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A STUDY OF THE DIFFUSION PROCESS OF VOCATIONAL EDUCATION INNOVATIONS.

MICHIGAN STATE BOARD OF EDUCATION, LANSING

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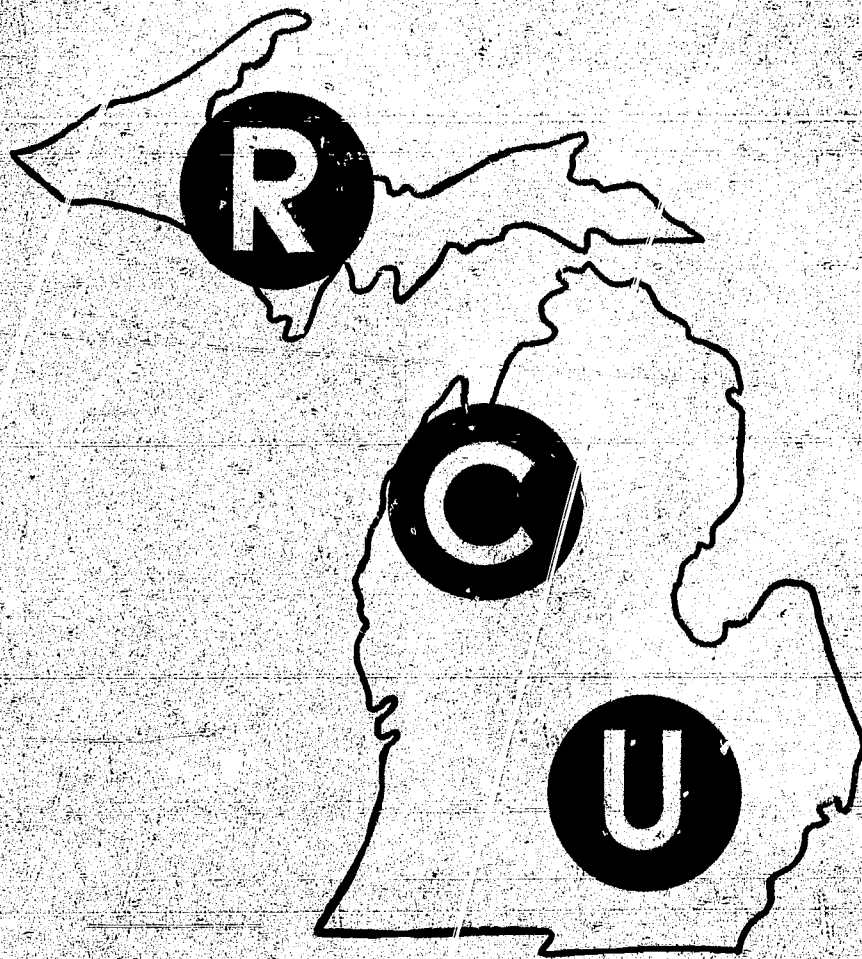
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THE MAIN OBJECTIVE OF THE STUDY WAS TO IDENTIFY A COMMUNICATION NETWORK, IF ONE EXISTED, WHICH COULD BE USED TO SHORTEN THE TIME LAG IN ADOPTING EDUCATIONAL INNOVATIONS IN VOCATIONAL EDUCATION. FIVE RELATIVELY NEW PRACTICES IDENTIFIED IN EACH OF THE VOCATIONAL SERVICE AREAS WERE SURVEYED. QUESTIONNAIRES WERE SENT TO ALL SCHOOLS IN MICHIGAN HAVING REIMBURSABLE VOCATIONAL EDUCATION PROGRAMS, AND RESPONSES WERE RECEIVED FROM 118 OF THE 205 SCHOOLS WITH PROGRAMS IN AGRICULTURE, 265 OF THE 600 WITH PROGRAMS IN BUSINESS, 280 OF THE 600 WITH PROGRAMS IN HOME ECONOMICS, AND 100 OF THE 89 WITH PROGRAMS IN TRADE AND INDUSTRY. THE FOLLOWING DATA WERE ANALYZED FOR EACH SERVICE AREA--(1) THE TIME OF ADOPTION OF THE PRACTICES SURVEYED, (2) PERCENTAGE OF SCHOOLS WHICH HAD HEARD ABOUT THE PRACTICES, ADOPTED THE PRACTICES, AND HAD BEEN OBSERVED BY OTHERS, (3) PATTERNS OF VISITATION NETWORKS, (4) SOURCES OF INFLUENCE USED IN ADOPTING EACH PRACTICE SUCH AS JOURNALS AND CONFERENCES, (5) LIST OF PRACTICES OBSERVED IN OTHER SCHOOLS, (6) NEW PRACTICES BEING TRIED, (7) NEW IDEAS IN THE FIELD, AND (8) DISCONTINUED PRACTICES. (FS)



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THE DIFFUSION PROCESS OF  
VOCATIONAL EDUCATION INNOVATIONS



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This study of the Diffusion Process of Vocational Education Innovations could prove to be invaluable to vocational education. It could prove to be the foundation for a structure able to meet the problems of change in a positive manner.

The motivation for this particular study came from two primary sources. First, Dr. Everett Rogers, researcher and writer on the diffusion-of-innovations process, on several occasions urged that an attempt be made to study the spread of vocational education innovations. His suggestions were heard by members of the Vocational Education Division. Secondly, after the establishment of the Michigan Research Coordinating Unit in the fall of 1965, the RCU Advisory Committee suggested that one activity of significant value for vocational education would be the identification of innovative schools through a study of the diffusion process. The final stimulus was provided by the approval of Vocational Education Director, Robert M. Winger, and State Superintendent of Public Instruction, Dr. Ira Polley.

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## PART I

### THE DIFFUSION PROCESS OF VOCATIONAL EDUCATION INNOVATIONS

Changes are taking place in American education at a rate never before experienced, and the pace will probably increase. Educators today are acutely aware that America can no longer afford a long time lag between research and practice. We cannot afford to watch our children simply pass through our schools. Because of the startling changes in technology of business and industry, vocational education is faced with many perplexing problems.

One of the main problems facing vocational education lies in the fact that new ideas in education are not accepted or adopted anywhere as rapidly as changes occur in business and industry. Ability to change is a vital prerequisite for survival in the world of business activity. Keep up with the times or fall by the wayside. Vocational education in the public schools is faced with this problem; it has been accused of living in the past and not doing the job it is supposed to do. The Vocational Education Act of 1963 has encouraged vocational education to change this image.

The Michigan Research Coordinating Unit (RCU) undertook the task of trying to find out some things that might help to improve and up-date and keep up-dated vocational education in Michigan.

The RCU proposed to study the process of change in vocational education within the public schools of Michigan. It was believed that in order to fulfill the functions of Stimulation, Coordination, and Dissemination the RCU needed to know more about the target systems, the local schools. Some of the questions to which answers were needed were: Who are the local schools? How do they react to change and innovations? Who are the opinion leaders and who are the followers? How do they communicate with one another? How soon after research do they begin putting research findings into practice?

Answers to these questions would make it possible to establish a communication network throughout the State for the diffusion of future vocational education innovations. Such a network would enable vocational education to help shorten the time lag between research and the implementation of research in the local schools.

One of the best methods of determining both opinion leaders and communication channels was described by Rogers<sup>1</sup> when he discussed the

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<sup>1</sup>Everett Rogers, Diffusion of Innovations, New York: The Free Press of Glencoe, 1962.



process of diffusion of innovations. Opinion leaders tend to be early adopters of innovations and tend to serve as role-models for others in the area.

It was felt that the findings from a study of the diffusion process of vocational education innovations in the State of Michigan would enable the RCU to utilize the existing communication network and leadership structure to more adequately stimulate, coordinate, and disseminate vocational education research.

As Rogers suggested at a meeting at Boyne Mountain in September, 1965, it would be well for education to study its diffusion process, determine who the adopters and the followers are if we are going to get acceptance of new methods and programs in our Michigan schools. A precedent for this type of study can be found in former Superintendent Bartlett's "5 Years of Change," which followed the diffusion of several academic innovations.<sup>2</sup> The study of the Diffusion Process of Vocational Education Innovations differed from the "5 Years of Change" study in two major respects: (1) It was concerned only with vocational education innovations, a noticeable omission from the Bartlett study, and (2) it was concerned only with the diffusion and communication of innovations whereas the Bartlett study was much broader in nature.

#### METHODOLOGY

It was determined that each of the vocational service areas included in the study would list some relatively new practices within their particular field, which would vary in terms of recency of invention, complexity, and cost.

From these lists the RCU Resource Committee, consisting of a representative from each of the Services within the Division of Vocational Education, selected the five practices that were used in the study. A questionnaire form was devised with the help of Dr. Everett Rogers, which could provide the information needed to supply answers to the important questions previously mentioned. (See Appendix A)

After the practices were selected and the questionnaire developed, it was sent out to all schools in Michigan having reimbursable programs of vocational education.

The survey itself consisted of four separate studies, one for each service area. All schools received two or more different forms, making a total of 1594 questionnaires. Forms were sent to 600 schools having both Office Education and Home Economics Education.

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<sup>2</sup>Lynn M. Bartlett, "5 Years of Change," Lansing: The Department of Public Instruction, 1964.



Agricultural Education forms were sent to 205 of these schools, and 189 received Trade and Industrial Education forms. Because of the lateness in the school year, which prevented a follow-up, and because of the difficulty in answering that confronted new teachers it was felt that the responses received from the survey were very good. The responses by service are shown in Table 1.

TABLE 1  
SUMMARY OF RESPONSES

	Number of Schools Sent Surveys	Number of Schools Responding with 1 or More Surveys	% of Schools Responding
TOTALS	600	362	60.3%
Services			
Agriculture	205	118	57.6%
Business	600	265	44.2%
Home Economics	600	280	46.7%
Trade & Industry	189	100	52.9%

#### TIME LINES

For each of the service areas surveyed the information was transferred onto the charts and tables found in the respective sections of this report. It was found that time lines did exist for the practices surveyed. It can be seen that various forms of the "S" Curve of adoption rate were discovered. The curves range from very subtle ones in the T & I area (where the practices were not well defined) to rather obvious ones in the other service areas. One interesting thing that can be seen from these lines is that there is a definite relationship between the adoption of some of the practices and the Vocational Education Act of 1963. An example of this can be seen in the time lines for Agricultural Education Practices No. 1 and No. 2 as shown on page 8.



The time line for Practice No. 1, Land Laboratory, begins slowly with early adopters and gradually grows, moving diagonally across the chart. This is described by Dr. Rogers as a "spontaneous" adoption curve.

Practice No. 2, Off-Farm Supervised Experience Program, gives an entirely different adoption time line. This practice began in 1948 and did not get underway to any extent until 1963-64, the beginning of the Vocational Education Act of 1963. The shape of the time line for this practice was probably affected by legislation. The Smith-Hughes Act emphasized farming and discouraged off-farm experiences of students. Those schools adopting the practice prior to passage of the Vocational Education Act of 1963 were truly innovators.

The 1963 Act encourages off-farm experience programs and with the obvious results. This is what Dr. Rogers describes as a "directed" adoption of an innovation. The idea was first held back by legislation and later encouraged or released.

#### COMMUNICATION NETWORK

Channels and networks of visitation were developed from the responses. For each practice in each service area visitations were reported both by the visiting and the visited schools. (See Charts c) From this it would seem that given the proper leadership, exposure of demonstration programs should help the spread of new ideas in vocational education. The networks of visitation are shown in the respective sections of this report.

#### SOURCES OF INFLUENCE

Responses as to the way in which the school became convinced to adopt a given practice indicated that most schools had many different kinds of exposures before the practice was adopted. Many schools did not interpret the question to mean which of the items was most important and they made several responses without any given order of importance to them.

