisory development.

Schools and small companies must meet together to determine their mutual needs and responsibilities.

Responsibility of Unions

Union members must realize that their well-being, as everyone else's, depends upon the kind of community in which they live.²⁷ They are, therefore, faced with two responsibilities:²⁸

They cannot neglect their increased opportunity to contribute to the improvement of the cities and towns in which their members live.

Most organized labor believes that unionized communities are better places to live, therefore, efforts must be integrated into the total community effort.

Remaining Question

"How many teachers go beyond the confines of the classroom and a textbook to educate students? It appears to this writer that very few do."²⁹

²⁷

²⁸

²⁹"A Personnel Man Takes a Look at High School Graduates", Appendix B, p.11

V. ANALYSIS OF RETURNS

Each question included in the survey was devised to find out certain information the writer felt was necessary to obtain in determining what summer job opportunities exist for teachers, and to learn if an Industrial Training Program was needed and if it could be used successfully.

As seen on the questionnaires contained in Appendix B, many of the questions were worded differently to the three groups. The answers to these questions, however, should reflect the particular point being asked in the question.

The responses to these questions were totalled and percentages calculated. The results are shown in the tables which follow. A summation of general comments is also included for each question.

1. "Does an 'obvious gap' exist between what youth are prepared to do as a result of their academic training and what is expected of them by industry?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Need exists	29	49	44	80	34	57	107	62
Need is narrowing	22	37	11	20	18	30	51	29
No, students are qualified	8	14	-	-	8	13	16	9
TOTAL RESPONSES	59	100	55	100	60	100	174	100

As indicated in the statistics on the preceding page, all three categories overwhelmingly agreed that there is a "gap" existing between what employees are able to do as a result of their academic training, and their ability to fulfill the job requirements of industry. Industry seemed more lenient than the other two groups and stressed the fact that the amount of gap varied in specific fields and that it would be very difficult to keep pace with these fast changing techniques. Teachers generally agreed that high school students have very little idea as to what is expected of them by industry, but pointed out that industries are usually willing to train in the "specific" skills. The unions brought out a good point in stating that the "present system encourages academic pursuit, and doesn't consider that all people are not meant to wear white collars." Many companies stated that the gap was narrowing, and one indicated taking positive action in this direction by organizing seminars and conferences for concerned high school counselors, employment agency personnel and concerned individuals in industry. Of the industries replying that "students are qualified," it is interesting to note that only one had a total employment of over 200. In reviewing the 80% union figure, it was noted that both large and small locals had the same opinions.

Constructive comments toward solving this problem included informing the students of the value of math and English courses, informing students about industry at the Junior High (rather than High School) level, more "manual training" for students not inclined toward higher education, and advising students to take advantage of training opportunities presently being offered.

2. "There is a lack of communication between schools and industry concerning the purpose of industrial arts courses. The purpose is: To inform students about industrial products and processes... Disciplinary classes for poor students... To develop skills for employability."

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTALS</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
To inform	26	44	23	33	45	59	94	45
Disciplinary classes	-	-	9	12	8	11	17	8
To develop skills	33	56	40	55	24	30	97	47
TOTAL RESPONSES	59	100	72	100	77	100	208	100

One would expect these statistics to be reversed since the philosophy of industrial arts is that of informing rather than developing skills. The 56% in industry who selected skills seemed out of character since their usual reply is "teach them the 3 R's, we'll train them." Generally, however, the larger companies stated that the primary purpose was to inform, but added that a general knowledge of basic or fundamental skills was desirable. This was not altogether true, however, since several of the large companies (1,000 to 4,000 employees) stated that skills was the purpose.

Fifty-nine percent of the teachers selected "to inform," but thirty percent thought skills were, or should be, the purpose. Discounting the fact that several teachers selected both "inform" and "skills," the percentage is still very surprising. A closer look indicated that many of the teachers selecting skills were employed in small towns, which might mean that they were educating "for employment" rather than "to inform."

A few teachers indicated that some administrators seemed to think that the purpose was to absorb "disciplinary cases." Several indicated that better students could be enrolled in these courses, but followed up immediately by stating that parents and counselors usually keep the good students out. Overall attitude of teachers is that Industrial Arts gets students with limited ability, mainly because they are not able to master basic educational skills.

Industries and teachers alike stated that if skills are taught they should be very basic, since specific skills are rarely immediately usable by industry due to the amount of training necessary to operate the sophisticated and expensive machinery. They pointed out that employees with basic, fundamental skills could easily learn processes.

Unions indicated that vocational trade courses come much closer to filling the need than the "unrealistic Industrial Arts courses." One suggested that pre-training of non-academic students would be helpful. Again, opinions seemed to vary from location to location and throughout the specific fields. However, these figures seem to support the assumption that a lack of communication does, in fact, exist.

3. "Who should accept the responsibility for training employees for occupations within a particular company? (Industry should be responsible for training their own employees...Schools should be partially responsible for training employees...Labor unions should assist in training their members for particular occupations.)"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Industry responsible	38	49	27	33	35	40	100	40
School partially responsible	27	35	18	22	36	40	81	33
Unions should assist	13	16	37	45	16	20	66	27
TOTAL RESPONSES	78	100	82	100	87	100	247	100

Industry stressed again that schools should provide the background and basic skills to enable employees to become trainable, and advise students of opportunities available in the industrial field. It was stated that "industry is doing the job now." One new idea presented was that communities should call on churches, welfare agencies, all levels of government, and civic organizations to support the necessary training programs.

Unions showed a willingness to participate and accept their share of the responsibility. They suggested that specific training be started in high school, and that this training should be acknowledged by industry in their hiring practices. A joint-management apprenticeship program was felt to be the most effective training available.

Teachers generally stated that all three groups should be responsible, and added again that schools should provide a good basic introduction. It was also suggested that industry might help furnish equipment and materials, and that unions be called upon to help provide standards and guidance.

Again, the size of the industry and union had a bearing on the type of response received. All three groups felt that the responsibility should be jointly shared - mainly the responsibility of industry (forty percent) and schools (thirty-three percent) - with unions (twenty-seven percent) assisting with their various trades. As indicated above, all three groups indicated a willingness and obligation in sharing this responsibility.

4. "In your opinion, do industrial arts and trade teachers have sufficient opportunities for keeping abreast of the latest industrial processes and manufacturing techniques? (Yes, through workshops and seminars; Yes, through summer employment opportunities; Yes, through existing trade and industrial programs in the schools; and No)"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Yes, workshops and seminars	27	37	10	18	17	22	54	26
Yes, summer employment	12	17	7	12	9	12	28	14
Yes, school trade and industrial programs	7	10	4	7	6	8	17	8
No	26	36	36	63	44	58	106	52
TOTAL RESPONSES	72	100	57	100	76	100	205	100

The opinion of industry was divided on this question, with thirty-seven percent saying that sufficient opportunities do exist and thirty-five percent stating that they do not. Many pointed out that dozens of trade journals and periodicals are available on all industrial subjects, while others noted the lack of summer employment opportunities and stated that workshops and seminars lack the realities of on-the-job experience. While some stated no opinion concerning this, others suggested that sufficient opportunities exist but that teachers do not take advantage of them. An Employment Manager stated that industries must learn that in the long run they will reap the results of having well-trained teachers in our schools. Another pointed out teachers are instructed using 1940 ideas.

Sixty-three percent of the union respondents stated that sufficient opportunities were not available. They criticized educators for being "too management inclined" and stated that industrial arts teachers are twenty years

behind the times. Suggestions toward solving this problem included on-the-job training, using unions to give impetus to workshops, and employing teachers in the trades during the summer months.

Teachers indicated that very limited opportunities are available. Fifty-eight percent expressed the opinion that sufficient opportunities did not exist. They pointed out that trade and industrial publications help. It was stated that while workshops and seminars do exist, they are either not readily available or are too expensive to attend. One teacher stated that if these types of programs were available, that all teachers did not have access to them. (Again, size and location of school seems to be very important.) A few indicated an interest in working with industry, but stated that industries do not want to hire summer help because of the time and expense of training involved, and added that unions prevent employment in this area.

Of the total responses received, eight percent found opportunities existing in trade and industrial programs conducted by schools, fourteen percent said summer employment opportunities were sufficient, twenty-six percent indicated an adequate number of workshops and seminars existing, and fifty-two percent indicated that sufficient opportunities to keep abreast did not exist.

5. "Do firms in this vicinity hire industrial arts and trade teachers for manufacturing or factory work during the summer months?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Yes, hire teachers	24	41	11	20	23	38	58	34
No, do not hire teachers	35	59	42	80	37	62	114	66
TOTAL RESPONSES	59	100	53	100	60	100	172	100

Forty-one percent of the industries indicated that summer jobs are available for teachers. However, most of these respondents stated that jobs would not be available in the trades area where a particular skill could be utilized. Areas of employment generally included vacation relief, clerical, or routine labor jobs. Some companies stated that a limited number of openings are available depending upon economic conditions. One company stated that summer months are seldom months of high employment levels. Fifty-nine percent of the industries indicated that they do not hire teachers for summer employment.

Only twenty percent of the union respondents stated that they hire teachers for the summer, and specific comments were very limited. One stated that they have teachers as members, but not in this field, and indicated that teachers work to earn additional income. Another stated that they hire teachers occasionally, but mainly in clerical jobs. Another stated that teachers do not apply for jobs. One union indicated that teachers are employed in their trade during the summer. Eighty percent of the union respondents replied that they do not permit the hiring of teachers for summer work.

Teachers stated that summer job opportunities are available to a very limited extent. However, they stated that they are not easy to find and added that teachers have no priority over other applicants. None of the teachers indicated that jobs were available in areas which would allow them to utilize their specific skills. Industry as a rule does not hire teachers for the summer due to the short term employment. There are, however, a few exceptions.

Some companies expressed difficulty due to union affiliation; but no mention of these problems was made by union respondents. Sixty-six percent of the total respondent group stated that summer jobs are not available.

6. "Do firms in this vicinity advise the local school board of current and future employment needs and of skills in demand?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Schools adequately informed	11	18	13	27	-	-	24	14
Schools partially informed	31	53	17	34	24	40	72	43
Schools lack information	17	29	19	39	36	60	72	43
TOTAL RESPONSES	59	100	49	100	60	100	168	100

Responses from industry were varied but generally indicated that schools are partially informed. One area stated that this advice goes to curriculum committees, high school principals, industrial arts teachers and counselors, not to the local school board (who was too far removed from the activity). Most indicated that they have no direct contact with schools. The Decatur area stated that this information is presently provided to the Chamber of Commerce who does a study on a systematic basis regarding manpower requirements. Several companies also indicated providing this information to the Illinois State Employment Service. Some industries pointed out that schools have never contacted them, have not responded, or (as a rule) do not have much interest in this direction. It was also stated that curricula are difficult to change and that course content needs to be more flexible. Almost all indicated that a better job could be done in this area through greater cooperation and frequent meetings.

Union respondents indicated that the U.S. Department of Labor requires that schools be informed of vocational needs (See Standards of Procurement - Apprentices Programs), however, only twenty-seven percent indicated that they were adequately informed.

None of the teachers felt that the schools were adequately informed. They stated that schools are informed to a very limited degree. It was suggested that while the school may be informed, the individual teacher was "poorly" and "usually not" informed. The need for a vocational coordinator to make contact between schools and industry concerning needs, placement, etc. was expressed.

7. "For planning purposes, teachers should know what employment opportunities are available in their vicinity, and also how many workers are needed to fill these positions. Are schools: Aware of distribution of labor force and present supply of workers? Aware of labor supply, but not of distribution of workers? Lacking information concerning supply and distribution of labor?"

