

DOCUMENT RESUME

ED 050 249

VT 012 438

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TITLE Research in Agricultural Education Programs Beyond High School.
INSTITUTION Minnesota Univ., St. Paul. Dept. of Agricultural Education.
SPONS AGENCY Minnesota Research Coordinating Unit in Occupational Education, Minneapolis.
PUB DATE Oct 70
NOTE 50p.; Report of the Central Regional Research Conference on Agricultural Education (Alexandria, Minn., Jul 28-30, 1970)

EDRS PRICE MF-\$0.65 HC-\$3.29
DESCRIPTORS Adult Farmer Education, *Agricultural Education, Area Vocational Schools, Community Colleges, *Conference Reports, *Educational Research, Junior Colleges, *Research Needs, Research Proposals, *Technical Education, Young Farmer Education
IDENTIFIERS Project MINI SCORE

ABSTRACT

Concentrating on research in agricultural programs beyond the high schools, this 1970 Central Region conference report includes material applicable to area vocational technical schools, junior and community colleges, and continuing education for beginning and adult farmers. Each of these groups developed a list of interests, needs, and problems for their particular area and generated research proposals which are included in the report. Paper presentations are: (1) "Project Mini-Score" by David Wheeler, and (2) "News and Reviews from Washington" by Philip Teske. The business session report and listing of conference staff and participants are appended. (GB)

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REPORT OF THE REGIONAL RESEARCH CONFERENCE ON AGRICULTURAL EDUCATION

ED050249

research in agricultural education programs *

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* BEYOND HIGH SCHOOL

**REPORT of the
CENTRAL REGIONAL RESEARCH CONFERENCE on
AGRICULTURE EDUCATION**

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**EDITED BY
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October, 1970

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This report was published and disseminated pursuant to a grant from the
Minnesota Research Coordinating Unit for Vocational Education.

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Introduction

The annual research conference in Agriculture Education for the central region was perceived by the 1970 planners as a medium for advancing the regional effort at educational research. With a strong emphasis on "doing and reporting back", this conference was organized using a planned workshop approach.

To further delimit the scope of conference activity, the central theme was Research in Agriculture Programs Beyond the High School. It was the intent of the planners that study should concentrate on research applicable to area vocational technical schools, junior and community colleges, and continuing education for beginning and adult farmers.

The specific objectives of the conference were:

1. To develop an understanding of the alternative methods available in determining the need for specific kinds of education programs beyond the high school.
2. To disseminate the results of recent research that is useful in the development, organization, implementation, understanding or evaluation of agriculture programs beyond the high school.
3. To identify problem areas that should be considered for further research and study.
4. To develop several research projects that can be organized within the participating states with enough uniformity in purpose and procedure so that a regional summary of research can be compiled.

The central region is indeed fortunate to have among its membership so many staff members in agriculture education who have both interest and expertise in research. If it were not for the volunteer service of these men, the planners would have been hard pressed to organize a program requiring attention to the details of preparing research proposals. The conference staff from the University of Minnesota expresses their thanks to the many members who reported on state activities and served as leaders in the workshop sessions.

The conference activity will not bear fruit, however, unless individuals within states organize to participate in the proposed projects. A renewed interest in educational research has been made possible by increased funds. Vocational education can benefit most if the efforts are guided by researchers with a clear commitment to improving both the quality and quantity of vocational education. It is hoped that the combined efforts of researchers in the central region will result in significant contributions to improved education for those who need, want or can benefit from instruction.

Conference Program

CENTRAL REGIONAL RESEARCH CONFERENCE ON AGRICULTURAL EDUCATION
Alexandria Area Vocational Technical School
Alexandria, Minnesota

July 28

Chairman: R. Paul Marvin

Secretary: Wisconsin
Gerald Matteson

- 8:30- 9:00 Registration - Lobby
- 9:00- 9:15 Welcome to conference - V. Maack, Director,
Alexandria Area Vocational Technical School-
Lunch Room
- 9:15- 9:45 The Conference Plan - Edgar Persons
- 9:45-10:30 Determining Needs for Programs Beyond the High School.
A report by states of techniques used to determine
the need for establishment or continuation of
educational programs beyond the high school.
- 10:30-10:50 Coffee Break - Lounge
- 10:50-11:45 Determining Needs - Continued
- 11:45-12:00 Buzz Group
- What alternatives for determining needs have been
overlooked?
- 12:00- 1:15 Lunch