Of the schools responding to this question, more than half made two or more references as to factors involved in causing them to adopt a practice. The schools were not asked to indicate which of the items was most important in the decision for adoption where more than one item was checked. Therefore, the only information that can be derived from the responses is a list of the times each item was mentioned without any relative weight attached to the responses.



## NEW IDEAS

Respondents were asked to indicate what new things they were doing and what they considered to be new practices in their area. For each of the service areas lists of these two things are included. This may serve as a start for the pooling of new ideas so that they may become systematically spread throughout the State.

## IDENTIFICATION OF INNOVATIVE SCHOOLS

One of the main objectives of the study was to identify a communication network, if one existed, for the purpose of developing a systematic approach to the spread of educational innovations in vocational education. The task was to make use of the information available from the study for this specific purpose. An effort was made to work as many different responses into the evaluation procedure as possible to reduce the margin of error in the identification process. Actual use was made of b, c, and d items from questions 1-5; and of questions 7, 9, and 10. These data were used in the following ways:

First, lists of schools were made for each practice by year of adoption. From these lists some schools were identified as early adopters by reason of being among the first to use such practices in their programs. From the five lists for each service a separate list was made of the schools that appeared on two or more of the practices as early adopters. It was felt that schools which appeared on this combination list might fit the classification of "innovative" schools.

Secondly, lists were made of the schools by the number of practices adopted regardless of year. This information would bring in newer schools which fact of newness would not show on the early adopter list but which might be more likely to be innovative than others. An additional look was taken to see which schools were still using the practices as this could have some meaning as to how well the personnel involved in the school were able to plan and implement the practice. (It is recognized that there may be many other factors involved in whether or not a school continues to use a practice over a period of time, but this is the reason the particular item was used.)

Thirdly, consideration was given to whether or not the school (vocational education personnel) had observed any new or different practices within their field. It is felt that an innovative school would be one in which an interest in new ideas and new developments exists. An indication of this might be given by observation of something new. Probably both administrators and teachers would be in accord in situations where visits outside of the school were involved.



Fourthly, a look was taken at whether or not something new was being tried within the particular vocational education field within the school. Since so many new ideas and practices are currently being developed it seems likely that a school which is truly innovative would be trying something new. Here we are not thinking necessarily of new courses but rather something within a course or even a teaching method.

Last, consideration was given to the rating given to the school by the person responding to the survey. It seems that an atmosphere for innovation would be obvious to the personnel within a school, if such an atmosphere existed.

The above mentioned items were taken all together in order to arrive at a list of schools for each service which might be among the more "innovative" vocational education schools within the State of Michigan.

After such a list was made for each of the four areas surveyed, an effort was made to combine the four vocational areas into one list of schools in which vocational education and innovation were strongly entrenched. The final identification was made in connection with representatives of the service areas at the State Vocational Education office. The final step was to map the schools identified in an effort to see how these schools were distributed geographically.

#### USES

It is hoped that the network identified can be used to the benefit of vocational education in general. This may be accomplished through the involvement of the school's personnel in the responsibility for the advancement of vocational education.

The first use of this information was made in selecting and inviting personnel from the identified schools to a Research Training Workshop held October 25-27, 1966, at the Kellogg Center for Continuing Education, Michigan State University, East Lansing, Michigan, sponsored jointly by the Michigan Research Coordinating Unit and Michigan State University's College of Education.

Specific information about the practices and service areas is found in the individual reports by service.

PART II--Section 1

AGRICULTURAL EDUCATION

The Agricultural Education survey form was distributed to 205 different high schools within the State of Michigan. Responses were received from 118 schools or 57.6 percent.

It was hoped that the analysis of these 118 surveys would provide us with some valuable information; such as:

1. Time lines showing the relative recency of the practices surveyed.
2. Identification of schools which were visited by other schools because of their innovativeness in adopting new ideas.
3. Identification of schools which adopted new practices early.
4. Identification of a communications network throughout the State which could be used to shorten the time lag in adoption of new practices.
5. Identification of school systems with favorable climate for demonstration, pilot, and research projects which would further the cause of vocational education.
6. Identification of new developments in each field of vocational education.

The five practices surveyed were:

1. Land Laboratory: A school forest or land rented or owned by the school or FFA which is used for crop, nursery, or livestock production for instructional purposes.
2. Off-Farm Supervised Experience Program: A program which gives students occupational experience in non-farm agriculture occupations and is under the joint supervision of the teacher of agriculture, or coordinator, and the employer.
3. Course for Students Entering Off-Farm Agriculture Occupations: A course with content designed specifically for preparation of students for non-farm agricultural occupations rather than the traditional preparation for production farming courses.
4. Girls in Vocational Agriculture on a Regular Basis: Self explanatory except that on a "regular basis" means that girls in agriculture has become a common practice rather than an occasional occurrence.

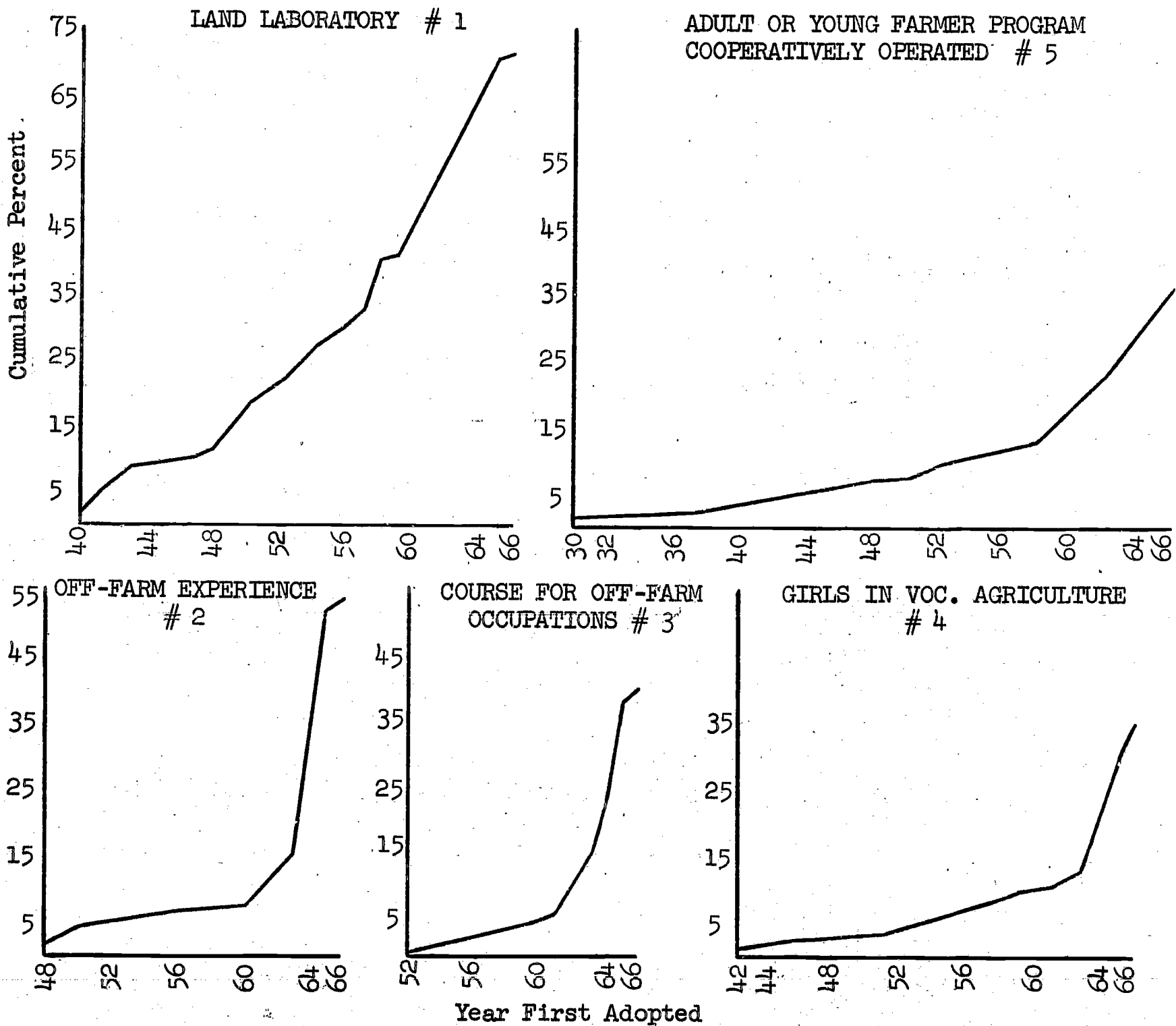


Section 1 - continued

5. Adult or Young Farmer Program Operated Cooperatively by Two or More Schools: Self Explanatory.

It can be seen from Chart 1a that these practices have been moderately adopted, with the exception of the more widely adopted Practice 1. It also can be seen that the adoption rate for these practices ranges from about 33% to about 72%. (It should be reported that several schools did not report the first year a practice was in use, so that Practice 1 actually has been adopted by 88% of the schools reporting.)

CHART 1a  
ADOPTION TIME LINES



Section 1 - continued

An interesting point is the rather sharp increase in adoption of Practices 2, 3, and 4 corresponding to the Vocational Education Act of 1963. Another point of interest is that the first year of adoption reported ranged from 14 to 36 years ago. This points up the need for developing ways of giving new ideas and practices exposure and for reducing the time lag of adoption.

Three of the questions asked about each of the practices concerned Awareness, Adoption, and Demonstration. Awareness meant had you heard about the practice; adoption meant were you using the practice now; and demonstration meant had others come to observe the practice in your school. The responses to these questions are found in Table 1b.

TABLE 1b

Practices	Awareness		Adoption		Observed	
	#	%	#	%	#	%
1. Land Laboratory	118	100	103	88	48	41
2. Off-Farm Experience	118	100	78	66	12	10
3. Off-Farm Occ. Course	115	98	54	46	7	6
4. Girls in Voc. Agric.	114	97	41	35	5	4
5. Adult/Young Farmer Prog.	107	91	48	41	11	9

These figures indicate that these practices were widely known, and Table 1b indicates the percent of adoption. There was special interest in the demonstration responses because it is in this area that we hope to find some of the answers to the problems of time lag in adoption.