	<u>INDUSTRY</u>		<u>UNION</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Aware of distribution and supply of workers	11	18	6	11	8	14	25	14
Aware of supply but not of distribution	17	29	14	27	9	15	40	24
Lacking information on both	31	53	32	62	41	71	104	62
TOTAL RESPONSES	59	100	52	100	58	100	169	100

Industry stated that this type of information would be helpful, but pointed out that it would be very difficult to maintain up-to-date information because many times the need fluctuates from week to week. One area stated that schools should be informed because they all had professionals who "watched these things." Another pointed out that an Advisory Committee handled it. Again, the Illinois State Employment Service was listed as a source for obtaining this information. On the whole, however, it was stated that there was probably very little awareness and that no one really worked at providing this information.

Union respondents stated that they had never been contacted for this type of data, but felt that if it was needed teachers should make arrangements to compile their own information.

A few teachers indicated a general knowledge, but seventy-one percent stated they lacked information concerning the supply and distribution of labor. It was stated again that if the school system had the necessary information, individual teachers were not informed.

8. "Will more 'direct contact' with industry help establish what qualifications are necessary for a student to become 'employable' and 'promotable'?"

	<u>INDUSTRY</u>		<u>UNION</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Yes	36	61	40	74	46	77	122	71
Might	17	29	14	26	13	21	44	25
No	6	10	-	-	1	2	7	4
TOTAL RESPONSES	59	100	54	100	60	100	173	100

As indicated by the statistics above, it is clear that more direct contact would be very desirable. It would not only provide a better understanding of the qualifications industry wants to see in students, but would also give teachers a better understanding of business problems. Some progress is being made. One large company stated that they actively encourage direct contact and periodically conduct group meetings in order to accomplish it.

9. "What qualities are needed to improve the 'employability' of future workers?"

	INDUSTRY		UNION		TEACHERS		TOTAL	
	#	%	#	%	#	%	#	%
Dependability & work habits	39	52	58	48	36	45	133	48
Skills, etc.	25	33	45	37	23	29	93	24
Information	11	15	18	15	21	26	50	18
TOTAL RESPONSES	75	100	121	100	80	100	276	100

As expected, industry again stressed dependability and work habits as most important, with attitudes and willingness to accept responsibility also ranking high. One of the biggest problems cited was new employees fresh out of high school who had not acquired these proper work habits and attitudes. While stating that all three of the above are important, it was noted again that most employees are not able to step into jobs immediately due to lack of seniority or amount of specific training required to qualify them. Although thirty-three percent of the industries selected skills, they reemphasized the fact that they should be fundamental, basic skills rather than specific skills.

It was interesting to note that forty-eight percent of the unions also rated the value of dependability above skills. One official observed that the current generation seems to be capable of executive level employment or know nothing at all of vocational skills.

Teachers agreed that dependability and work habits were most important (forty-five percent), with skills (twenty-nine percent) and information (twenty-six percent) following and about equal in importance. It was pointed out that the information presented should be concerning the skills needed to obtain jobs.

10. To Industry: "Are sufficient opportunities available to your employees for the purpose of training or upgrading their skills?"

To Unions: "Are sufficient opportunities available to your union members for the purpose of training or upgrading their skills?"

To Teachers: "Are sufficient opportunities available for industrial arts or trade teachers for the purpose of upgrading or improving their skills?"

	<u>INDUSTRY</u>		<u>UNION</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Yes	42	71	32	59	23	38	97	55
No	17	29	24	41	37	62	78	45
TOTAL RESPONSES	59	100	56	100	60	100	175	100

Seventy-one percent of the industries replying believed that sufficient opportunities were available to employees who were interested in self-development programs. Listed as a means of accomplishing these goals were: Tuition reimbursement programs, educational leaves of absence, learner jobs, voluntary off-shift courses, adult education programs, educational counseling service, and on-the-job training. As shown, industry provides a broad program for upgrading, but in many instances it is restricted to the needs of the company or provided only to employees selected by management.

Only thirty-eight percent of the teachers (compared to seventy-one percent of industries) felt that sufficient opportunities existed for the purpose of learning or updating skills. Teachers commented that in certain areas, depending upon the teacher and his field, a limited number of opportunities do exist. However, the opportunities existing seldom provided experience useful in upgrading teaching skills, nor were any offered through industry via the route of practical experience.

The close association between industry and unions is reflected in the fifty-nine percent of union respondents who agree that sufficient opportunities are available to learn or upgrade skills. In addition to the programs listed by industry, unions provide their own periodic upgrading by testing and on-the-job training. They also conduct classes for retraining in special fields on a no fee, voluntary basis.

Although it was expected that the general trend for teachers would be downward, it was surprising to note that none indicated an opportunity for upgrading or learning skills through practical work experience.

11. To Industry: "Does your Company sponsor any of the following?"

To Unions: "Does the union of which you are a member sponsor:"

To Teachers: "Does your school sponsor any of the following in-service training courses for the purpose of improving teacher's skills?"

	INDUSTRY		UNIONS		TEACHERS		TOTAL	
	#	%	#	%	#	%	#	%
Graduate level study courses	22	21	4	7	18	35	44	20
Conferences and seminars	26	25	25	41	14	28	65	30
Human Relations Courses	23	22	22	36	7	14	52	24
Math, science, communications, technical, reading, etc.	19	18	8	14	9	18	36	17
Other	15	14	2	2	3	5	20	9
TOTAL RESPONSES	105	100	61	100	51	100	217	100

Differences were noted between the types of training presently available to the three groups.

Twenty-five percent of the industrial respondents indicated that their company conducted conferences and seminars, twenty-two percent Human Relations courses, twenty-one percent Graduate Level Study Courses, and eighteen percent

stated that courses such as math, science, communications, reading, etc. were offered (primarily through tuition reimbursement programs of some kind). They also pointed up the existence of various apprentice programs, home study correspondence courses, and on-the-job training conducted in specific phases such as planning, procedures, etc.

Forty-one percent of the union respondents stated that unions sponsor conferences and seminars, thirty-five percent replied that Human Relations Courses are available, and seven percent stated that (university sponsored) graduate level study courses were offered. Respondents commented that courses dealing with labor negotiations, union administration, and special union problems were also available. The fact that special courses are available through the Adult Education Program for apprenticeship training was mentioned. Some unions pointed out that retraining is conducted on a no fee, voluntary basis for apprentices and journeymen.

Twenty-eight percent of the teachers replied that schools conduct conferences and seminars, and fourteen percent indicated that Human Relations Courses were available. Although thirty-five percent of the teachers indicated that university sponsored graduate level study was available, individual comments revealed that it was usually not available through the local school as an in-service training program, but rather through a college or university on a tuition basis. It was noted that one or two-week workshops are offered, and that graduate level courses are available for elementary but not industrial arts teachers. Generally, most respondents indicated that very few in-service training programs are provided for teachers.

12. To Industry: "Does your company participate in conferences or seminars involving either teachers or school administrators?"

To Unions: "Do union officials have the opportunity to participate in conferences or seminars involving teachers or school administrators?"

To Schools: "Does your school participate in conferences or seminars with leaders from business, industry or labor unions for the purpose of discussing the various problems arising from time to time?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Yes	23	39	16	28	18	32	57	33
No	36	61	41	72	38	68	115	67
TOTAL RESPONSES	59	100	57	100	56	100	172	100

Thirty-nine percent of the industrial respondents (mostly the large major companies) stated that they take part in conferences and seminars involving either teachers or school administrators. This association was usually as a participant in counselor's day, senior day, career day, business and industry day, etc.; or through attending various conferences, luncheons, teachers' institutes; in connection with cooperative training programs; or in conjunction with the Chamber of Commerce, AMA, etc. Of the sixty-one percent not presently involved, several stated that this type of involvement was conducted at the corporate, rather than the local, level. Many others indicated a desire to cooperate in this type of endeavor if asked.

Unions indicated a lack of participation with almost three-fourths of these respondents stating that they do not take part in conferences or seminars involving teachers or school administrators. Respondents stated that the type of contact they have generally included supplying speakers for school programs,

association through bargaining committees or various Human Relations study courses, or through conferences with Junior College instructors.

Thirty-two percent of the teachers indicated that they are involved in conferences and seminars with leaders from business, industry and labor. This association included participation in round tables, business-industry days, plant tours, advisory committees, and various contacts made at the administrative level.

Of the overall groups replying, however, sixty-seven percent stated that they have no opportunity to participate in programs of this type.

13. "Would more direct contact among schools, industry and labor lead to a better understanding of problems encountered by employers when seeking qualified employees and would it help provide more plausible solutions to these problems?"

	INDUSTRY		UNIONS		TEACHERS		TOTAL	
	#	%	#	%	#	%	#	%
Yes	26	44	28	51	40	67	94	54
Might	26	44	17	31	14	23	57	33
Doubtful	7	12	10	18	6	10	23	13
TOTAL RESPONSES	59	100	55	100	60	100	174	100

Although specific comments to this question were limited, all three groups overwhelmingly agreed that more "direct contact" would be beneficial. Some of the larger companies already involved in programs of this type stated emphatically that a great need for more direct contact existed, and that if handled properly would certainly help. One firm stated, "Yes, our experience over the past 3-4 years has proved this beyond a shadow of a doubt. Even as I write this, nearly 150 teachers, counselors, and industrial people are at

a meeting we set up."

14. "Do you feel an obligation to establish better communication between schools, labor unions and industry in order to develop an understanding of industrial processes and the important role industry plays in our society?"

	INDUSTRY		UNIONS		TEACHERS		TOTAL	
	#	%	#	%	#	%	#	%
Great obligation	26	43	27	49	29	48	82	47
Some obligation	26	43	21	38	27	45	74	42
No obligation	9	14	7	13	4	7	20	11
TOTAL RESPONSES	61	100	55	100	60	100	176	100

Although an analysis of the comments revealed that each group feels an obligation to establish better communications, opinions on the extent of the obligation and how to go about it differed. Generally, however, all three groups believed that it should be a cooperative effort with all groups sharing the responsibility.

Several respondents from industry and schools have already started working in this direction and have formed advisory committees or set up special meetings for this purpose. One successful program is apparently underway, since one respondent stated that he considered "local communications with ISU adequate." A teacher commented that the "obligation must be recognized by administration and free time granted for this purpose."

There was some feeling that labor unions might not be interested in this type of interchange, although a union respondent stated that this type of communication "should be a part of training for future citizens." It was also

stated that industry would benefit from it in the long run, and a willingness to cooperate on properly organized programs was indicated.

The following expresses the sentiment on the part of some union officials:

"In my opinion, the schools are not interested in labor unions as potential employers -- have no experience in labor problems -- and just don't understand labor as a source."

In summary, eighty-nine percent of the total respondents indicated an obligation (in varying degrees) to help establish better communications.

15. "Do you feel that the contact provided by an 'Industrial Training Program' would help in improving current and future curricula in the public schools?"

	INDUSTRY		UNIONS		TEACHERS		TOTAL	
	#	%	#	%	#	%	#	%
Yes	22	38	25	45	45	75	92	53
Might	32	54	21	38	15	25	68	39
No	5	8	9	17	-	-	14	8
TOTAL RESPONSES	59	100	55	100	60	100	174	100

As indicated above, opinions varied greatly within the three groups on the real value of an Industrial Training Program with regard to planning public school curricula.

Industry seemed hesitant to give full support to such an idea citing three determining factors:

1. Type of program established
2. Goals to be achieved
3. Individual teacher involved and opportunities available to him.