July 28

Chairman: Don Priebe

Secretary: Iowa
Hilbert Hoof

- 1:15- 1:45 Report of the Buzz Sessions
- 1:45- 2:00 Introduction to the workshop - Ed Persons

- 2:00- 4:00 Workshop in session (Rooms 115, 117, 119, 121)
- Assignment. Define and delimit the interests, needs and problems for agriculture programs in each of the four areas - Area Vocational Technical Schools, Junior and Community Colleges, Young Farmer Programs and Adult Farmer Programs.
- 4:00- 4:45 Selecting students for vocational study - David Wheeler.
Lunch Room
- 4:45- 5:30 Walking tour of Alexandria Area Vocational Technical School.
In Charge: Raymond Ahlfors, Assistant Director
- 7:00- 9:00 Tea and Cakes - A reception - Cafeteria.
Dr. and Mrs. Harry Kitts, Host and Hostess

July 29

Chairman: Hilding Gadda

Secretary: Illinois
Paul Hemp

- 8:30- 9:15 Reports from the workshops - Lunch Room
- 9:15-10:00 A review of agriculture programs in the Area Vocational Technical Schools and Junior Colleges and Community Colleges.
- 10:00-10:15 Coffee Time
- 10:15-11:00 News and Views from Washington - Dr. Phil Teske
- 11:00-11:10 Introduction to today's A.M. workshop - Ed Persons
- 11:10-12:00 Workshop in session (Rooms 115, 117, 119, 121)
- Assignment. From among the suggested topics for your area, select a problem to be studied. Write a statement that describes the purposes of the study and outlines the specific objectives of the research.
- 12:00- 1:00 Lunch

July 29

Chairman: Odell Barduson

Secretary: South Dakota
Gary Leske

- 1:00- 1:40 Workshop reports - purposes and objectives of each study - Workshop Reporters.

- 1:40- 1:50 Introduction to P.M. workshop - Ed Persons
- 1:50- 3:30 Workshop in session
- Assignment. Work out the details of the study; sample size, sampling plan, instrumentation, data collection procedures.
- 3:30- 4:30 Research in Agriculture Education Beyond the High School. A report of significant research in the central region.
- 6:30- 9:00 Family outing; picnic, fun and games - Alexandria City Park.

July 30

Chairman: Forrest Bear

Secretary: Kentucky
Alfred Manneback

- 8:30- 9:30 Distribution and review of research projects - Workshop Reporters.
- 9:30- 9:35 Introduction to workshop - Ed Persons
- 9:35-10:30 Workshop in session
- Assignment. Detail plans for analysis of research data including specification of statistical design and format for reporting results.
- 10:30-10:45 Coffee Break
- 10:45-11:30 Workshop in session
- Develop a workable plan for implementation of the proposed research plan by states including a timetable of events and provisions for compiling state results into a regional report; attention to details of the study; clean-up of unfinished workshop business.
- 11:30-11:45 Evaluation of research conference - George Copa
- 11:45-12:00 Closing Business Session - R. Paul Marvin
(Host State - 1971, Conference Dates, Theme)

Definition of Interests, Needs, and Problems

The first assignment of each workshop group was to develop a list of the interests, needs and problems for their particular area. The lists which follow identify some of these concerns. It was through this discussion that a topic for regional research was identified and later developed into an organized proposal.

The research proposal generated by each group follows the list of interests, needs and problems. Some of the proposals have been modified by the editors to facilitate regional organization.

AREA VOCATIONAL TECHNICAL PROGRAMS

1. How do 11th and 12th grade programs compare with post-high school programs regarding occupational entry and advancement. Follow-up information.
2. Development of a model for placement of students in occupational work experience programs (time and length of placement).
3. What is the role of the employer in occupational work experience programs?
4. Is there a difference in student competency for those experiencing cooperative occupational experience and those not receiving on-the-job training outside the classroom?
5. Occupational opportunities in each state.
6. Articulation between states within a region to provide post high school programs.
7. Where does the instructional staff and administrators for post high school area vocational and technical schools receive their educational training? Should programs be developed to specifically prepare these individuals at the undergraduate or master's levels?