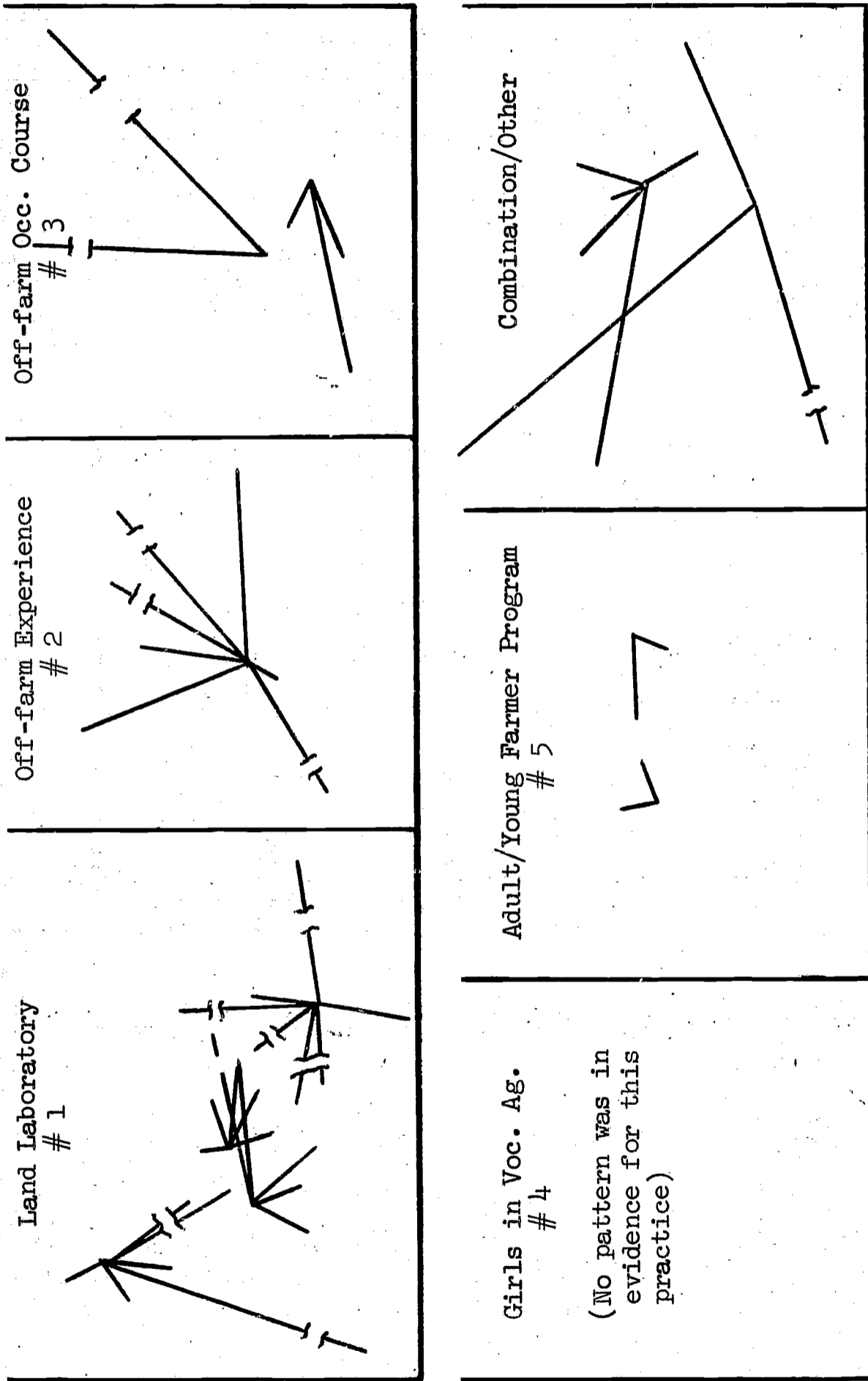
From 12% to 47% of the schools using the practices had been visited by other schools. From this information an effort was made to establish a communications network for these Agricultural practices. It was found that some patterns of visitation do exist (Chart 1c) which would indicate that given the proper leadership, exposure of demonstration programs should help the spread of new ideas in Agriculture as well as in vocational education in general.



Section 1 - continued

CHART 1c

VISITATION NETWORKS BY PRACTICE

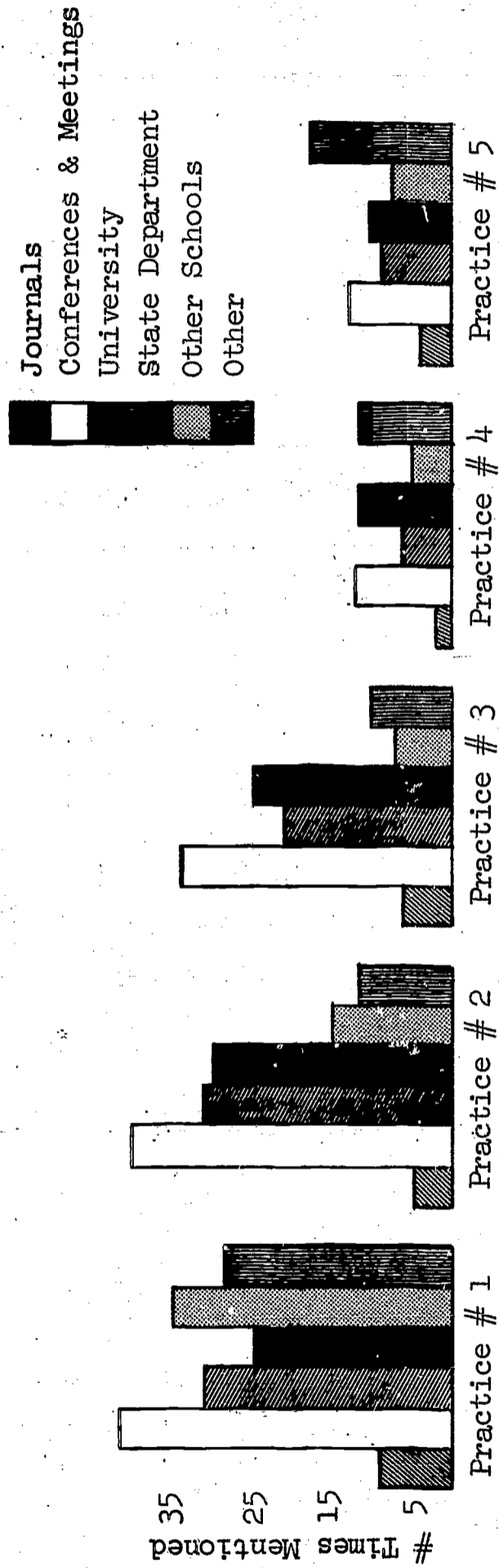


Section 1 - continued

Another area of interest in regard to the adoption of these particular practices dealt with the various sources of influence to adopt each practice (Chart 1d). From this it was found that there are often several sources of influence. In most cases more than one source was mentioned. For these particular practices several sources seemed to have considerable influence with conferences and meetings being the most consistently mentioned and journals being of least importance in each case.

CHART 1d

SOURCES OF INFLUENCE TO ADOPT





Section 1 - continued

Some general totals of interest concern the number of practices adopted by each school, the number of practices now in use, how many schools had observed a new practice within the last year, and how many schools were trying something new (Table 1e).

TABLE 1e

NUMBER OF PRACTICES ADOPTED			NUMBER OF PRACTICES NOW IN USE		
<u>Adopted</u>	<u>Schools</u>	<u>%</u>	<u>Using</u>	<u>Schools</u>	<u>%</u>
5	11	9.3	5	3	2.5
4	18	15.2	4	16	13.5
3	39	33.1	3	35	29.7
2	31	26.3	2	31	26.3
1	16	13.6	1	23	19.5
0	3	2.5	0	10	8.5
	<u>118</u>	<u>100</u>		<u>118</u>	<u>100</u>
OBSERVED NEW PRACTICES			TRYING NEW PRACTICE		
<u>Schools</u>	<u>%</u>		<u>Schools</u>	<u>%</u>	
46	39.0		68	57.6	

Section 1 - continued

Information given regarding the practices which schools reported going to visit is found in Table 1f. It is assumed that practices which attract observers would be somewhat of an innovative nature, at least to the extent that the practice was new in a particular geographic region.

TABLE 1f

PRACTICES OBSERVED IN OTHER SCHOOLS

Greenhouse	Horticulture
Drawing	Plowing-Tractor Contests
Experience Program	Adult Education
Landscape Laboratory	School Farm
Nursery	Science in Agriculture
Steer Feeding	Off-Farm Experience
Floriculture	FFA Activities
Conservation	Plant Bed
Power Mechanics	School Pond
Land Use	School Forests
Work Study	Corn
Propagation Houses	Swine
Farm Mechanics	Co-op
Plant Propagation	

Practices reported as newly being tried within a school are shown in Table 1g. These practices may or may not reflect the influence of visits to other schools. It might be assumed that most of the new practices being tried would be patterned after observed practices. However, some of the new ideas being tried might be of a truly innovative nature.

TABLE 1g

NEW PRACTICES BEING TRIED

One semester program of special problems for seniors  
Advanced courses in mechanics work (Agriculture)  
Semester courses; Ag. projects for private homes  
Honest approach to achieving success in FFA; adult courses  
More forestry; surveying course; contests; livestock sale  
Exchange of Agriculture and Home Economics classes for 6 days  
Group according to interest; students supervise class  
Floriculture; sheep project; greenhouse; vegetable growing  
Reduce labor in dairying; 2-year farm mechanics  
Landscaping and gardening; ornamental horticulture  
Relation of all to Agriculture; girls in vocational ag.  
Slides of homes with a landscape architect as resource person  
Vocational agriculture for junior high students  
Sap projects for community (evaporation)  
Electrical training for farm and non-farm students



Section 1 - continued

Table 1h lists the responses to the question, "In your opinion, what are the most important new ideas and practices in your field?". These are single responses for the most part with no selecting or editing done for this report. Items in the list may or may not reflect the latest developments within the field and should be treated with caution in terms of adoption or promotion.

TABLE 1h

NEW IDEAS IN FIELD

Integration of farm and off-farm related occupations  
Methods of showing agricultural job opportunities  
Placement in ag-related occupations  
Combination of vocational and technical skills  
Broadened ag. training (forestry and conservation)  
Ag. outside farming  
Girls in vocational agriculture  
Land laboratories  
Plant study  
On-job training  
Automation  
More ag. opportunities available  
Ornamental horticulture  
Field trips and films  
Meeting of student needs  
Area vocational programs  
Silage feeding to dairying  
First 2 years allow for non-farm persons; last 2 years farm persons only  
Occupational surveys  
Animal science  
Nursery  
Use of chemicals, mechanical picking equipment  
Greenhouse  
Technical training ag.  
Free-stall housing  
Automation of potato industry

Section 1 - continued

The last Table, li, lists practices that have been tried but discontinued. The reasons for discontinuing these practices could be an area for careful consideration, for there may be some information pertinent to the development of new practices and the pitfalls that face any new program ideas. This is largely a single-response (unedited) list.

TABLE li

INEFFECTIVE PRACTICES TRIED

Cropping program- no work done without nominal fee  
Shop- no equipment, lack of qualified personnel  
Horticulture course-  
Disease control-  
New crop varieties-  
Combined FFA from HS-lack of leadership  
Using more principle less practice-  
Using grade sheets and FFA as part of grade-  
FFA meetings right after school-transportation, no coordination  
Course arrangements-  
Program and opportunities not large enough-  
Weed control-moisture  
Inbreeding hogs-small litter size  
Co-op farm plots-  
Veal production on milk replacer-volume not large enough  
All students in agriculture- lack of interest  
Students select area of study-lack of interest  
Landscaping experience-lack of time, interest  
Putting together agricultural machinery-lack of time  
Upgrading classes-  
Reduced size of land laboratory-  
Integrated farm and shop-unable to use shop  
Gardens for freshmen-summer, lack of interest  
School nursery-limited area  
FFA buy brood gilts-lack of money  
Planting trees-too large of a job  
Young farmer meetings separate from adults-farming is a partnership  
Agriculture II as a science course-lack of equipment  
Instruction in ag. occupations-dull  
Raising calves at school-too many students feeding, not good facilities  
Raising of crops-summer, lack of interest, loss of money  
Greenhouse-vandalism, lack of interest  
Teach how to calibrate a sprayer-  
Renting of land-didn't use it all  
Classroom work with resource persons-lack of participation  
Finding jobs for those in agriculture-students leave for higher pay  
Class for non-farm bound agriculture students-lack of time  
Sold SMV emblems-slow, little demand  
Grew popcorn-no demand  
Grafting and top working old apple trees-impractical  
Christmas trees-weeds, started too late



Section 1 - continued

In Summary

It is hoped that this information will be of use to vocational education and that it can be used in such a way that the change process within vocational education is speeded and made less haphazard. We do not have all the answers to the problems of adoption of new practices, but hope that some things can be started which will help to provide answers and to help improve vocational education in the high schools. The reader is encouraged to make any suggestions known to the Research Coordinating Unit in regard to the use of the Diffusion Study data and in connection with new ideas within the field of vocational education.

## PART II--Section 2

### BUSINESS--OFFICE EDUCATION

The Business--Office Education survey form was distributed to 600 different schools within the State of Michigan. Responses were received from 265 schools or 44.2 percent.