In contrast, seventy-five percent of the teachers indicated that this program would be helpful in knowing what industry wanted, and added that in order to be effective, it would have to be a totally integrated program.

Forty-five percent of the union respondents indicated "yes" and thirty-eight percent indicated that such a program "might" be helpful. A good point was made in the following comment: "Just how can they predict the courses of construction in any field three or four years in advance?"

Considering all of these factors, however, ninety-two percent of the total group indicated that this type of program might be of some value in planning future curricula requirements.

16. "Would association with an 'Industrial Training Program' help establish a realistic guidance program by effectively matching abilities and interests of students with possible job opportunities and requirements?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Great value	18	31	13	24	38	63	69	40
Some value	35	59	35	64	22	37	92	52
Little value	6	10	7	12	-	-	13	8
TOTAL RESPONSES	59	100	55	100	60	100	174	100

Although thirty-one percent of the respondents from industry felt that association with an Industrial Training Program would be of "great" value, the majority (fifty-nine percent) took the middle road stating that it might be of "some" value in relating guidance programs to job opportunities and requirements. It was felt that the initial planning and development of such

a program would be very difficult in view of the many fields to be covered and union relationships involved. One respondent summed it up as follows: "Properly conceived, communicated to the right populations, and presented in a meaningful manner (and not just a one-shot program) it could have inestimable value."

Teachers apparently had more confidence in the effect such a program might have on future guidance programs, since sixty-three percent (compared to thirty-one percent above) stated that it would be of "great" value. Various statements regarding such a program included that the "guidance" should then be done by Industrial Training Program teachers, or that guidance teachers should be included in the program. Respondents expressed dissatisfaction with the present system stating that many people are now out of place in colleges when they should be attending technical schools. It was also stated that the philosophy of some schools is "college prep" training for the intelligent students, then automatically steer the others into industrial arts.

Of the union respondents, sixty-four percent indicated that the program would be of "some" value. The only comments made were: "it remains to be seen" and "the teacher would have to work at the trade to know."

Ninety-two percent of the total respondent group indicated that the program would be helpful in some measure in establishing more effective guidance programs.

17. "Would association with an 'Industrial Training Program' aid teachers in 'getting-to' some of the non-academic students by giving them a better insight into opportunities available to them as future citizens who must earn a living for themselves?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Great value	21	36	16	29	33	55	70	40
Some value	35	59	32	58	25	42	92	53
Little value	3	5	7	13	2	3	12	7
TOTAL RESPONSES	59	100	55	100	60	100	174	100

Again, industrial respondents took the middle road with fifty-nine percent stating that an association with the Industrial Training Program might be of "some" value in "getting-to" the non-academic students. A few qualified their opinions and indicated that it would depend upon the teacher and the scope of the program. It was suggested that the program would need to be planned to meet specific objectives and not just a casual approach. Others stated that the program would be of some value and indicated that "teachers should know this now." The philosophy of "college prep" training for all intelligent students seemed to be questioned again in the following comment: "Why 'get-to' the non-academic students? Doesn't industry need the so-called academic students?"

Fifty-nine percent of the teachers felt that such an association would be of "great" value; however, it was indicated that the problem would be in getting the students to "listen."

The majority of the union respondents indicated "some" value. It was pointed out that in order for such a program to be effective the teacher

would have to "know the trades and current changes at all times."

Ninety-three percent of the total respondent group indicated at least some possibility of "getting-to" these non-academic students through use of knowledge and information gained through association with an Industrial Training Program.

18. "Would you actively support the establishment of an 'Industrial Training Program'?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
In public school system	31	53	28	43	31	38	90	44
In industry	21	36	22	33	31	38	74	31
Sponsored by Fed govt	-	-	8	12	17	21	25	12
Other	7	11	8	12	2	3	17	13
TOTAL RESPONSES	59	100	66	100	81	100	206	100

As shown above, the majority of industrial and union respondents would support a program established in the public school system, while teachers were evenly divided between "schools" or "industry."

Several industrial respondents pointed out that it would depend on the nature, scope, and objectives of such a program. Some were noncommittal stating that they might consider a "finalized" program or might consider such a program after it had been in operation and had proven effective. Others stated that they had their own in-plant programs for training employees. Some felt it should be a joint program shared by schools and industry. Notice that none of the industrial respondents indicated support of the program if sponsored by the Federal government.

Teachers pointed out that, although not certain where it should be located, they would support the program in any way possible whether it was conducted in schools or in industry.

Forty-three percent of the union respondents stated they would support such a program conducted in schools, and thirty-six percent would support one conducted in industry. The following comments were made: "Under proper conditions - yes," "We have a program and are improving same," and "Only as a joint educator - industry - labor program."

19. "If you are not presently involved in any of the programs listed below, would you be interested in participating in any of the following?"

	INDUSTRY		UNIONS		TEACHERS		TOTAL	
	#	%	#	%	#	%	#	%
Summer "Industrial Training Program	20	27	34	25	35	27	89	27
Conferences or seminars during school year	22	30	31	22	31	24	84	25
Conferences or seminars during summer	14	19	25	18	22	19	61	18
In-service training program conducted by industry	15	20	37	27	40	31	92	27
Other	3	4	11	8	-	-	14	3
TOTAL RESPONSES	74	100	138	100	128	100	340	100

On a percentage basis the industrial respondents indicated greatest support of conferences and seminars conducted during the school year. The Industrial Training Program was second choice, with the in-service training program and conferences and seminars during summer following closely. Comments

were varied, however, some respondents again expressed interest in a finalized Industrial Training Program. It was stated that such a program would have more of an impact during the school year. Several industries indicated they were already involved in various training programs of their own. Others stated that they attended conferences and seminars from time to time but not on a scheduled basis. Four percent of these respondents indicated participation in "other" programs, such as plant tours and high school vocational training programs.

Thirty-one percent of the teachers favored an in-service training program located in the schools but conducted by industrial personnel. The Industrial Training Program was again second choice with conferences and seminars following closely. Although their comments did not indicate a particular preference for the Industrial Training Program, the need for some kind of program was pointed up by comments such as: "I'm open to improving my background in any of the above," "Any or all - I feel left out as an Industrial Arts teacher, " "Good - proceed," and "The above should be with pay and college credit similar to DO program only on a higher level."

The majority of the union respondents also favored the in-service training program located in the school.

20. "Would an 'Industrial Training Program' (sponsored by a university, but conducted in factory or manufacturing areas of local companies) designed to improve industrial knowledge and skills of teachers be feasible?"

	<u>INDUSTRY</u>		<u>UNIONS</u>		<u>TEACHERS</u>		<u>TOTAL</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Yes	47	80	39	71	60	100	146	83
No	12	20	16	29	-	-	28	17
TOTAL RESPONSES	59	100	55	100	60	100	174	100

Eighty percent of the industrial respondents indicated that an Industrial Training Program would be feasible. However, specific comments received were mostly noncommittal. Many stated "might," "could be," "I think so," "yes for some - not for others," "not sure," and "possibly." Others pointed out that the support given would determine the effectiveness and that a project like this would be "a considerable expense to industry with very indirect results." Twenty percent of the industrial respondents indicated that such a program would not be feasible. One respondent gave the following reasons: "(1) Labor contract commitments; (2) Fringe benefit costs; (3) Staff time required; and (4) Disrupt production."

Teachers were unanimous in their opinion that an Industrial Training Program would be feasible. A few qualified their statements by adding that in order to be effective the program would have to cover a wide area in order to be worthwhile to both schools and industry. Also, the training would have to be in the field in which the individual was teaching. Others stated that there was a great need for the program and that it would be very worthwhile.

The percentage dropped with only seventy-one percent of the union respondents stating that such a program would be feasible. It was stated that it depended upon "how the program was instituted."

VI. CONCLUSIONS

The survey attempted to determine if summer employment opportunities were available to the extent that teachers could keep informed on the latest technological changes in their fields. It also tried to determine the need for an Industrial Training Program; to establish a comparison between training opportunities available to industry, labor unions, and teachers; to determine what benefits would result from the establishment of an Industrial Training Program; and to conclude if such a program was feasible. The following conclusions are based on the replies received.

Need for Program

Obvious Gap. - It is apparent that a gap does exist between formal academic preparation and qualifications necessary to perform current job requirements, although some progress has been made toward narrowing this gap in most areas.

More English and mathematics courses, providing information concerning industry at the Junior High School level, and utilization of present opportunities are cited as possible remedies to this problem.

Lack of Communication Regarding Purpose of Industrial Arts. - Statistics indicated a lack of communication concerning the purpose of industrial arts, and opinions varied from location to location and throughout the specific fields. Most of the larger industries agreed that the purpose was to inform

students about industrial processes. Teachers also indicated that the purpose was to inform, but a surprising thirty percent stated that skills was the purpose. Most of the teachers selecting skills were employed in small population areas, which might account for their different philosophy. The majority of the union respondents selected skills and indicated that vocational trade courses come much closer to filling the need than industrial arts courses. All three groups emphasized that skills should be basic, stating that employees with basic skills can easily learn specific processes.

Who is responsible for training employees? - It was concluded that schools should provide the basic fundamentals, and that it was the responsibility of industry and unions to train in specific skills. All three groups indicated a willingness to share this responsibility.

Sufficient Opportunities for Keeping Abreast of Changes? - There seems to be a need for a systematic program for keeping teachers abreast of the changes. Although teachers have access to many trade journals and periodicals on a variety of subjects, they are deficient in practical application which would be valuable in giving impetus to teaching. Workshops, seminars, conferences, and summer employment opportunities have been unable to fulfill this need.

Survey of summer employment opportunities available in manufacturing or shop areas. - Industry has a few jobs available, but generally not in areas where specific skills can be utilized. This employment usually consists of vacation relief help, clerical jobs, or routine labor jobs. Some labor

unions indicated that occasionally they hire teachers for clerical positions. The majority, however, replied that at present they do not permit the hiring of teachers for summer work. Teachers indicated a few exceptions but stated that as a rule industry does not hire for the summer due to the short-term employment.

With sixty percent of the total group replying that summer jobs are not available, and the companies and unions which do offer jobs stating that the work is usually not in the teacher's specific field, teachers cannot expect to keep abreast of the changes through summer employment opportunities presently existing.

Schools advised of employment needs? - In some areas this advice goes direct to curriculum committees, high school principals, industrial arts teachers and counselors. Some companies supply this information to the Chamber of Commerce who does a systematic study on manpower requirements. Other companies provide this data for the Illinois State Employment Service.

Teachers, along with industry and union officials, share the opinion that schools are not adequately informed and state that a much better job could be done in this area. The lack seems to be in organizing and dispersing the data.

(An interesting study might be made by contacting the various services who receive this information in an effort to determine how it is used.)

Distribution of Labor Force - It was learned that some companies provide this type of information (areas where workers are needed, type of

skills required, turnover rates, distribution of minority group personnel, etc.) to the Illinois State Employment Service. There seems to be a slight awareness, but no one works very hard at providing this data. It would be difficult to maintain up-to-date statistics since the needs fluctuate from week to week.

Direct Contact to Establish Qualifications - As indicated in the survey analysis, ninety-six percent of the total respondent group felt that more direct contact would be very desirable in establishing what qualifications industry wants to see in students.

Qualities Necessary in Improving "Employability" - Industrial arts teachers cannot teach all up-to-date skills due to the huge financial outlay which would be required to purchase expensive machinery.

It was agreed that the most important qualities for improving "employability" are dependability and work habits (honesty, punctuality, and pride in work), with basic fundamentals skills and information following and about equal in importance.