It was hoped that the analysis of these 265 surveys would provide us with some valuable information; such as:

1. Time lines showing the relative recency of the practices surveyed.
2. Identification of schools which were visited by other schools because of their innovativeness in adopting new ideas.
3. Identification of schools which adopted new practices early.
4. Identification of a communications network throughout the State which could be used to shorten the time lag in adoption of new practices.
5. Identification of school systems with favorable climate for demonstration, pilot, and research projects which would further the cause of vocational education.
6. Identification of new developments in each field of vocational education.

The five practices surveyed were:

1. Audio Laboratory for Shorthand Skills Training: A laboratory classroom utilizing records and commercially- or teacher-prepared tapes for the development or improvement of skills in shorthand or typing.
2. Overhead Projector with Overlays: The use of an overhead projector and either commercially- or teacher-prepared transparencies.
3. Motorized Visual Aids--Skill Builders: This approach to teaching is concerned with the utilization of commercially-prepared skill-building programs (such as the EDL typewriting and shorthand series).
4. Teaching "Concepts" in Data Processing: This does not mean instruction utilizing expensive hardware. The approach refers to teaching the basic elements and theory underlying data processing operations.



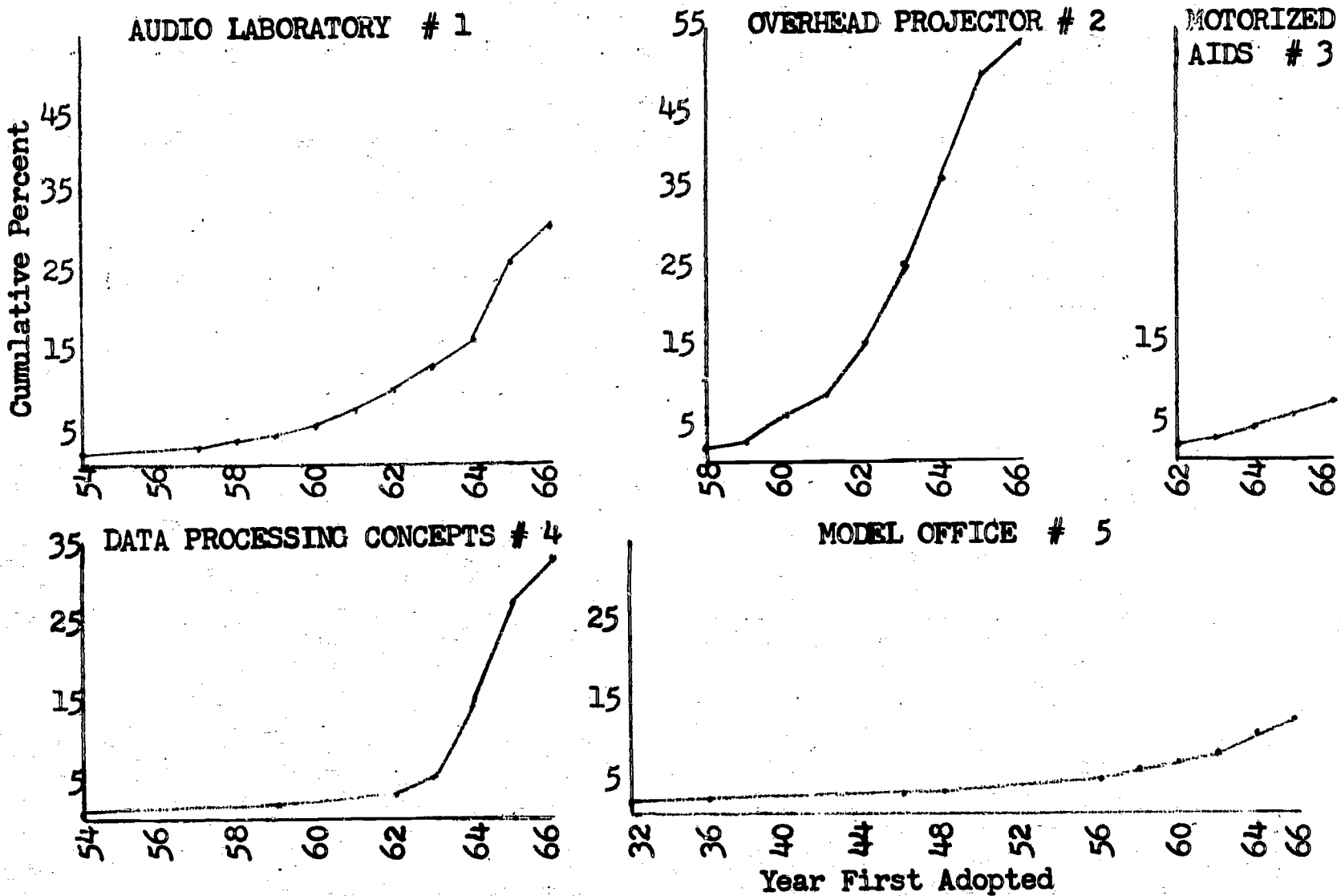
Section 2 - continued

5. Model Office: A simulated business office, furnished with typical, modern office furniture and equipment, and designed in such a manner as to provide the student with the opportunity to apply her skills in a situation closely resembling the operation of an actual business office.

It can be seen from Chart 2a that these practices have not been widely adopted, with the exception of Practice 2. It also can be seen that the adoption rate for these practices ranges from about 5% to 53%. (It should be noted that several schools did not report the first year a practice was in use, so that Practice 2 actually has been adopted by 64% of the schools reporting).

CHART 2a

ADOPTION TIME LINES



Section 2 - continued

An interesting point is the recent sharp increase in adoption of Practices 1, 2, and 4, all of which have some relation to recent Federal legislation related to the use of equipment. Another point of interest is that the first year of adoption reported ranged from 4 to 35 years ago. Except for the most recent innovative practice, the time lag of adoption indicates a need for developing ways of giving new ideas and practices exposure.

Three of the questions asked about each of the practices concerned Awareness, Adoption, and Demonstration. Awareness meant, had you heard about the practice; adoption meant, were you using the practice now; and demonstration meant, had others come to observe the practice in your school. The responses to these questions are found in Table 2b.

TABLE 2b

Practices	Awareness		Adoption		Observed	
	#	%	#	%	#	%
1. Audio Laboratory	257	97	84	32	12	5
2. Overhead Projector	262	99	169	64	12	5
3. Motorized Visual Aids	189	71	16	6	3	1
4. Data Processing Concepts	249	94	89	34	9	3
5. Model Office	245	92	31	12	8	3





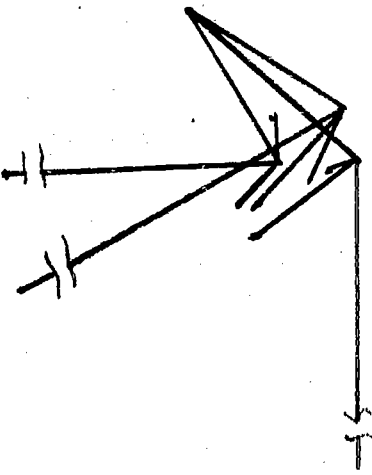



Section 2 - continued

These figures indicate that these practices were widely known with the exception of Practice 3, which is the most recent innovation and was unknown to about 30% of the respondents. There was special interest in the demonstration responses because it is in this area that we hope to find some of the answers to the problems of time lag in adoption. It was found that from 7% to 26% of the adopter schools had been visited for these practices. It would seem, therefore, that for these practices, or possibly for office education in general, other sources of influence play larger roles in the spread of practices. It was found, however, that some patterns of visitation did exist (Chart 2c) which would indicate that given the proper leadership, exposure of demonstration programs should help the spread of new ideas in Office Education as well as vocational education in general.

CHART 2c

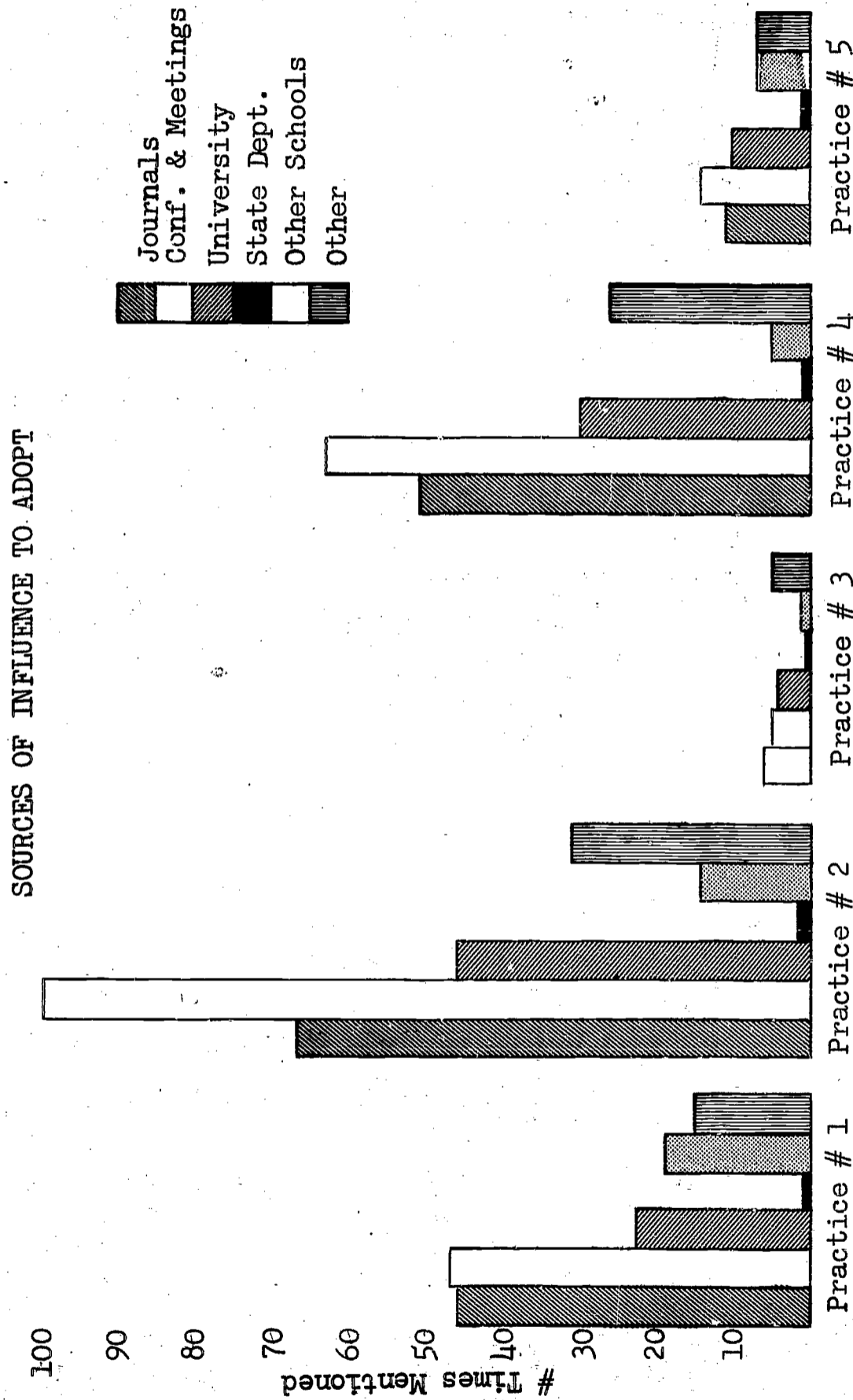
VISITATION NETWORKS BY PRACTICE

AUDIO LABORATORY # 1	OVERHEAD PROJECTOR # 2	MOTORIZED AIDS # 3
<p>DATA PROCESSING CONCEPTS # 4</p>  	<p>MODEL OFFICE # 5</p>  	<p>COMBINATION/OTHER</p>  

Section 2 - continued

An area that may be even more significant as far as Office Education practices are concerned dealt with the sources of influence to adopt the practices surveyed (Chart 2d). It can be readily seen that the most significant sources of influence were Conferences & Meetings and Journals. It may be that the nature of the practices surveyed resulted in this picture and that a different set of practices less connected with equipment would show a different picture.

CHART 2d





Section 2 - continued

Some general totals of interest concern the number of practices adopted by each school, the number of practices now in use, how many schools had observed a new practice within the last year, and how many schools were trying something new (Table 2e).

TABLE 2e

NUMBER OF PRACTICES ADOPTED			NUMBER OF PRACTICES NOW IN USE		
<u>Adopted</u>	<u>Schools</u>	<u>%</u>	<u>Using</u>	<u>Schools</u>	<u>%</u>
5	0	0	5	0	0
4	9	3.4	4	6	2.3
3	48	18.1	3	40	15.1
2	72	27.2	2	60	22.6
1	74	27.9	1	84	31.7
0	62	23.4	0	75	28.3
	<u>265</u>	<u>100</u>		<u>265</u>	<u>100</u>
OBSERVED NEW PRACTICE			TRYING NEW PRACTICE		
<u>Schools</u>	<u>%</u>		<u>Schools</u>	<u>%</u>	
62	23.4		109	41.1	

Information given regarding the practices which schools reported going to visit is found in Table 2f. It is assumed that practices which attract observers would be somewhat of an innovative nature, at least to the extent that the practice was new in a particular geographic region.

TABLE 2f

PRACTICES OBSERVED IN OTHER SCHOOLS

Steno Laboratories  
 Modular Scheduling  
 Model Office  
 Visual Aids  
 Laboratories  
 Data Processing Machine  
 Lab Work in Typing

Typing Via Television  
 Key Punch  
 Audio Laboratory  
 Shorthand Course  
 Office Machines  
 Co-op  
 Mimeograph

Section 2 - continued

Practices reported as newly being tried within a school are shown in Table 2g. These practices may or may not reflect the influence of visits to other schools. It might be assumed that most of the new practices being tried would be patterned after observed practices. However, some of the new ideas being tried might be a truly innovative in nature.

TABLE 2g

NEW PRACTICES BEING TRIED

Adding co-op and vocational programs to the curriculum  
Use of modern textbooks and teaching aids  
Rotating wheel for the use of office machines in office practice  
Use of personal typing and notehand for the academic student  
Work in outside organizations  
Student operated book and retail store  
Key punch introduction and practice  
Data processing kits with workbooks  
Overhead projectors in typing  
Offset printing  
Co-op education  
Character development  
Varied dictation techniques  
Student centered bookkeeping classes  
Group work  
Year-round co-op  
Blackboard approach to key punching  
Exploratory business  
Practical office class  
Individual study plan  
Use of telephone and office procedures  
Stiff penalties to improve proofreading  
Use of resource people  
Integrated typing and shorthand  
Xerox and modern machines and usage  
Block time  
Team teaching



Section 2 - continued

Table 2h lists the responses to the question, "In your opinion, what are the most important new ideas and practices in your field?". These are single responses for the most part with no selecting or editing done for this report. Items in the list may or may not reflect the latest developments within the field and should be treated with caution in terms of adoption or promotion.

TABLE 2h

NEW IDEAS IN FIELD

Teaching data processing or at least an introduction to data processing  
Teaching of key punch, use of the IBM typewriter  
Teaching of typing and bookkeeping on different levels in same class  
Use of overhead projector and overlays  
Use of audio visual equipment  
Shorthand laboratories  
Films, records, tapes, and slides  
Automated equipment  
Advanced typing, shorthand, and bookkeeping  
Work for the advanced students within the school  
Model office  
Co-op program  
New advancements in office machines and the increased use of electric typewriters  
Developing attitudes needed in business in the schools  
Distributive education  
Teaching of economics and distributive education  
EDL skill building dictation sets  
Federal government recognition of value of office education  
Practice sets  
Typing in elementary grades  
Skill building  
Vocational education  
Exploratory business  
Television in schools  
Diamond jubilee in shorthand  
Independent study  
Teaching to ability  
Modernization of ideas and practices  
Production typing  
On-the-job training  
Team teaching and modular scheduling

Section 2 - continued

The last Table, 2i, lists practices that have been tried but discontinued. The reasons for discontinuing these practices could be an area for careful consideration, for there may be some information pertinent to the development of new practices and the pitfalls that face any new program ideas. This is largely a single-response (unedited) list.

TABLE 2i

INEFFECTIVE PRACTICES TRIED

Use of EDL in introducing keyboard in typing-  
Students use of time cards-  
Coordinating typing and office practice-  
Giving just one semester of advanced typing-made typing too vocational  
and college bound were afraid to take it because of the standards  
Teaching office practice-lack of proper equipment  
Overhead projector with overlays-surface too small, crowded  
Taking a survey of local businesses to see what is needed for the  
Business Education Department-lack of interest from business  
Laboratories-  
Open book tests in shorthand-speeds too low  
Filing on an individual basis-lack of time  
Key punch with IBM Selectric-lack of materials  
Self-directed study-didn't know how to direct themselves  
Large assignments instead of many little ones-students get discouraged  
Personal typing-poor textbook

In Summary

It is hoped that this information will be of use to vocational education and that it can be used in such a way that the change process within vocational education is speeded and made less haphazard. We do not have all the answers to the problems of adoption of new practices, but hope that some things can be started which will help to provide answers and to help improve vocational education in the high schools. The reader is encouraged to make any suggestions known to the Research Coordinating Unit in regard to the use of the Diffusion Study data and in connection with new ideas within the field of vocational education.

## PART II--Section 3

### HOME ECONOMICS EDUCATION

The Home Economics Education survey form was distributed to 600 different high schools within the State of Michigan. Responses were received from 280 schools or 46.7 percent.

It was hoped that the analysis of these 280 surveys would provide us with some valuable information; such as:

1. Time lines showing the relative recency of the practices surveyed.
2. Identification of schools which were visited by other schools because of their innovativeness in adopting new ideas.
3. Identification of schools which adopted new practices early.
4. Identification of a communications network throughout the State which could be used to shorten the time lag in adoption of new practices.
5. Identification of school systems with favorable climate for demonstration, pilot, and research projects which would further the cause of vocational education.
6. Identification of new developments in each field of vocational education.

The five practices surveyed were:

1. Wage Earning Course: Any course involving home economics knowledge and skills that prepares youth and/or adults for gainful employment upon completion. Such a course is taught by, or under the supervision of, a home economics teacher.
2. Play School in Teaching Child Development: A planned and organized play school for pre-schoolers that is conducted by home economics or family living classes as part of a unit on the understanding and guidance of children.
3. Teaching with Television: Home economics classes where television is used as a method of classroom instruction.
4. A Home and Family Living Class for Senior High School Boys and Girls: A specialized semester or full year's course for girls and boys in senior high school.



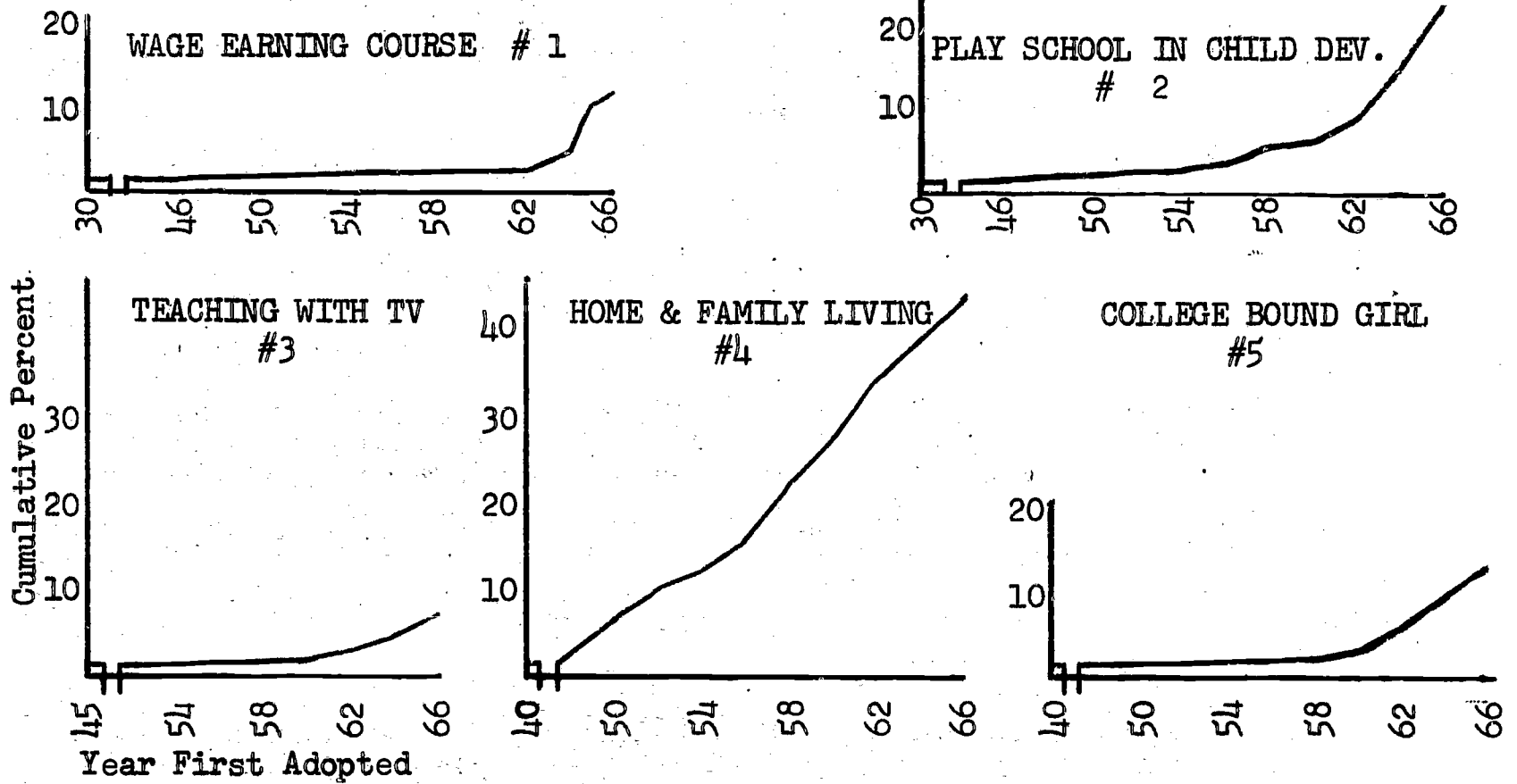
Section 3 - continued

5. A Home Economics Course for the College-bound Girl: A course specifically designed for college-bound senior girls who may or may not have had previous classes in home economics.

It can be seen from Chart 3a that these practices have not been widely adopted, and are relatively new Home Economics Education developments. With the exception of Practice 4, all of the practices still are not widely adopted and show an upswing only within the last 5 to 8 years. It is readily seen from this chart that all of the practices were first adopted, according to our study, twenty or more years ago. This points up the need for developing ways of giving new ideas exposure and for reducing the time lag of adoption.

CHART 3a

ADOPTION TIME LINES



Section 3 - continued

Three of the questions asked about each of the practices concerned Awareness, Adoption, and Demonstration. Awareness meant, had you heard about the practice; adoption meant, were you using the practice now; and demonstration meant, had others come to observe the practice in your school. The responses to these questions are found in Table 3b.