Comparison of Training Opportunities - It is evident that unions and industry have numerous programs available for updating knowledge and skills on an academic level as well as through on-the-job training. In most instances these courses are free or the tuition costs are completely or partially reimbursable upon successful completion of the courses. Generally, these courses are restricted to the needs of the company and are approved on a work related basis.

Opportunities for teachers to upgrade are available mainly through programs provided by colleges and universities on a tuition basis. Local

systems do not, to any degree, sponsor such programs. Courses available are academic in nature and provide little or no practical application. Teachers did not mention any provisions for reimbursement.

Many unions provide their own periodic retraining by testing and on-the-job training in addition to having access to programs available through their employers.

Study of Educational Programs Sponsored - Most large industries sponsor a variety of programs including conferences and seminars; human relations courses; tuition reimbursement programs; various in-service programs such as apprentice and on-the-job training; and off-shift courses offered on a free, voluntary basis. Graduate level courses (sponsored through local universities) are available on a tuition refund basis provided they are work related.

Unions sponsor courses dealing with human relations, union administration and special union problems. Retraining for journeymen and apprentices is conducted on a no fee, voluntary basis.

Schools sponsor various conferences and seminars, human relations courses and workshops. Very few in-service programs are sponsored through the local schools. Graduate level courses are available through local colleges and universities on a tuition basis.

Communication Between the Three Groups - There is some association on the part of the larger companies to provide speakers for career days and round tables, as members on advisory committees, or in conducting plant tours. However, very little effort is made on the part of any of these groups to communicate with each other.

Direct Contact Provide Understanding and Solutions to Employer's

Problems? - Companies who have experienced various types of contact stated emphatically that there is a great need for more direct contact, and that if handled properly it would certainly help. All three groups overwhelmingly agreed that more direct contact would be beneficial.

Obligation to Establish Better Communications - All three groups felt an obligation to establish better communications, but indicated that it should be a cooperative effort with all groups sharing the responsibility.

It is believed that since teachers would definitely benefit from better communications, they should take the initiative in establishing a method to obtain it.

Value of Industrial Training Program in Improving Curricula - Although difficult to determine the final outcome of any proposal, ninety-two percent of the total respondent group felt that an Industrial Training Program might help improve the public school curricula. The final outcome, however, would depend upon how the program was established, the support it received, and its capability of meeting specific goals and objectives.

Value of Industrial Training Program in Improving Guidance Programs - As in the previous question, ninety-two percent of the total respondent group felt that association with an Industrial Training Program might help provide a more effective guidance program. It was indicated, however, that it would be difficult to develop and institute a program broad enough to cover all of the various aspects.

Value of Industrial Training Program in "Getting-to" Non-Academic

Students - It was concluded that it is very difficult to communicate with non-academic students. We need to find a way to get across the idea that industry prefers employees who are dependable and who have already mastered the basic, fundamental skills such as reading, writing, arithmetic, etc. The majority of the respondents took the middle road stating again that the program might be of some value depending on the nature and scope of the program and the individual teachers involved.

Active Support of an Industrial Training Program - Unions and industry

would rather support a program established in the public schools. Teachers were evenly divided between establishment in industry or in the schools. It is concluded, however, that if this program were established the schools would have to take the lead and prove the effectiveness of such a program. Further, industrial and union support would be very difficult to obtain if this program was sponsored by an agency of the Federal government.

Interest in Participating in Various Programs - Most of the respondents

indicated that they are interested in participating in conferences and seminars. The analysis of the survey indicated that an Industrial Training Program would receive as much support as any of the other programs now in operation. These percentages were somewhat misleading, however, since many companies and unions withheld judgment until a finalized program was presented. An interesting point seems to be that companies who are already actively involved in various training programs indicated much more support of an Industrial Training Program.

Feasibility of an Industrial Training Program - Although eighty percent of the total group indicated that an Industrial Training Program would be feasible, it is believed that little actual support would be given in establishing such a program. The survey indicated that a need exists in the field of communication between the three groups, and in opportunities for teachers to upgrade knowledge and skills once their academic education was completed.

This survey did not establish that an Industrial Training Program was the best approach to solving these problems. In order to establish whether support of this program was actually forthcoming, another study would have to be done providing respondents with a finalized program which outlined specific goals and objectives to be achieved.

VII. RECOMMENDATIONS

Based on the data collected and reported in this study, and upon the conclusions reached, the following recommendations are made:

Closer cooperation should be established between industry, labor unions, and schools in order to develop mutual respect and understanding of problems.

Since teachers would benefit from having more direct contact with industry and labor, they should take the initiative in establishing conferences, seminars, round tables, plant tours, field trips, etc. on a systematic basis which are designed to meet specific objectives for upgrading or retraining. A joint committee of labor, industry, and school personnel should be established to evaluate and coordinate programs presently existing.

Teachers must make every effort to utilize material found in the numerous trade journals and publications presently available in most fields in order to become familiar with fast changing techniques and concepts and to effectively develop students.

Direct contact with industry and labor unions is necessary if teachers are to communicate effectively concerning job opportunities available and requirements necessary to qualify for those jobs. Particular emphasis should be placed on the fact that industry needs employees who are dependable, punctual, and honest, who take pride in their work. Teachers must continue to stress the importance of having a good basic understanding of reading, writing, and arithmetic skills.

Schools should continue to provide counseling services for potential industrial workers informing students about industry and the role it plays in our society. This information should be started at the junior high school level.

Administrators, counselors, advisory committees, etc. should call upon local service agencies such as the Chamber of Commerce and the Illinois State Employment Service in obtaining industrial statistics such as hiring needs, skills in demand, placement of minority group personnel, turnover rates, etc.

More involvement with labor unions is necessary in order to create a better understanding of the union's role and functions. Schools should continue to select individuals from labor and industry as speakers for assemblies, conferences, seminars, round tables, etc. Union officials should be invited to become members on education advisory committees. Since three-fourths of the students graduating from high school will not complete college, this involvement would be beneficial in preparing youth for industry.

None of the above would provide the actual practical experience need to become thoroughly familiar with industrial changes and manufacturing techniques. Further studies should be conducted in this area to determine if an Industrial Training Program would be beneficial enough to all three groups to warrant the human energy and financial outlay which would be required to maintain such a program.

APPENDIX

A

QUESTIONNAIRES - DISTRIBUTION AND RATE OF RETURN

<u>Type of Reply</u>	<u># Sent</u>	<u># Received</u>	<u>% Returned</u>
Original letter & questionnaire	Industry - 100	44	44%
	Unions - 100	18	18%
	Teachers - 100	39	39%
Personal contacts*	Industry - 46	15	33%
	Unions - 70	37	53%
	Teachers - 44	21	48%
Total replies in each category	Industry - 100	59	59%
	Unions - 100	55	55%
	Teachers - 100	60	60%
TOTAL - ALL CATEGORIES	300	174	58%

*In the belief that personal contact would be more effective in obtaining additional replies, follow-up was accomplished as follows:

	<u>Industry</u>	<u>Unions</u>	<u>Teachers</u>
Telephone contacts	14	11	6
Personal visit to office or home	10	24	16
Contacts made through friends with "personal acquaintances" (These were people I have worked with while employed as a teacher, a union president, and as a small company owner)	22	35	22

APPENDIX

B

EASTERN ILLINOIS UNIVERSITY

58

SCHOOL OF INDUSTRIAL ARTS AND TECHNOLOGY
CHARLESTON, ILLINOIS 61920

This survey is being conducted to determine if industry, labor unions, and teachers themselves feel a need for establishing and participating in an "Industrial Training Program" designed to upgrade the technical knowledge and skills of industrial arts and trade teachers.

Another purpose is to find out what summer job opportunities are available for trade and industrial teachers.

Please complete the enclosed questionnaire and return it to me at your earliest opportunity. A self-addressed envelope is provided for your convenience.

If you have additional comments or opinions on any item contained in this questionnaire, please feel free to include them. Your answers will be held strictly confidential.

Thank you for your cooperation.

Very truly yours,

Richard D. Halliburton
Graduate Student
Eastern Illinois University

Walter A. Klehm
Faculty Advisor

A SURVEY TO DETERMINE THE OPINIONS AND FEELINGS OF SELECTED REPRESENTATIVES FROM
LABOR UNIONS, INDUSTRIES, AND PUBLIC SCHOOLS CONCERNING INDUSTRIAL TRAINING PROGRAMS

Industrial arts and trade teachers are faced with a problem unique to the technological fields -- that of keeping abreast of constantly changing processes and techniques. It is believed that these teachers could benefit immensely by having more direct contact with industry and labor groups.

Therefore, an "Industrial Training Program" is being considered for the summer months under the auspices of the University, but conducted in factories or places of business. Details concerning pay scales, grades, and college credit for participation in this program could be worked out.

Please give us your reaction to the establishment of such a program by checking the appropriate blocks for the questions listed below.

* * *

1. Does an "obvious gap" exist between what youth are prepared to do as a result of their academic training and what is expected of them by industry?

Yes, a definite need exists
 Need exists, but is narrowing
 No, recent high school graduates are well qualified
to enter industrial occupations.

Comment _____

2. There is a lack of communication between schools and industry concerning the purpose of industrial arts courses. The purpose is:

To inform students about industrial products and processes
 Disciplinary classes for poor students
 To develop skills for employability

Comment _____

3. Who should accept the responsibility for training employees for occupations within a particular company?

Industry should be responsible for training their own employees.
 Schools should be partially responsible for training employees.
 Labor unions should assist in training their members for
particular occupations.

Comment _____

In your opinion, do industrial arts and trade teachers have sufficient opportunities for keeping abreast of the latest industrial processes and manufacturing techniques?

- Yes, through workshops and seminars
- Yes, through summer employment opportunities
- Yes, through existing trade and industrial programs in the schools
- No

Comment _____

Do firms in this vicinity hire industrial arts and trade teachers for manufacturing or factory work during the summer months?

- Yes
- No

Comment _____

Do firms in this vicinity advise the local school board of current and future employment needs and of skills in demand?

- Yes, the schools are adequately informed.
- The schools are partially informed.
- No, schools lack this information.

Comment _____

For planning purposes, teachers should know what employment opportunities are available in their vicinity, and also how many workers are needed to fill these positions. Are schools:

- Aware of distribution of labor force and present supply of workers?
- Aware of labor supply, but not of distribution of workers?
- Lacking information concerning supply and distribution of labor?

Comment _____

Will more "direct contact" with industry help establish what qualifications are necessary for a student to become "employable" and "promotable"?

- Yes
- Might
- No

Comment _____

9. What qualities are needed to improve the "employability" of future workers?

- Dependability and work habits
 Skills, etc.
 Information

Comment _____

10. Are sufficient opportunities available for industrial arts or trade teachers for the purpose of upgrading or improving their skills?

Yes No

Comment _____

11. Does your school sponsor any of the following in-service training courses for the purpose of improving teacher's skills?

- Graduate level study courses (University sponsored)
 Conferences and seminars
 Human Relations Courses
 Math, science, communications, technical, reading, etc.
 Other (Please specify)

Comment _____

12. Does your school participate in conferences or seminars with leaders from business, industry or labor unions for the purpose of discussing the various problems arising from time to time?

Yes (Please specify type) No

Comment _____

13. Would more direct contact among schools, industry and labor lead to a better understanding of problems encountered by employers when seeking qualified employees and would it help provide more plausible solutions to these problems?

Yes Might Doubtful

Comment _____

14. Do you feel an obligation to establish better communication between schools, labor unions and industry in order to develop an understanding of industrial processes and the important role industry plays in our society?