TABLE 3b

Practices	Awareness		Adoption		Observed	
	#	%	#	%	#	%
1. Wage Earning Course	258	92	37	13	8	3
2. Play School in Child Dev.	249	89	69	25	11	4
3. Teaching With Television	267	95	18	6	0	0
4. Home & Family Living	277	99	145	52	20	7
5. College Bound Girl	238	85	35	12	10	4

These figures indicate that these practices were widely known, and Table 3b indicates the percent of adoption among responding schools. There was special interest in the demonstration responses because it is in this area that we hope to find some of the answers to the problems of time lag in adoption. Except for the TV practice, from 14% to 29% of the schools using the practices had been visited by other schools. From this information we tried to establish a communications network for these Home Economics practices.

It was found that some patterns of visitation do exist (Chart 3c) which would indicate that given the proper leadership, exposure of demonstration programs should help the spread of new ideas in Home Economics as well as in vocational education in general.

CHART 3c

VISITATION NETWORKS BY PRACTICE

<p>WAGE EARNING COURSE # 1</p>	<p>PLAY SCHOOL IN CHILD DEV. # 2</p>	<p>TEACHING WITH TELEVISION # 3</p>
<p>HOME &amp; FAMILY LIVING # 4</p>	<p>COLLEGE BOUND GIRL # 5</p>	<p>COMBINATION/OTHER</p>

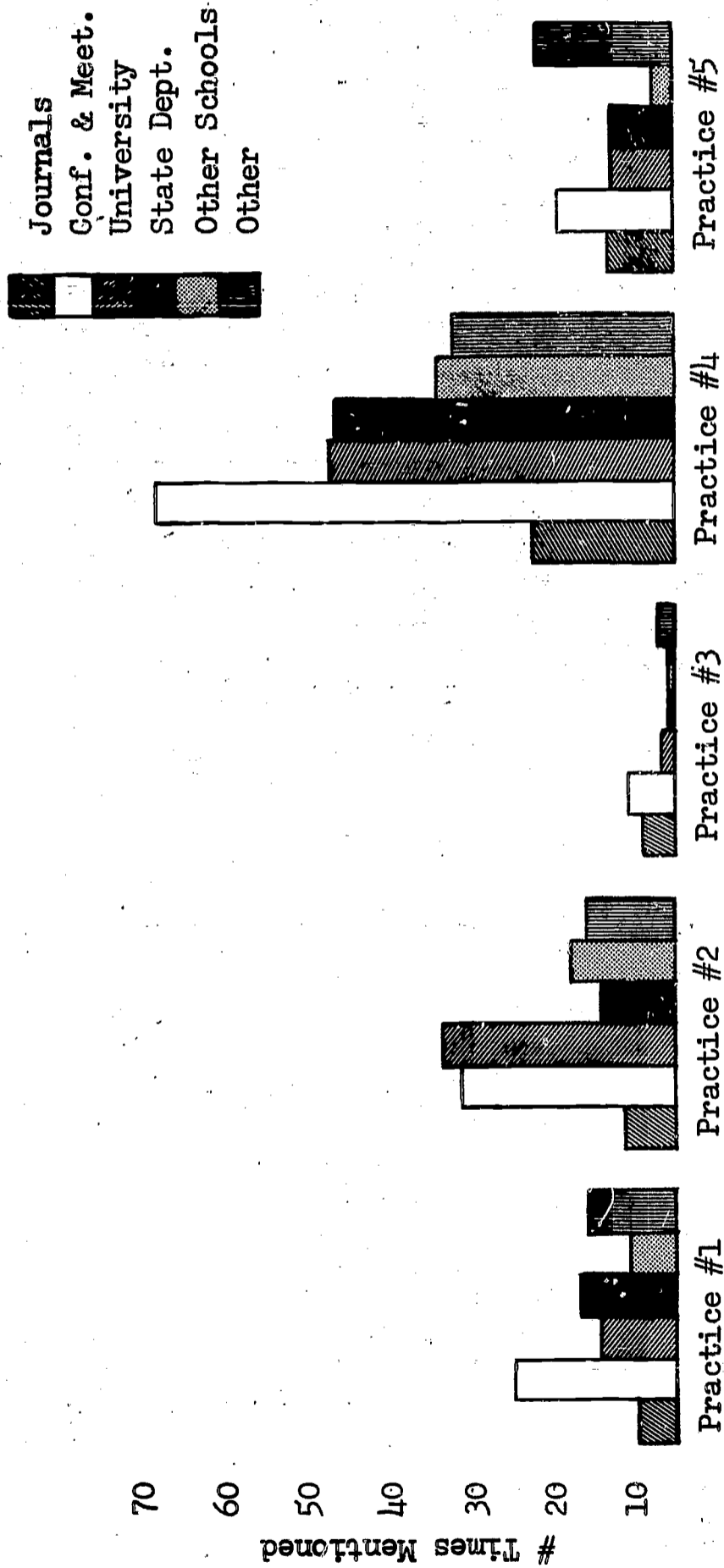


Section 3 - continued

Another area of interest in regard to the adoption of these particular practices dealt with the various sources of influence to adopt each practice (Chart 3d). From this we can see that there are often several sources of influence. In most cases more than one source was mentioned. It was interesting to find that meetings and conferences seem to be relatively important for the spread of new ideas. It was also notable that the Home Economics Service of the State Vocational Education Division seems to be of considerable importance and influence in the spread of new practices.

CHART 3d

SOURCES OF INFLUENCE TO ADOPT



Section 3 - continued

Some general totals of interest concern the number of practices adopted by each school (Table 3e), the number of practices now in use, how many schools had observed a new practice within the last year, and how many schools were trying something new.

TABLE 3e

NUMBER OF PRACTICES ADOPTED			NUMBER OF PRACTICES NOW IN USE		
<u>Adopted</u>	<u>Schools</u>	<u>%</u>	<u>Using</u>	<u>Schools</u>	<u>%</u>
5	1	.4	5	0	0
4	4	1.4	4	2	.7
3	17	6.1	3	10	3.6
2	57	20.4	2	39	13.9
1	120	42.8	1	114	40.7
0	81	28.9	0	115	41.1
	<u>280</u>	<u>100</u>		<u>280</u>	<u>100</u>
OBSERVED NEW PRACTICE			TRYING NEW PRACTICE		
<u>Schools</u>	<u>%</u>		<u>Schools</u>	<u>%</u>	
48	17.1		126	45.0	

Section 3 - continued

Information given regarding the practices which schools reported going to visit is found in Table 3f. It is assumed that practices which attract observers would be somewhat of an innovative nature, at least to the extent that the practice was new in a particular geographic region.

TABLE 3f

PRACTICES OBSERVED IN OTHER SCHOOLS

Supermarket Pricing	Television
Senior Boys in Home Economics	Lunch Room Run by Home
Home and Family Living Classes	Economics Class
Wage Earning	Adult Education
Nursery School--Play School	Pattern Making
Concentrated Effort on Less Talented	Food and Health Program
Girls	Child Care
Visual Aids	Value Teaching
Wardrobe	Human Development
Regular Home Economics	Clothing Craft
Commercial Foods in Wage Earning	Scheduling
Restaurant (Boys Class)	Mixed Home Economics
Home Economics for College-bound Girl	Student Participation

Practices reported as newly being tried within a school are shown in Table 3g. These practices may or may not reflect the influence of visits to other schools. It might be assumed that most of the new practices being tried would be patterned after an observed practice. However, some of the new ideas being tried might be of a truly innovative nature.

TABLE 3g

NEW PRACTICES BEING TRIED

Child development; Family life education; Sex education  
 Alterations; Decorating; Reports and demonstrations  
 Use of Anita Dowler Fielder's Student Notebook in Home Economics  
 Junior high boys in Home Economics; 4-H; FHA; Teaching on levels  
 Catering unit; Waitress training; Use of resource persons  
 Science course geared to Home Economics; Consumer economics  
 Exchange of classes with Agriculture and Shop  
 Meal planning and nutrition combined  
 Individual research and study for advanced students  
 Bishop Method of clothing construction  
 Using Michigan Vocational Curriculum Guide in Home Economics  
 Shared-time programs; Non-graded Home Economics  
 Life adjustment class; Food service programs  
 Hotel and motel training; Hospitality program  
 Slow learner courses; Work with handicapped



Section 3 - continued

Table 3h lists the responses to the question, "In your opinion, what are the most important new ideas and practices in your field?". These are single responses for the most part with no selecting or editing done for this report. Items in the list may or may not reflect the latest developments within the field and should be treated with caution in terms of adoption or promotion.

TABLE 3h

NEW IDEAS IN FIELD

Wage earning  
Home Economics for the college bound  
How families are important to our society  
Home and family living for boys and girls  
Consumer education  
Teaching with television  
Play school in child development  
Home units  
New types of foods, packaging  
New methods of preparation for foods and clothing  
Student learning how much his actions are influenced by his  
psychological needs  
Class work combined with outside opportunity  
Discussion in all branches of Home Economics  
Rotation of schedule for junior high with music, etc.  
Preparation for occupations  
More information on entertaining  
Student planning  
Use of resource persons  
Retailing  
Homemaking services--girls go out and help others  
Adult education  
Generalizations  
Less stress on foods and clothing  
Restaurant management  
Pre-job training  
Modular scheduling  
Money management  
Classes for boys  
Concept method for teaching  
Emphasis on synthetics and textiles  
Economic concept  
Science in Home Economics  
Practical applications  
Modern approaches  
Home Economics in lower grades  
Use of cookbooks as supplements  
Work with handicapped  
Shared-time programs

Section 3 - continued

The last Table, 3i, lists practices that have been tried but discontinued. The reasons for discontinuing these practices could be an area for careful consideration, for there may be some information pertinent to the development of new practices and the pitfalls that face any new program ideas. This is largely a single-response (unedited) list.

TABLE 3i

INEFFECTIVE PRACTICES TRIED

Integrated a semester course in home science and home chemistry-  
Role playing-students self-conscious  
Classes for married girls-girls too busy, left at noon  
Double activity-too complicated  
Work in cafeteria, menus-lack of cooperation  
Home Economics for boys-boys afraid to speak up  
Home Economics into the summer-lack of cooperation and approval  
Change of program from 4 years to 3 years-parent objection  
Home Economics for 7th grade boys and girls-better off if only girls  
or only boys  
Use of Vocational Guide for Home Economics in child development-  
Trip to health center, lectures-nothing new  
Summer classes in sewing-lack of control  
Work with elementary school-  
Group instruction in foods-unable to go on without formal instruction  
Foods class for boys-lack of interest  
Operated a bakery-lack of money  
Boys' "chef" class-lack of discipline  
Family health class-no teacher available  
Time limits on foods and clothing-not completed on time  
Students plan course-needed more direction  
Required home and family living-lack of interest  
Individual assignments-no interest, time  
Tried to develop consumer economics-  
Interior decorating-  
Allow students to choose own project-too much diversity, lack of  
interest  
Good grooming-  
Nutrition and dietetics unit-lack of interest  
Varying approaches-not inspiring enough  
Advanced meal preparation-lack of interest  
Generalizations-not effective  
Unit on merchandising-lack of time  
Scheduling-  
Wage earning-lack of class time  
Home and family living for seniors only-lack of interest  
Field trips-red tape  
Different furniture and material styles and repair-lack of time,  
money

### Section 3 - continued

#### In Summary

It is hoped that this information will be of use to vocational education and that it can be used in such a way that the change process within vocational education is speeded up and made less haphazard. We do not have all the answers, but we hope that some things can be started which will help to provide answers to the problems of adoption of new practices, and of improving vocational education in the high schools. The reader is encouraged to make any suggestions known to the Research Coordinating Unit in regard to the use of the Diffusion Study data and in connection with new ideas within the field of vocational education.



## PART II--Section 4

### TRADE AND INDUSTRIAL EDUCATION

The Trade and Industrial Education survey form was distributed to 189 different high schools within the State of Michigan. Responses were received from 100 schools or 52.9 percent.