Great obligation Some obligation No obligation

Comment _____

15. Do you feel that the contact provided by an "Industrial Training Program" would help in improving current and future curricula in the public schools?

Yes Might No

Comment _____

16. Would association with an "Industrial Training Program" help establish a realistic guidance program by effectively matching abilities and interests of students with possible job opportunities and requirements?

Great value Some value Little value

Comment _____

17. Would association with an "Industrial Training Program" aid teachers in "getting-to" some of the non-academic students by giving them a better insight into opportunities available to them as future citizens who must earn a living for themselves?

Great value Some value Little value

Comment _____

18. Would you actively support the establishment of an "Industrial Training Program:

In public school system Sponsored by Federal government
 In industry Other

Comment _____

19. If you are not presently involved in any of the programs listed below, would you be interested in participating in any of the following?

Summer "Industrial Training Program"
 Conferences or seminars - during school year
 Conferences or seminars - during summer
 In-service training program - conducted by industry
 Other (Please specify type)

Comment _____

20. Would an "Industrial Training Program" (sponsored by a University, but conducted in factory or manufacturing areas of local companies) designed to improve industrial knowledge and skills of teachers be feasible?

Yes No

Comment _____

A SURVEY TO DETERMINE THE OPINIONS AND FEELINGS OF SELECTED REPRESENTATIVES FROM
LABOR UNIONS, INDUSTRIES, AND PUBLIC SCHOOLS CONCERNING INDUSTRIAL TRAINING PROGRAMS

Industrial arts and trade teachers are faced with a problem unique to the technological fields -- that of keeping abreast of constantly changing processes and techniques. It is believed that these teachers could benefit immensely by having more direct contact with industry and labor groups.

Therefore, an "Industrial Training Program" is being considered for the summer months under the auspices of the University, but conducted in factories or places of business. Details concerning pay scales, grades, and college credit for participation in this program could be worked out.

Please give us your reaction to the establishment of such a program by checking the appropriate blocks for the questions listed below.

* * *

1. Does an "obvious gap" exist between what youth are prepared to do as a result of their academic training and what is expected of them by industry?

Yes, a definite need exists
 Need exists, but is narrowing
 No, recent high school graduates are well qualified to enter industrial occupations.

Comment _____

2. There is a lack of communication between schools and industry concerning the purpose of industrial arts courses. The purpose is:

To inform students about industrial products and processes
 Disciplinary classes for poor students
 To develop skills for employability

Comment _____

3. Who should accept the responsibility for training employees for occupations within a particular company?

Industry should be responsible for training their own employees.
 Schools should be partially responsible for training employees.
 Labor unions should assist in training their members for particular occupations.

Comment _____

In your opinion, do industrial arts and trade teachers have sufficient opportunities for keeping abreast of the latest industrial processes and manufacturing techniques?

- Yes, through workshops and seminars
 Yes, through summer employment opportunities
 Yes, through existing trade and industrial programs in the schools.
 No

Comment _____

Does the Company you work for employ industrial arts and trade teachers for manufacturing or factory work during the summer months?

- Yes No

Comment _____

Does the Company you work for advise the local school board of current and future employment needs and of skills in demand?

- Yes, the schools are adequately informed
 The schools are partially informed
 No, schools lack this information

Comment _____

For planning purposes, teachers should know what employment opportunities are available in their vicinity, and also how many workers are needed to fill these positions. Are schools:

- Aware of distribution of labor force and present supply of workers?
 Aware of labor supply, but not of distribution of workers?
 Lacking information concerning supply and distribution of labor?

Comment _____

Will more "direct contact" with industry help establish what qualifications are necessary for a student to become "employable" and "promotable"?

- Yes Might No

Comment _____

9. What qualities are needed to improve the "employability" of future workers?

- Dependability and work habits
 Skills, etc.
 Information

Comment _____

10. Are sufficient opportunities available to your union members for the purpose of training, or upgrading, their skills?

Yes

No

Comment _____

11. Does the union of which you are a member sponsor:

- Graduate level study courses (University sponsored)
 Conferences and seminars
 Human Relations Courses
 Math, science, communications, technical or reading courses
 Other (Please specify type)

Comment _____

12. Do union officials have the opportunity to participate in conferences or seminars involving teachers or school administrators?

Yes (Please specify type)

No

Comment _____

13. Would more direct contact among schools, industry and labor lead to a better understanding of problems encountered by employers when seeking qualified employees and would it help provide more plausible solutions to these problems?

Yes

Might

Doubtful

Comment _____

14. Do you feel an obligation to establish better communication between schools, labor unions and industry in order to develop an understanding of industrial processes and the important role industry plays in our society?

Great obligation

Some obligation

No obligation

Comment _____

A SURVEY TO DETERMINE THE OPINIONS AND FEELINGS OF SELECTED REPRESENTATIVES FROM
LABOR UNIONS, INDUSTRIES, AND PUBLIC SCHOOLS CONCERNING INDUSTRIAL TRAINING PROGRAMS

Industrial arts and trade teachers are faced with a problem unique to the technological fields -- that of keeping abreast of constantly changing processes and techniques. It is believed that these teachers could benefit immensely by having more direct contact with industry and labor groups.

Therefore, an "Industrial Training Program" is being considered for the summer months under the auspices of the University, but conducted in factories or places of business. Details concerning pay scales, grades, and college credit for participation in this program could be worked out.

Please give us your reaction to the establishment of such a program by checking the appropriate blocks for the questions listed below.

* * *

1. Does an "obvious gap" exist between what youth are prepared to do as a result of their academic training and what is expected of them by industry?

Yes, a definite need exists
 Need exists, but is narrowing
 No, recent high school graduates are well qualified
to enter industrial occupations.

Comment _____

2. There is a lack of communication between schools and industry concerning the purpose of industrial arts courses. The purpose is:

To inform students about industrial products and processes
 Disciplinary classes for poor students
 To develop skills for employability

Comment _____

3. Who should accept the responsibility for training employees for occupations within a particular company?

Industry should be responsible for training their own employees.
 Schools should be partially responsible for training employees.
 Labor unions should assist in training their members for
particular occupations.

Comment _____

4. In your opinion, do industrial arts and trade teachers have sufficient opportunities for keeping abreast of the latest industrial processes and manufacturing techniques?

- Yes, through workshops and seminars
- Yes, through summer employment opportunities
- Yes, through existing trade and industrial programs in the schools.
- No

Comment _____

5. Are summer job opportunities available in your manufacturing or factory areas for industrial arts or trade teachers?

- Yes No

Comment _____

6. Does your Personnel Department advise the local school board of current and future employment needs and of skills in demand in their particular industry?

- Yes, the schools are adequately informed.
- The schools are partially informed.
- No, schools lack this information.

Comment _____

7. For planning purposes, teachers should know what employment opportunities are available in their vicinity, and also how many workers are needed to fill these positions. Are schools:

- Aware of distribution of labor force and present supply of workers?
- Aware of labor supply, but not of distribution of workers?
- Lacking information concerning supply and distribution of labor?

Comment _____

8. Will more "direct contact" with industry help establish what qualifications are necessary for a student to become "employable" and "promotable"?

- Yes Might No

Comment _____

9. What qualities are needed to improve the "employability" of future workers?

- Dependability and work habits
- Skills, etc.
- Information

Comment _____

10. Are sufficient opportunities available to your employees for the purpose of training or upgrading their skills?

- Yes No

Comment _____

11. Does your Company sponsor any of the following?

- Graduate level study courses (University sponsored)
- Conferences and seminars
- Human Relations Courses
- Math, science, communications, technical, reading, etc.
- Other (Please specify)

Comment _____

12. Does your Company participate in conferences or seminars involving either teachers or school administrators?

- Yes (Please specify type meeting) No

Comment _____

13. Would more direct contact among schools, industry and labor lead to a better understanding of problems encountered by employers when seeking qualified employees and would it help provide more plausible solutions to these problems?

- Yes Might Doubtful

Comment _____

14. Do you feel an obligation to establish better communication between schools, labor unions and industry in order to develop an understanding of industrial processes and the important role industry plays in our society?

- Great obligation Some obligation No obligation

Comment _____

15. Do you feel that the contact provided by an "Industrial Training Program" would help in improving current and future curricula in the public schools?

Yes Might No

Comment _____

16. Would association with an "Industrial Training Program" help establish a realistic guidance program by effectively matching abilities and interests of students with possible job opportunities and requirements?

Great value Some value Little value

Comment _____

17. Would association with an "Industrial Training Program" aid teachers in "getting-to" some of the non-academic students by giving them a better insight into opportunities available to them as future citizens who must earn a living for themselves?

Great value Some value Little value

Comment _____

18. Would you actively support the establishment of an "Industrial Training Program:

In public school system Sponsored by Federal government
 In industry Other

Comment _____

19. If your Company is not presently involved in any of the programs listed below, would you be interested in participating in any of the following?

Summer "Industrial Training Program"
 Conferences or seminars - during school year
 Conferences or seminars - during summer
 In-service training program - conducted by industry
 Other (Please specify type)

Comment _____

20. Would an "Industrial Training Program" (sponsored by a University, but conducted in factory or manufacturing areas of local companies) designed to improve industrial knowledge and skills of teachers be feasible?

Yes No

Comment _____

APPENDIX

C

COMPLETE LIST OF COMMENTS - INDUSTRY SURVEY QUESTIONNAIRE

1. Does an "obvious gap" exist between what youth are prepared to do as a result of their academic training and what is expected of them by industry?
- ...Varies in specific fields
 - ...They do not have required courses - such as enough to meet union requirements.
 - ...Yes - but industry doesn't understand the philosophy of industrial arts.
 - ...Those going into industry are the ones for whom "academic training" did very little.
 - ...It's pretty hard for schools to keep up with the fast changing techniques of today.
 - ...Yes, in certain fields - electronics for instance.
 - ...Usually their math background is poor and they have no idea what is expected of them in an industrial situation.
 - ...No - academic training isn't only influence on youths.
 - ...Is narrowing - Our company has taken the initiative in organizing an annual series of seminars for high school counselors, employment agency personnel, and others concerned with the problem.
 - ...Yes - All male students should be made aware of the value of math courses. They should be told that math is needed if they are to perform layout work, tool and die work, etc. Math is also needed if they want to enter an apprentice course of any kind.
2. There is a lack of communication between schools and industry concerning the purpose of industrial arts courses. The purpose is: To inform students about industrial products and processes; Disciplinary classes for poor students; To develop skills for employability.
- ...To inform - Once the student has learned about products, processes, etc., he is at the point where he can state about what he would like to do when he gets out of school. In other words, what field he should enter.
 - ...Skills - I don't believe that a total lack of communication exists.
 - ...(1) Inform (2) Skills - Most skills are not readily usable by industry.
 - ...Inform & skills - "Better" students could be "pursued" for these courses.
 - ...Skills - Many unqualified teachers.
 - ...Inform - I believe better communication could be accomplished.
 - ...Skills - The above "lack" is being overcome in the Decatur area.
 - ...To inform - Schools don't understand that those of industry are not interested in other than skills.
 - ...To inform - Counselors and board members seem too busy to pass on or obtain assistance to give this information to students. This should be done at least by the 9th grade.
 - ...Skills - Should be the purpose.

3. Who should accept the responsibility for training employees for occupations within a particular company? (Industry should be responsible for training their own employees; Schools should be partially responsible for training employees; Labor unions should assist in training their members for particular occupations.)