It was hoped that the analysis of these 100 surveys would provide us with some valuable information; such as:

1. Time lines showing the relative recency of the practices surveyed.
2. Identification of schools which were visited by other schools because of their innovativeness in adopting new ideas.
3. Identification of schools which adopted new practices early.
4. Identification of a communications network throughout the State which could be used to shorten the time lag in adoption of new practices.
5. Identification of school systems with favorable climate for demonstration, pilot, and research projects which would further the cause of vocational education.
6. Identification of new developments in each field of vocational education.

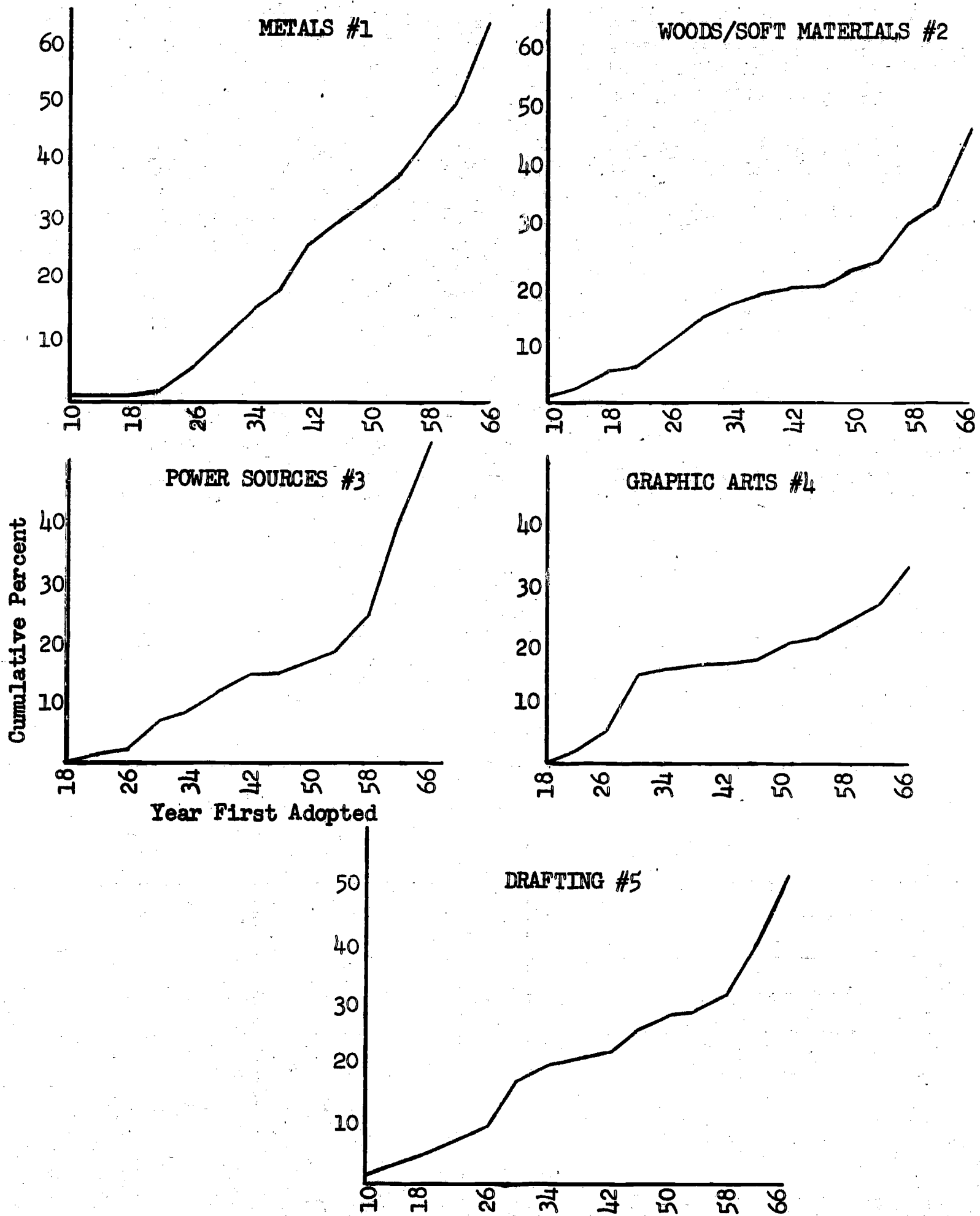
The five practices surveyed were:

1. Metals Program: A program which leads to the following occupations: machinist, machine repairman, machine operator, heat treater, welder, tool grinder, tool room clerk.
2. Woods--Other Soft Materials Program: A program which leads to the following occupations: cabinet maker, furniture maker, carpenter, pattern maker, machine operator, plastic molder, floor layers, plastic extrusion, construction.
3. Power Sources Program: A program which leads to occupations in auto mechanics and/or electricity-electronics.
4. Graphic Arts Program: A program which leads to the following occupations: off-set pressman, letter pressman, bookbinder, compositor, machine repairman, cameraman, rubber stamp maker, commercial arts, vari-type.
5. Drafting Program: A program which leads to the following occupations: detailer, draftsman, tool designer, topographer, surveyor.

Section 4 - continued

CHART 4a

ADOPTION TIME LINES



Section 4 - continued

It can be seen from Chart 4a that these practices have been quite widely adopted in schools with Trade and Industrial programs. There seems to have been some misunderstanding on the part of the persons developing the practices and the descriptions of them and the respondents. As a result, the information seems to indicate that respondents interpreted the practices as general courses of study that are offered in most industrial education programs.

As the chart shows, these are not particularly new developments in the industrial education area, as all of the programs had beginnings more than 40 years ago. Regardless of the beginning dates, it is interesting to note that a definite upswing has taken place within the last three years, or, to put it another way, since the passage of the Vocational Education Act of 1963. This chart also points out the slowness with which adoption of these programs has taken place, and indicates that a need exists for developing ways of giving new ideas and practices exposure.

Three of the questions asked about each of the practices concerned Awareness, Adoption, and Demonstration. Awareness meant, had you heard about the practice; adoption meant, were you using the practice now; and demonstration meant, had others come to observe the practice in your school. The responses to these questions are found in Table 4b.

TABLE 4b

Programs	Awareness		Adoption		Observed	
	#	%	#	%	#	%
1. Metals	92	92	73	73	37	37
2. Woods/Soft Materials	84	84	60	60	26	26
3. Power Sources	87	87	66	66	31	31
4. Graphics Arts	88	88	37	37	14	14
5. Drafting	89	89	66	66	25	25

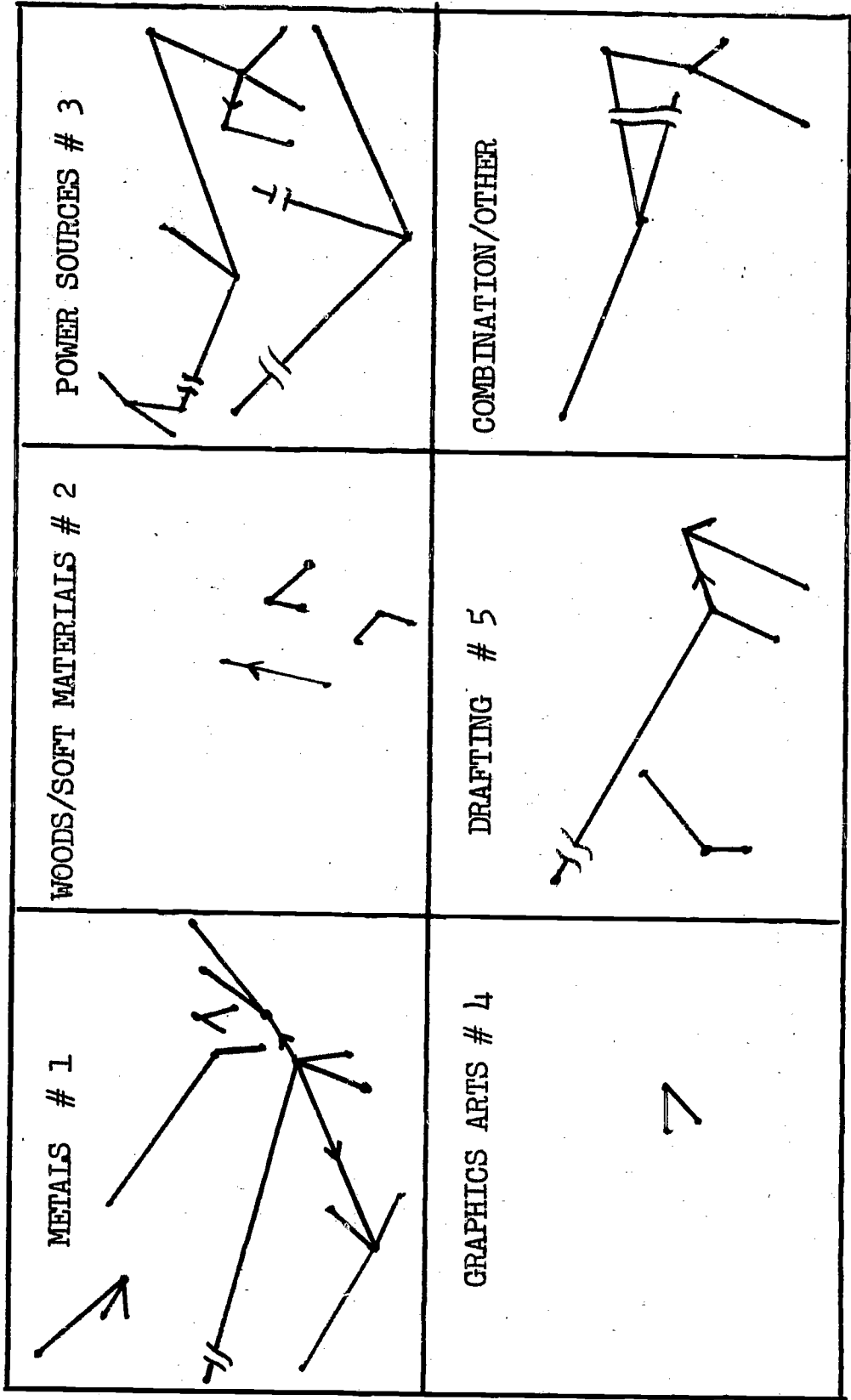


Section 4 - continued

These figures indicate that these programs were widely known and that adoption of these programs ranged from 37% to 73% in the responding schools. There was special interest in the demonstration responses because it is in this area that we hope to find some of the answers to the problems of time lag in adoption.