- ...Schools (To have them responsible requires exploratory math by time of graduating from high school.)
- ...Every source of training and education should be drawn from.
- ...All three - Churches should assist, welfare agencies should require training, all levels of government should support training, and civic organizations should supply leaders for training.
- ...Schools and industry should cooperate in training.
- ...Schools and unions - If they expect to collect the money, they should be qualified when they come on the job.
- ...Industry - Many seniority practices do not permit partially trained young people to enter jobs discussed.
- ...Schools should see that the students take the proper subjects. They should make the student aware of the opportunities that are available in industry, what background the students must have for the various jobs, and what the various jobs entail.
- ...I feel this must be a shared responsibility: schools giving basics - unions emphasizing their various crafts, industry the specific applications appropriate to machines used, products manufactured.
- ...Industry - Schools should provide good foundation.
- ...All three should assist in this area.
- ...Industry & Schools - Schools should provide basic and thorough knowledge in a certain technology - Industry must train to a certain extent to show the employee how his knowledge is applied or should be applied to the industry's problem.
- ...All three - Industry is doing the job now.
- ...Industry - Schools should make certain that potential employees come to industry with certain basic skills which make them trainable.
- ...Schools should concentrate on basic qualifications.
- ...Industry - With an assist from schools in theoretical aspects.

4. In your opinion, do industrial arts and trade teachers have sufficient opportunities for keeping abreast of the latest industrial processes and manufacturing techniques?

- ...Unqualified to answer
- ...No - Increased contact with major employers would be helpful.
- ...Do not know
- ...Reading trade journals
- ...No opinion
- ...There are dozens of periodicals on all industrial subjects.
- ...If they utilized opportunities available.
- ...The opportunities exist, but only the dedicated professionals make use of them.
- ...I presume they could if they wanted.

4. (Continued)

- ...No - Industries must be made aware of the fact that in the long run they will reap the results of having well-trained Industrial Arts teachers in our schools.
- ...Summer opportunities don't always exist; workshops and seminars are essentially too bookish or at best "contrived situations" lacking the realities of on-the-job experience.
- ...I doubt it.
- ...No, they are instructed using 1940 ideas.
- ...I don't know, I have never talked to any!!
- ...I don't feel they take advantage of some of the opportunities which do exist.

5. Are summer job opportunities available in your manufacturing or factory areas for industrial arts or trade teachers?

- ...Yes - These would be hourly labor jobs.
- ...Yes - Very limited number sometimes available.
- ...No - Sometimes in the hourly area.
- ...Very few - Summer months are seldom months of high employment. In the shops, one runs up against problems of union affiliation.
- ...I don't know.
- ...Not to my knowledge, i.e., where their particular skills would be used.
- ...By the time they learned our business it would be school time again.
- ...Summer employment is limited this year.
- ...The employment picture has been better in previous years.
- ...Yes, as vacation relief hiring permits.
- ...Not in mechanical departments.
- ...Not at present, but planning to present opportunities.
- ...Possibly, would depend upon our needs.
- ...Yes - Not every year however.
- ...Not this year, but have been in the past.
- ...Some
- ...Yes - Majority of summers, depending on economic conditions.
- ...Yes - Use them to assemble dryers and to supervise college kids.
- ...Yes - If openings are available.
- ...Labor jobs, but not training jobs as such.
- ...Yes - Factory help - skilled, if qualified.
- ...No - Not to the extent needed by those performing in the field of education.
- ...Possibly, when work force is larger.

6. Does your Personnel Department advise the local school board of current and future employment needs and of skills in demand in their particular industry? (Yes schools are adequately informed; Schools are partially informed; No, schools lack this information.)

- ...A much better job is possible.
- ...A better job possible in this area.
- ...We participate in D.O. program and have since it started.
- ...Not direct from our company.
- ...No - The schools never ask for this information.
- ...Schools should check through Illinois State Employment Service.
- ...The schools should make an effort to keep informed.
- ...Partially in craft and maintenance departments.
- ...Communication is seldom really adequate - but the process is improving rapidly through greater cooperation, frequent meetings.
- ...Schools do not respond.
- ...I do not believe there is enough interest (as a rule) on the part of the schools in this direction.
- ...Yes - Advice goes to the curriculum committees, high school principals, IA teachers and counselors. The school board is too far removed from the action.
- ...Chamber of Commerce makes systematic study of manpower needs.
- ...School curricula are difficult to change - course content needs more flexibility.

7. For planning purposes, teachers should know what employment opportunities are available in their vicinity, and also how many workers are needed to fill these positions. Are schools: Aware of distribution of labor force and present supply of workers? Aware of labor supply, but not of distribution of workers? Lacking information concerning supply and distribution of labor?

- ...There is an advisory committee.
- ...Probably little awareness
- ...I have not been informed that the schools are informed. Generally, they know that a plant may need men or women.
- ...Actual numbers needed fluctuate on a weekly basis. In our business alone it would be quite impossible to keep such information up-to-date.
- ...Would guess "lacking information" would be true - schools could seek this information.
- ...Appears that they need to pursue more aggressively.
- ...Most companies inform Illinois State Employment Service.
- ...It would be helpful.
- ...Should be - All have professionals that watch these things.
- ...No one works at providing this information.
- ...Lacking to my knowledge.
- ...I have no way of determining what the schools know.
- ...Not qualified to state what teachers know.
- ...Schools never ask.

8. Will more "direct contact" with industry help establish what qualifications are necessary for a student to become "employable" and "promotable"?

...Should

...Advance preparation in high school skill requires adaptation to industrial environment. It could provide the teacher greater understanding of business problems. Greater business lectures and visits to factories would be valuable.

...I think a better understanding of qualifications would help students.

...We actively encourage more direct contact, even to mailing out scores of invitations to group meetings conducted periodically.

...Very important

...Providing the individual has the other necessary tools in order to do a decent job - such as desire.

...Definitely

...Certainly

...Yes, but the student must then believe what the school is telling him.

9. What qualities are needed to improve the "employability" of future workers? (Dependability and work habits; Skills, etc.; Information)

...All three - We find that some of our biggest problem employees are the ones who are fresh out of school and have not worked anywhere, etc.

...All three - Specific skills least important - many of which cannot be acquired until a person is on the job due to expensive and highly sophisticated machinery.

...Dependability and work habits, plus attitudes.

...Dependability and work habits - An attitude and willingness in accepting responsibility.

...Dependability and work habits - Future workers need a greater understanding of the free enterprise system and what it means to our country.

...Dependability and work habits & Skills - Too many are interested only in 5 p.m. and pay day - not work.

...Dependability and work habits - Many really don't want to work.

...All three - Always room for improvement.

...All three - Can these be separated?

...Dependability and work habits plus a good foundation in reading, writing and math.

...All three - Dependability and work habits most important.

...More than ever before, the "right" attitudes toward work and a job make, or the lack of them interfere with, employability.

...Dependability and work habits - We train in our own occupations.

...All of these.

...Dependability and work habits & basic skills.

10. Are sufficient opportunities available to your employees for the purpose of training or upgrading their skills?
- ...Yes - Through learner jobs, educational leaves of absence, tuition aid.
 - ...Yes - However, an employee must have basic skills.
 - ...Yes - Off-shift courses are available on a regular basis.
 - ...Yes - Adult education, in-plant training programs.
 - ...No - Despite a very full in-plant program, it is still not sufficient, particularly in the skills area. We offer many inducements such as tuition refund plans, educational counseling service, etc. - but there is more to be done.
 - ...Many courses are made available through tuition reimbursement, but the employees fail to take advantage of them.
 - ...Yes - Generally
 - ...Yes - Our company growth has been real fine for the past 10 years.
 - ...Yes - On-the-job training
 - ...No - Additional night and day adult education programs helpful.
 - ...Yes - In some classifications.
 - ...No - Progress is being made.
 - ...No - We have no training programs.
 - ...Yes - Somewhat limited.
 - ...Qualified no - Will offer more in-plant training.
 - ...Yes - Only for the needs of our organization.
11. Does your Company sponsor any of the following? (Graduate level study courses (university sponsored); Conferences and Seminars; Human Relations Courses; Math, science, communications, technical, reading, etc.?)
- ...At larger facilities - Training Department is available for help at outlying plants.
 - ...Supervisory skills
 - ...In-plant training on specific plans, procedures, etc.
 - ...Yes - Through tuition reimbursement.
 - ...Supervised study program for those enrolled in home-study program.
 - ...Undergraduate and some adult study.
 - ...Some university professors bring their classes in for a tour and conference - this is good.
 - ...Any course that improves an employee's job performance is paid for.
 - ...Certain people, chosen by management, have cost of night school courses reimbursed. Training course for precision machinists (2-year program) now in operation.
 - ...In-plant training, correspondence courses.
 - ...No, not to an acceptable degree.
 - ...Special courses, informal training and OJT
 - ...None
 - ...Tool and Die Apprentice Program
 - ...Participate in apprenticeship program
 - ...Apprentice program, supervisor conferences
 - ...Machine shop training - service manual
 - ...For our own employees only

12. Does your Company participate in conferences or ~~seminars~~ involving either teachers or school administrators?

- ...If invited
- ...AMA
- ...Technical societies, counselor's day
- ...Would if allowed
- ...Whenever asked
- ...To a very small degree
- ...Whenever invited
- ...From time to time we have conferences with various groups from local schools.
- ...Not on local level.
- ...Conferences on GED & high school diploma programs; Personnel Association Workshops; ~~Seminars~~ for Guidance Personnel and ~~Employment~~ Counselors; and Seminars to which we invite personnel from various colleges.
- ...NMTA - AMA
- ...Guidance Counselor Programs
- ...Not locally
- ...Selected persons sent to seminars.
- ...Junior College Boards
- ...Various, when in conjunction or through the Industrial Division, Chamber of Commerce.
- ...No, unless they participate in AMA programs.
- ...Vocational Education Advisory Council
- ...Senior Day, Careers Day, Operation - ~~Employment~~
- ...Have had some conferences with teachers.
- ...Not at this location.
- ...Luncheons with counselors
- ...Teachers Institutes, etc.
- ...Conferences
- ...Only on corporate level
- ...Cooperative training program - university sponsored
- ...At times - example: Business, Industry Day

13. Would more direct contact among schools, industry and labor lead to a better understanding of problems encountered by employers when seeking qualified employees and would it help provide more plausible solutions to these problems?

- ...I'm not sure I understand labor's part.
- ...Certainly would help and make for a better understanding.
- ...If it is handled properly.
- ...Yes - Our experience over the past 3-4 years has proved this beyond a shadow of a doubt. Even as I write this, nearly 150 teachers, counselors, and industrial people are at a meeting we set up.
- ...A great need for more direct contact exists.
- ...Need a very close working relationship.
- ...A pretty fair understanding seems present.

14. Do you feel an obligation to establish better communication between schools, labor unions and industry in order to develop an understanding of industrial processes and the important role industry plays in our society?

- ...This is a matter of definition. Industry shouldn't have the entire burden to establish improved understanding.
- ...As indicated, we not only feel an obligation, but we are doing something about it.
- ...I feel we should have a better understanding with schools.
- ...I doubt if labor unions are interested in this type of interchange.
- ...No, I feel many union men are unqualified, and industry is stuck with them because of union strength.
- ...I have met with each new Industrial Arts teacher in the system and regularly contact some.
- ...We consider our local communications with ISU adequate.

15. Do you feel that the contact provided by an "Industrial Training Program" would help in improving current and future curricula in the public schools?

- ...Providing it is a good program.
- ...It would help skills, but I'm not sure it would make the student more knowledgeable of industry.
- ...Might - Without further elaboration regarding the nature of the program in mind, this would be difficult to determine.
- ...Might - Depends upon teacher and opportunity available to him.
- ...Yes - Very definitely
- ...Might - It is difficult for schools to train for specific occupations. Concentration should be placed on making the student employable and then let industry give them the specific training needed.
- ...Might - Politics?
- ...Might - Depends upon goals to be achieved.

16. Would association with an "Industrial Training Program" help establish a realistic guidance program by effectively matching abilities and interests of students with possible job opportunities and requirements?

- ...Some value - Great "diversification" in this area.
- ...Great value - Properly conceived, communicated to the right populations, and presented in a meaningful manner (and not just a one-shot program) it could have inestimable value.
- ...Some value - Would be difficult
- ...I understand your "program" would be for teachers. "It" could do nothing toward matching abilities of students with jobs. Teachers, after association with it, might do so.
- ...Difficult due to union relationships.

17. Would association with an "Industrial Training Program" aid teachers in "getting-to" some of the non-academic students by giving them a better insight into opportunities available to them as future citizens who must earn a living for themselves?

- ...Probably would help some.
- ...Great value - Provided that you are not limiting this to the traditional "Plant Tour approach" which may have some value, but is too casual to make much impression and too fleeting to impart much knowledge.
- ...Great value - this is a fertile field.
- ...Some value - he should know this now.
- ...Some value - Why "get-to" non-academic students? Doesn't industry need the so-called academic students?
- ...It would depend upon the teacher.

18. Would you actively support the establishment of an "Industrial Training Program"?

- ...We support a large program of apprenticeship and in-plant training for employees.
- ...Can't say until "direction" such a program might take is known.
- ...Depends upon the nature of the program. If it is meant solely doling out a few summer jobs to teachers, definitely not. It would have to be a jointly planned, integrated and on-going experience for concerned people in schools and industry --- and possibly federal employment personnel.
- ...Would consider a "finalized" program.
- ...Depends on the needs of this area.
- ...Schools and industry have to work on a program of this nature jointly to make it effective.
- ...We are not a large enough company for this sort of thing.
- ...We would consider each program on its own merits.
- ...Schools and industry jointly.
- ...Too vague a question to answer.

19. If your company is not presently involved in any of the programs listed below, would you be interested in participating in any of the following: (Summer "Industrial Training Program"; Conferences or seminars - during school year; Conferences or seminars - during summer; In-service training program - conducted by industry; other?)

- ...Tours
- ...Have helped with High School vocational training.
- ...Not at this time.
- ...Would consider a finalized program.

19. (Continued)

- ...I'm not ruling out the summer aspect, but people tend to scatter so much at that time. During the school year when the impact would be more immediate would seem preferable to me.
- ...Involved in the above.
- ...Yes
- ...We are involved to a degree in some.
- ...Not on a scheduled basis.
- ...Possibly, would need more information before answering.
- ...Students of High School change their minds, and industry has so much training on and off the job that keeps them very busy.
- ...Presently involved in all except Summer "Industrial Training Program."

20. Would an "Industrial Training Program" (sponsored by a University, but conducted in factory or manufacturing areas of local companies) designed to improve industrial knowledge and skills of teachers be feasible?

- ...Might
- ...Could be
- ...Couldn't help but add to a man's stature.
- ...I think so, especially if the group is not so large as to be unwieldy. As a matter of fact, we have a dozen or so from ISU as our guests at the plant studying numerical control. The experiences include a short plant tour, luncheon, classroom session conducted by a graduate engineer from Purdue along with the University Professor.
- ...Would consider a "finalized" program.
- ...Yes for some local industry, but not for others.
- ...I would imagine there would be too much interference with production.
- ...No - Because (1) Labor contract commitments; (2) Fringe benefit costs; (3) Staff time required; and (4) Disrupt production.
- ...Support given to the project would determine its effectiveness.
- ...Yes, in specific areas and/or skills.
- ...This would be fine for all concerned.
- ...Yes - They would know industries problems better.
- ...Could be
- ...Possibly
- ...Not sure on this
- ...Yes - However, what you ask could be of considerable expense to industry with very indirect results.

COMPLETE LIST OF COMMENTS BY UNION REPRESENTATIVES

1. Does an "obvious gap" exist between what youth are prepared to do as a result of their academic training and what is expected of them by industry?
 - ...The schools need to start at Junior High level (seen on two surveys)
 - ...Gap may be narrowing because of demands made upon schools by industry and construction.
 - ...Present system encourages academic pursuit, and doesn't seem to consider that all people are not meant to wear white collars.
 - ...More manual training

2. There is a lack of communication between schools and industry concerning the purpose of industrial arts courses. The purpose is: To inform students about industrial products and processes; Disciplinary classes for poor students; To develop skills for employability.
 - ...We get some of them (poor students)
 - ...High school I.A. courses are just not realistic - the vocational trade courses come much closer to filling the need.
 - ...Schools do not recognize the needs of industry.
 - ...We get too many poor students in the Union - schools could help by pre-training them.
 - ...A skillful employee will learn processes.

3. Who should accept the responsibility for training employees for occupations within a particular company?
 - ...A boy should be pointed in a given direction (say machinist) in school. Industry should reflect this in hiring practices, and in my opinion, a joint labor-management apprenticeship program is the most effective training available.
 - ...We will help if schools and companies do their part.
 - ...If the company needs them, they should train them.
 - ...Schools could help company and unions to clean out incoming deadwood.
 - ...The responsibility depends upon all three.
 - ...PDCA and International are revising standards for all Labor Unions of painting industry for a unified program.

4. In your opinion, do industrial arts and trade teachers have sufficient opportunities for keeping abreast of the latest industrial processes and manufacturing techniques?
 - ...Unknown
 - ...Not in plasterers or concrete trades
 - ...Should work at the trades during summer months.
 - ...Educators seem too management inclined, when the actual skills are possessed by the men in the shops or on the job.

4. (Continued)

- ...There is no substitute for on-the-job training.
- ...Know little about workshops, etc.
- ...Could use unions to give impetus to workshops.
- ...Industrial arts teachers are 20 years behind the times.

5. Does the Company you work for employ industrial arts and trade teachers for manufacturing or factory work during the summer months?

- ...We have teachers as members, but not in this field. They work to have additional income.
- ...On occasion - but only in clerical positions - which is one hell of a waste of time!
- ...They do not apply for jobs.
- ...We have teachers in our union who work summers at the trade.

6. Does the Company you work for advise the local school board of current and future employment needs and of skills in demand?

- ...The unions do.
- ...Vocational courses concerning our process are kept informed.
- ...The U.S. Dept of Labor requires this. See standards of procurement - Apprentice Programs.
- ...My union supplies teachers for union seminars.

7. For planning purposes, teachers should know what employment opportunities are available in their vicinity, and also how many workers are needed to fill these positions. Are schools: Aware of distribution of labor force and present supply of workers? Aware of labor supply, but not of distribution of workers? Lacking information concerning supply and distribution of labor?

- ...The schools have never contacted this labor union.
- ...Teachers should make arrangements to compile their own information.

8. Will more "direct contact" with industry help establish what qualifications are necessary for a student to become "employable" and "promotable"?

(No comments)

9. What qualities are needed to improve the "employability" of future workers? (Dependability and work habits, skills, information)

- ...All are required
- ...Current generation seems to be capable of executive level employment or know nothing at all of vocational skills.
- ...Skill and dependability share importance.

10. Are sufficient opportunities available to your union members for the purpose of training, or upgrading, their skills?
- ...Generally true - occasionally not
 - ...Periodic upgrading by testing and OJT
 - ...We conduct classes for retraining on a no fee, voluntary basis in special fields.
11. Does the union of which you are a member sponsor: Graduate level study courses (university sponsored); Conferences and Seminars; Human Relations Courses; Math, science, communications, technical or reading courses; Other?
- ...On labor negotiations and union administration
 - ...Apprenticeship through Adult Education (special courses)
 - ...No program at present
 - ...We conduct classes for retraining on a no fee, open, voluntary basis in special fields.
 - ...Apprenticeship Programs
 - ...Seminars dealing with problems of union interest and need.
 - ...Specialized Journeyman retraining.
12. Do union officials have the opportunity to participate in conferences or seminars involving teachers or school administrators?
- ...Not enough
 - ...Supply speakers for school programs
 - ...Mainly bargaining and study of human relations
 - ...With Junior College instructors
13. Would more direct contact among schools, industry and labor lead to a better understanding of problems encountered by employers when seeking qualified employees and would it help provide more plausible solutions to these problems?
- (No comments)
14. Do you feel an obligation to establish better communication between schools, labor unions and industry in order to develop an understanding of industrial processes and the important role industry plays in our society?
- ...This should be part of training for future citizens
 - ...In my opinion, the schools are not interested in labor unions as potential employers -- have no experience in labor problems -- and just don't understand labor as a source.
 - ...Industry would benefit in the long run -- labor would probably be willing to go along if program was instituted correctly.
 - ...There should be some kind of cooperation instigated.

15. Do you feel that the contact provided by an "Industrial Training Program" would help in improving current and future curricula in the public schools?

...Just how can they predict the courses of construction in any field three or four years in advance?

16. Would association with an "Industrial Training Program" help establish a realistic guidance program by effectively matching abilities and interests of students with possible job opportunities and requirements?

...A teacher would have to work at the trade to know.
...Remains to be seen.

17. Would association with an "Industrial Training Program" aid teachers in "getting-to" some of the non-academic students by giving them a better insight into opportunities available to them as future citizens who must earn a living for themselves?

...A teacher would have to know the trades and the current changes at all times to be effective.

18. Would you actively support the establishment of an "Industrial Training Program"?

...Under the proper conditions - yes
...We have our program and are improving same.
...Only as a joint educator - industry - labor program

19. As a union leader, are you in favor of "teacher participation" in any of the following: Summer "Industrial Training Program"; Conferences or seminars during school year; Conferences or seminars during summer; In-service training program conducted by industry; Other?

...Judgment withheld for want of particulars

20. Would an "Industrial Training Program" (sponsored by a University, but conducted in factory or manufacturing areas of local companies) designed to improve industrial knowledge and skills of teachers be feasible?

...I doubt it
...Must depend upon how program is instituted

COMPLETE LIST OF COMMENTS BY PUBLIC SCHOOL REPRESENTATIVES

1. Does an "obvious gap" exist between what youth are prepared to do as a result of their academic training and what is expected of them by industry?
 - ...High School students at Lovington - very small idea of what is expected of them, other than fundamentals.
 - ...Most industries are willing to train in the "skills"
 - ...Due to cost of equipment, students need access to industry's equipment.
 - ...There isn't enough time for these students to become fully qualified - nor are there ideal conditions existing.
 - ...Training is available in many instances if students will take advantage of it.

2. There is a lack of communication between schools and industry concerning the purpose of industrial arts courses. The purpose is: To inform students about industrial products and processes; Disciplinary classes for poor students; To develop skills for employability.
 - ...A novice skill
 - ...Most of the poor students (academically) are in the Industrial Arts Program because they can't master basic educational skills.
 - ...Many administrators seem to think "disciplinary classes" is the purpose of Industrial Arts.
 - ...To develop skills if in vocational.