CHART 4c

VISITATION NETWORKS BY PROGRAMS



Section 4 - continued

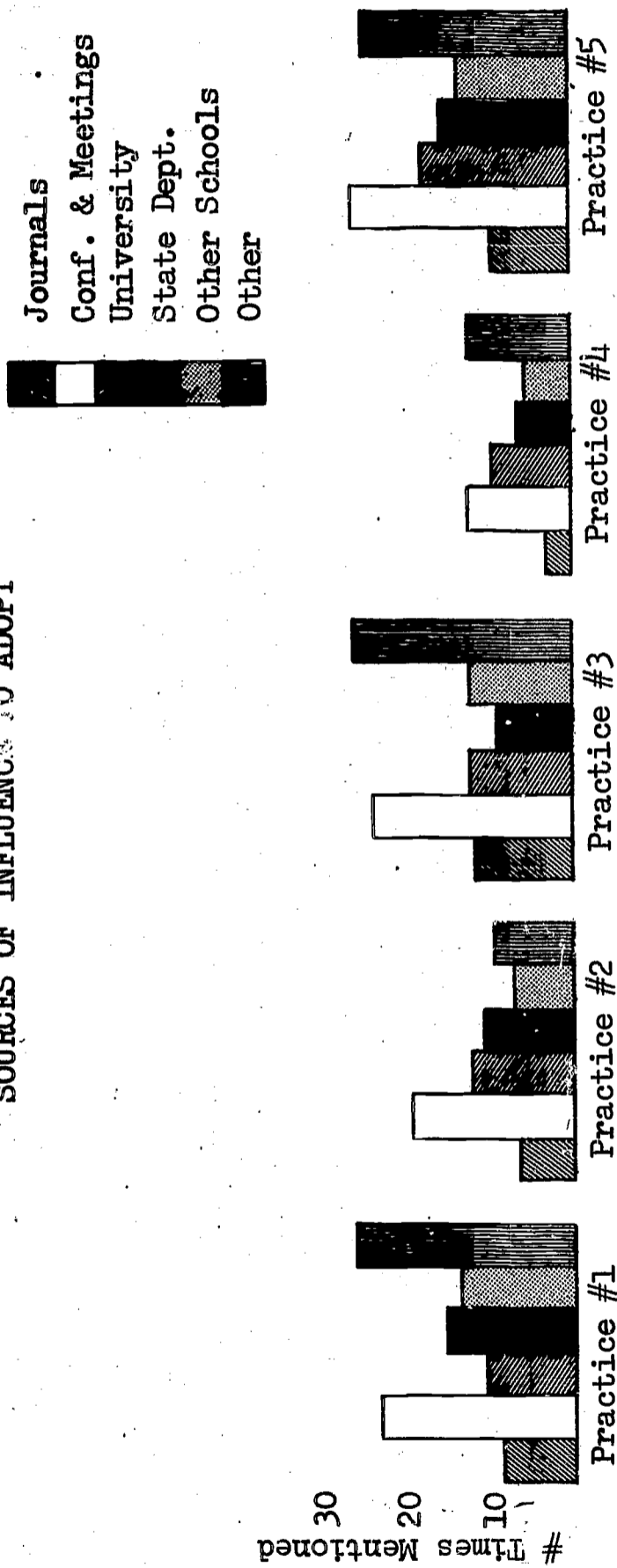
It was found that from 38% to 51% of the schools adopting a practice had been visited for the particular practice. An observation about the high percentage of visitations to adopting schools might be that the long time period covered by these programs allowed visits to schools as they newly adopted the programs. In other words, the visitations to the schools might very well correspond to the time period in which the programs were adopted.

Nevertheless, patterns of visitation did exist (Chart 4c) which would indicate that given the proper leadership, exposure of demonstration programs should help the spread of new ideas in Industrial Education as well as vocational education in general.

Another area of interest related to Industrial Education concerned the sources of influence to adopt the programs surveyed (Chart 4d). It can be seen from this that conferences and meetings were most frequently mentioned. The variety of responses grouped as "other" may have some significance for Industrial Education educators.

CHART 4d

SOURCES OF INFLUENCE TO ADOPT



Section 4 - continued

Some general totals of interest concern the number of practices adopted by each school, the number of practices now in use, how many schools had observed a new practice within the last year, and how many schools were trying something new (Table 4e).

TABLE 4e

NUMBER OF PRACTICES ADOPTED			NUMBER OF PRACTICES NOW IN USE		
<u>Adopted</u>	<u>Schools</u>	<u>%</u>	<u>Using</u>	<u>Schools</u>	<u>%</u>
5	25	25.2	5	20	20
4	22	22.2	4	22	22
3	18	18.2	3	23	23
2	11	11.1	2	8	8
1	7	7.1	1	10	10
0	<u>16</u>	<u>16.2</u>	0	<u>17</u>	<u>17</u>
	99	100		100	100
OBSERVED NEW PRACTICE			TRYING NEW PRACTICE		
<u>Schools</u>	<u>%</u>		<u>Schools</u>	<u>%</u>	
38	38		44	44	

Information given regarding the practices which schools reported going to visit is found in Table 4f. It is assumed that practices which attract observers would be somewhat of an innovative nature, at least to the extent that the practice was new in a particular geographic region.

TABLE 4f

PRACTICES OBSERVED IN OTHER SCHOOLS

Unit Shops; Industrial Practices	House Construction
Electrical Works	Paper Works
Plastics; Scheduling	Occupational Secondary Training
Hydraulics	Welding
Gas Engine Repair	Co-op
Printing	Work Line Theory
Building Trades Program	Phases of Vocational Education
Drafting	Team Teaching
Foundry	Modern Equipment and Usage
Power Mechanics	Auto and Farm Mechanics
Auto Mechanics	Tracer to Lathe



Section 4 \* continued

Practices reported as newly being tried within a school are shown in Table 4g. These practices may or may not reflect the influence of visits to other schools. It might be assumed that most of the new practices being tried would be patterned after an observed practice. However, some of the new ideas being tried might be of a truly innovative nature.

TABLE 4g

NEW PRACTICES BEING TRIED

Die work; Optical measurement; Construction shop  
Power mechanics; Industrial survey and shared-time  
Shorter periods; House building; Implementing; Printing  
New approach to electronics and drafting; Visual aids  
Soft materials; Model making; Small gasoline engine service  
Plastics; Model building; Work with industry  
Drafting program correlated to metals and woods  
Furniture repair; Auto bump and paint shop  
Tig-welding; "Gas station service"

Table 4h lists the responses to the question, "In your opinion, what are the most important new ideas and practices in your field?". These are single responses for the most part with no selecting or editing done for this report. Items in the list may or may not reflect the latest developments within the field and should be treated with caution in terms of adoption or promotion.

TABLE 4h

NEW IDEAS IN FIELD

Automated devices; Masonry, Carpentry, Dry Wall  
De-emphasis on industrial arts; more for vocational education  
Survey of American Industry; Self-instruction by students  
Cooperation--realistic experience; Area technical schools  
Equipment; Job clusters; Welding and electronics; Off set camera  
Off set approach to graphic arts; Plastics; Hydraulics  
Teaching of industrial practices; not just operation of machines  
Metals program; More specialization; Power mechanics  
Furniture repair; Auto bump and paint shop  
Preparation for an occupation  
Up-dating of equipment and procedure; Problem solving  
On-the-job training; Team teaching; Independent study  
Mill work; Chemical milling; Electrical discharge machines

Section 4 - continued

The last Table, 4i, lists practices that have been tried but discontinued. The reasons for discontinuing these practices could be an area for careful consideration, for there may be some information pertinent to the development of new practices and the pitfalls that face any new program ideas. This is largely a single-response (unedited) list.

TABLE 4i

INEFFECTIVE PRACTICES TRIED

Industrial vocational trades-  
Metallurgy-  
Charts-  
Wood shops with plastic-  
Students pick projects-go to extremes, too hard or too easy  
Adult education-lack of interest  
Programmed instruction-poor motivation  
Combine physics and electronics courses-lack of time  
Auto mechanics program-lack of money  
Furniture repair course-  
Auto bump and paint course-  
Electronics course-  
Problem solving technique-individual study hard  
Electricity course-lack of interest  
Carpentry-  
Team teaching-facilities not adequate  
Tungsten carbide tools-students not skilled enough

In Summary

It is hoped that this information will be of use to vocational education and that it can be used in such a way that the change process within vocational education is speeded and made less haphazard. We do not have all the answers to the problems of adoption of new practices, but hope that some things can be started in the high schools. We ask that you feel free to make any suggestions known to the Research Coordinating Unit in regard to the use of the Diffusion Study data and in connection with new ideas within the field of vocational education

APPENDIX A

School \_\_\_\_\_

SURVEY OF \_\_\_\_\_ PROGRAMS

1.  No  
 No

Yes:  
 Yes:

- a) Have you heard about \_\_\_\_\_?  
b) Has your school ever used this program?  
c) What year was it first used? \_\_\_\_\_  
d) Do you now use the program?  
     Yes    No; Why did you discontinue? \_\_\_\_\_

GO TO  
PROGRAM  
#2

- e) Where or from whom did you become convinced to use this program?  
     journals/newspapers    university staff  
     conference or meeting    State Department staff  
     other; specify \_\_\_\_\_  
     observed in another school  
f) In what school(s) was it observed prior to adoption? \_\_\_\_\_  
g) Since adoption, has the program been observed by other schools? Specify \_\_\_\_\_

2.  No  
 No

Yes:  
 Yes:

- a) Have you heard about \_\_\_\_\_?  
b) Has your school ever used this program?  
c) What year was it first used? \_\_\_\_\_  
d) Do you now use the program?  
     Yes    No; Why did you discontinue? \_\_\_\_\_

GO TO  
PROGRAM  
#3

- e) Where or from whom did you become convinced to use this program?  
     journals/newspapers    university staff  
     conference or meeting    State Department staff  
     other; specify \_\_\_\_\_  
     observed in another school  
f) In what school(s) was it observed prior to adoption? \_\_\_\_\_  
g) Since adoption, has the program been observed by other schools? Specify \_\_\_\_\_

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Appendix A - Continued

3.  No |  Yes: a) Have you heard about \_\_\_\_\_ ?  
 No |  Yes: b) Has your school ever used this program?  
c) What year was it first used? \_\_\_\_\_  
d) Do you now use the program?  
 Yes  No; Why did you discontinue? \_\_\_\_\_
- GO TO PROGRAM #4
- e) Where or from whom did you become convinced to use this program?  
 journals/newspapers  university staff  
 conference or meeting  State Department staff  
 other; specify \_\_\_\_\_  
 observed in another school
- f) In what school(s) was it observed prior to adoption? \_\_\_\_\_
- g) Since adoption, has the program been observed by other schools? Specify \_\_\_\_\_

4.  No |  Yes: a) Have you heard about \_\_\_\_\_ ?  
 No |  Yes: b) Has your school ever used this program?  
c) What year was it first used? \_\_\_\_\_  
d) Do you now use the program?  
 Yes  No; Why did you discontinue? \_\_\_\_\_
- GO TO PROGRAM #5
- e) Where or from whom did you become convinced to use this program?  
 journals/newspapers  university staff  
 conference or meeting  State Department staff  
 other; specify \_\_\_\_\_  
 observed in another school
- f) In what school(s) was it observed prior to adoption? \_\_\_\_\_
- g) Since adoption, has the program been observed by other schools? Specify \_\_\_\_\_

Appendix A - Continued

5.  No |  Yes: a) Have you heard about \_\_\_\_\_?
- No |  Yes: b) Has your school ever used this program?
- GO TO | c) What year was it first used? \_\_\_\_\_
- COMMENTS | d) Do you now use the program?
- |  Yes  No; Why did you discontinue?
- | e) Where or from whom did you become convinced to use this program?
- |  journals/newspapers  university staff
- |  conference or meeting  State Department staff
- |  other; specify \_\_\_\_\_
- |  observed in another school
- | f) In what school(s) was it observed prior to adoption? \_\_\_\_\_
- | g) Since adoption, has the program been observed by other schools? Specify \_\_\_\_\_
- 

COMMENTS:

GO TO  
#6

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6. Have you tried new practices within the past three or four years which proved to be ineffective:

No |  Yes: a) What were the practices and what was wrong with them? \_\_\_\_\_

GO TO |  
#7

7. Have you observed a new practice in another school during the past year?

No |  Yes: a) What was the name of the school(s)? \_\_\_\_\_

GO TO | b) What practice(s) did you observe? \_\_\_\_\_

#8

Appendix A - Continued

8. In your opinion, what are the most important new ideas and practices in your field? \_\_\_\_\_  
\_\_\_\_\_

9. Are you currently trying out new ideas and/or approaches which might be of interest to other schools?  
   No       Yes: Specify \_\_\_\_\_  
\_\_\_\_\_

10. Think of the most innovative school in your field in Michigan. Now think of the least innovative school in the State. On the scale below, place an X where you think your school stands in relation to the most and least innovative schools in the State.

Least Innovative									Most Innovative
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Please send the completed questionnaire by \_\_\_\_\_ to:

Research Coordinating Unit Division of Vocational Education Box 928 Lansing, Michigan 48904
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