3. Who should accept the responsibility for training employees for occupations within a particular company? (Industry should be responsible for training their own employees; Schools should be partially responsible for training employees; Labor unions should assist in training their members for particular occupations.)
 - ...I feel that cooperation between school and industry would be most satisfactory.
 - ...All three should share in training people who will benefit them.
 - ...All are responsible to a degree, in this order: industry, schools, unions.
 - ...Schools - For fundamentals, safety, etc.
 - ...Schools should teach basic skills - Industry trains in their own unique way.
 - ...Schools should be responsible for giving a background relative to any skills in any of the many industries, but also should emphasize industrial processes. Industry should train in specific skills.
 - ...Your approach to upgrading teachers via the route of practical experience is long overdue. Especially for those people who already have their master's degree and are looking for experience, further

3. (Continued)

education, and a chance to advance on the salary schedule. This is also an excellent means to build up rapport between the schools and industry.

- ...Both industries and schools
- ...Schools should be responsible for basic skills only - the way question is worded is perhaps at fault for my taking exception to it.
- ...Schools provide a good basic introduction - Industry help furnish equipment and materials - Union help provide standards and some guidance.
- ...If it is peculiar to the company - the company; if it is a general skill - responsibility of all three.

4. In your opinion, do industrial arts and trade teachers have sufficient opportunities for keeping abreast of the latest industrial processes and manufacturing techniques? (Yes, through workshops and seminars; Yes, through summer employment opportunities; Yes, through existing trade and industrial programs in the schools; and No)

- ...Limited - Would like to see local industry hire teachers and/or give them training, or college/industry cooperate together.
- ...Could be better
- ...Only by visit, reading and working that area.
- ...Unions prevent employment in this area.
- ...Trade and industrial publications also help.
- ...If the above are available they don't include all Industrial Arts teachers.
- ...The three positive answers are good, but not readily available.
- ...Also trade magazines
- ...Workshops and seminars are available - most Industrial Arts teachers cannot afford to attend them.
- ...With the expanding technological fields it is virtually impossible to learn the latest techniques during the summer; and many of such industries do not seem to want to hire "summer" help because of the time and expense of training.

5. Do firms in this vicinity hire industrial arts and trade teachers for manufacturing or factory work during the summer months?

- ...I have no information on this subject.
- ...To my knowledge, no. I have tried two different summers to work in factories, and they won't hire for three months.
- ...Not to my knowledge.
- ...Not that I know of.
- ...If you know the right people.
- ...None that I have found.
- ...Some in the Decatur area.
- ...Don't know definitely.

5. (Continued)

- ...I used to work at Caterpillar. Since 1964 they have not hired Industrial Arts teachers.
- ...I don't know
- ...Don't know
- ...Some (If you're not too old)
- ...Yes, but not much
- ...To a very limited extent
- ...Yes, but they don't go out of their way looking for them.
- ...I believe they do, but this is my first year in teaching and I am looking for a job for summer at the present time.
- ...Teachers have no priority
- ...Not that I know of
- ...Because of short term employment, they do not as a whole. There are a few exceptions.

6. Do firms in this vicinity advise the local school board of current and future employment needs and of skills in demand? (Yes, the schools are adequately informed; The schools are partially informed; and No, schools lack this information.)

- ...Schools are partially informed to a very small degree.
- ...Schools are partially informed - This is only an educated guess.
- ...Yes - Based on the fact there is an Area Vocational Center in the building and planning.
- ...We need "Vocational Co-ordinators" to be a "liaison officer" between schools and industry for needs, placement, etc.
- ...Not to my knowledge
- ...Don't know
- ...I don't know - Am poorly and usually not informed.
- ...Some, could be more.

7. For planning purposes, teachers should know what employment opportunities are available in their vicinity, and also how many workers are needed to fill these positions. Are schools: Aware of distribution of labor force and present supply of workers? Aware of labor supply, but not of distribution of workers? Lacking information concerning supply and distribution of labor?

- ...Have some idea, but not enough.
- ...As an Industrial Arts teacher, am not informed by industry or counseling office in school.
- ...Poor question
- ...Teachers should be aware of general employment opportunities.
- ...Schools may not be lacking, but teachers are.

8. Will more "direct contact" with industry help establish what qualifications are necessary for a student to become "employable" and "promotable"?
- ...Counselors in most schools are Liberal Arts graduates - do not understand Industrial Arts
 - ...We would know what industry wants in students.
 - ...If this contact is varied as to different occupations.
9. What qualities are needed to improve the "employability" of future workers? (Dependability and work habits; Skills, etc.; Information)
- ...Need all three
 - ...Seminars by industry keep us informed
 - ...Specific skills must be taught by each industry
 - ...Some of all
 - ...Information should be about the jobs available and also the skills needed to obtain them.
 - ...All, in this order: Dependability and work habits, Information, Skills.
 - ...All are needed
10. Are sufficient opportunities available for industrial arts or trade teachers for the purpose of upgrading or improving their skills?
- ...Charleston High School is just now starting a seminar with the University of Illinois which I will participate in.
 - ...Yes, if the teacher wants to improve.
 - ...For Industrial Arts teachers ISU is access to the street trades.
 - ...Depends on individual and field.
 - ...But not through industry.
 - ...Definitely not in this area.
 - ...Yes, junior college and university near.
 - ...Very limited.
 - ...Graduate work exists, however, it does not provide proper opportunities for upgrading skills in teaching.
 - ...Only in colleges and universities.
11. Does your school sponsor any of the following in-service training courses for the purpose of improving teacher's skills? (Graduate level study courses (university sponsored); Conferences and seminars, Human Relations Courses; Math, science, communications, technical, reading, etc.?)
- ...None
 - ...None that I know of
 - ...Not to my knowledge
 - ...None
 - ...Advisory committees in vocational
 - ...No in-service training courses are available.
 - ...The school district sometimes provides a teacher for one or two-week workshops.

11. (Continued)

- ...None
- ...None
- ...No
- ...No
- ...No
- ...None
- ...No such courses offered
- ...No
- ...None
- ...Only for elementary teachers
- ...Workshops
- ...No
- ...Not for Industrial Arts teachers
- ...Not enough courses offered.

12. Does your school participate in conferences or seminars with leaders from business, industry or labor unions for the purpose of discussing the various problems arising from time to time?

- ...Only by speakers at roundtables
- ...BIE Day (Business Industry Education - visits to local factories and businesses as an institute)
- ...At administrative level, when requested
- ...Roundtable
- ...An inactive Advisory Committee
- ...Advisory Committees in Vocational Education
- ...Only on departmental level

13. Would more direct contact among schools, industry and labor lead to a better understanding of problems encountered by employers when seeking qualified employees and would it help provide more plausible solutions to these problems?

(No comments)

14. Do you feel an obligation to establish better communication between schools, labor unions and industry in order to develop an understanding of industrial processes and the important role industry plays in our society?

- ...Industry should become more concerned and promote this more than what is done now.
- ...Along with industry
- ...Curriculum committee has just formed an advisory group.

14. (Continued)

- ...This obligation must be recognized by administration and free time granted for this purpose.
- ...Have been appointed Chairman of the Industrial Arts Department - am going to work in this direction.
- ...If there is cooperation.

15. Do you feel that the contact provided by an "Industrial Training Program" would help in improving current and future curricula in the public schools?

- ...Would know what is needed in industry.
- ...Must be a total integrated program.

16. Would association with an "Industrial Training Program" help establish a realistic guidance program by effectively matching abilities and interests of students with possible job opportunities and requirements?

- ...The philosophy at our school: If you're intelligent, automatic college prep; otherwise, Industrial Arts.
- ...Guidance personnel should be included.
- ...If guidance is done by various ITP teachers.
- ...Especially in Senior High School
- ...Too many people are out of place in colleges and should be in technical schools.

17. Would association with an "Industrial Training Program" aid teachers in "getting-to" some of the non-academic students by giving them a better insight into opportunities available to them as future citizens who must earn a living for themselves?

- ...You can lead a horse to water but....
- ...Difficulty is in getting students to listen.

18. Would you actively support the establishment of an "Industrial Training Program": In public school system; In industry; Sponsored by Federal Government; Other?

- ...Any of the above
- ...I'm not sure where it should be located, but I would support one.
- ...Yes, any way possible.
- ...In both schools and industry.

19. If you are not presently involved in any of the programs listed below, would you be interested in participating in any of the following: Summer "Industrial Training Program"; Conferences or seminars - during school year; Conferences or seminars - during summer; In-service training program - conducted by industry; Other?

...I'm open to improving my background in any of the above.
 ...The best example of a summer conference I know of is that of the Int. Graphic Arts Educ. Assn. Last summer it met for a week at the Typographical Union Training Center in Colorado Springs, Colo.
 ...Any or all - I feel left out as an Industrial Arts teacher - I feel just there.
 ...Should be conducted in summer, at union scale wages.
 ...Good - Proceed
 ...The above should be with pay and college credit similar to DO program only on a higher level. Coordinator for the program.

20. Would an "Industrial Training Program" (sponsored by a University, but conducted in factory or manufacturing areas of local companies) designed to improve industrial knowledge and skills of teachers be feasible?

...If it was in the area teacher was teaching.
 ...Yes, but we need counselors, or at least one in the department, who are sympathetic to our problems.
 ...Maybe - Would depend on the industry or industries involved.
 ...Yes, Provided you could incorporate a large enough area to get enough teachers to make it worthwhile for the university and the local company.
 ...Would industry cooperate?
 ...Very much needed
 ...This would be very important

OTHER COMMENTS:

...I participated in an NDEA 8 week seminar last summer. We visited 25 major industries in Georgia, Alabama, Florida and Tennessee. We had a top-level forum with the management of each one of these industries. Each came out with this idea. Leave the high school students skill building to us. You teach them honesty, punctuality, pride in their work and we will show them how to do it. Everyone commented that we as I.A. teachers cannot teach up to date skills. Such as: Computerized drafting, exotic types of welding, computer programming.

Each one of these require outlays of \$100,000s of dollars - not a budget of maybe \$5,000.

I would be glad to comment on this further if you wanted.

OTHER COMMENTS (Continued)

...TO WHOM IT MAY CONCERN:

Briefly - Have become concerned with Ind Arts future. Inability of getting teachers. No support by a large local industry - We do not get good students - consequently we have no feeder system to institutions of higher learning to develop teachers who want to come back and teach H.S. Ind Arts. A large local industry in our area gives us no support. In fact is negative to H.S. Ind Arts programs. They of course have a fine apprentice training program. They want college prep trained students. I can understand why. At our H.S. we are tracked. We in Ind Arts get (CDF) students. Their future is limited because of their inability and attitudes. Teachers that teach H.S. are frustrated because of limited talent in their classes. They get bitter and cynical. It is hard to maintain a positive attitude. Industry claims our students are not well prepared, we claim it is because we get students of overall limited ability, which we find it most difficult to teach & maintain subject matter in depth. Teaching dull students makes one a dull subject matter teacher. I teach in a community of 18,000 - 2000 in our school - working class kids - Yet most emphasis is put on culture, college prep course, etc. I don't understand, but yet I do. Most fathers who work in a factory don't want their boys to. The workaday world & getting your hands dirty is a crime anymore. If you are not a soul saver & a character builder in the Peoria area you will not last in H.S. Ind Arts. Most Ind Arts teachers are trying to get out of it to Jr. Colleges, etc. They claim the subject matter challenge is gone. We get a handful of good academic students. They come into the dept. on their own. Parents & counselor usually keep the good students out.

Why upgrade teacher industrial skills when normal subject matter knowledge is good enough?

When I first got into Ind Arts I was enthused. I have watered my program down year after year till it is pathetically boring to teach.

I hope the field can be revived, but it must come from industry (outside of schools).

If I sounded brutally frank, I intended to. I am a realistic person.

By the way, we need a Drafting Teacher - Know any?

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