8. What is being done in vocational guidance programs to guide more students into vocational-technical programs? What should be done?

JUNIOR AND/OR COMMUNITY COLLEGE PROGRAMS

1. Articulation relates to the transfer of credit from a 2-year to a 4-year college or university. In general, there is no problem with courses of liberal arts nature. There are problems when students complete a technical program and then want to transfer that credit to a 4-year school. With reference to agricultural courses in particular, some 4-year colleges will not accept any such work while others may accept up to 50 percent. In Illinois, representatives of all community colleges with agriculture programs and representatives of the four universities with 4-year agricultural programs have held a series of meetings aimed at approving certain basic agriculture courses as acceptable in transfer at full credit value. A common course outline and text are agreed upon and those courses must carry an identifying course number that indicates it is transferable. These are the usual freshman level courses of animal science, soils, field crops and agricultural economics.
2. The second problem closely related to the first one is that of transferring credit from one state to another with the same problems to be resolved.
3. When a Junior College decides to include an agricultural curriculum, the decision has to be made on what to offer. One immediately thinks of the needs of industry and young people and how this is best determined. This is where an advisory council or group is a necessity. Needs, facilities, work-stations, and placement are best arrived at with the aid of an active advisory council.
4. Securing qualified staff is an increasing problem. The most common source is an experienced vo-ag teacher. The other source is the experienced technician from business or industry. In many situations, it is a team effort with the degree man teaching principles and other basics and the skilled technician handling the laboratory work. Teacher education institutions can help here with programs designed to fit agriculture occupations teachers for junior college work. In-service programs are a must in preparing and keeping junior college teachers up-to-date.
5. The accreditation of teachers is closely associated with and is a part of the previously mentioned problem. It is a decision for the local institution and governing junior college board, but it is becoming increasingly important as it becomes more difficult to secure staff.

6. Selecting an administrative staff involves the problem of who would make the best kind of administrator, i.e. training, experience, philosophy, etc. Secondly, what kind of training should a person get with the goal of becoming an administrator in a junior college.

YOUNG FARMER PROGRAMS

1. Need of local communities for young farmer programs. Who qualifies? What are the educational needs?
2. Who should administrate young farmer programs?
 - A. Local secondary schools
 - B. Area vocational schools
 - C. Junior or community colleges
3. What class organization will promote young farmer programs to meet their needs?
 - A. Club type
 - B. Records
 - C. Winter series
 - D. Year around meetings
4. Revive the National Young Farmer Study.
5. Criteria to use in developing young farmer programs?
 - A. Heterogenous groups
 - B. Homogenous groups
6. Pilot programs in using the criteria developed.
7. Evaluation of criteria after using longer than one year.
8. What leadership experience have young farmer officers had and what has been the effect of organizing young farmer programs?
9. What are the effects of young farmer programs?
 - A. Benefits to young farmers
 - B. Benefits to their communities.
10. What effect has multiple teacher departments had on starting young farmer programs?
11. Make a time allotment study on the vo-ag teachers time in terms of cost benefits, cultural benefits, and leadership development.
12. Study young farmer members as compared to other similar ag-ed non-young farmers in efficiency factors, size of operation, etc.

13. Can we measure effectiveness of separate young farmer class as compared to combinations with adults in the same classes?
14. What should be the guidance function with this age group?
15. What are community resources available for teaching this age group?
16. What young farmer programs now exist and how are they organized?

Year around	Club	
Intensive	Meetings	Organization
	Class	
17. Effectiveness of in-service education of agriculture teachers and starting young farmers programs?
18. Should agricultural occupations groups be in the same or different classes with young farmers?
19. What effects would telelecturers have on young farmer classes?
20. Should young farmer education be set by University people for credit?
21. How should supervision and work experience be effected in these programs?

ADULT FARMER PROGRAMS

1. Develop procedures for promoting adult programs.
2. Determine competencies needed by all levels of agricultural employees.
3. Determine the role and function of the local high school, relative to adult education.
4. Determine the role and function of a 2-year post high school institution in relation to adult education.
5. Determine the value of adult education programs in gaining support for agriculture education.
6. How far will adults go to attend adult classes?
7. Determine effective organization and utilization of resources for providing adult education.
8. Identification of a common core of competencies for all agricultural employees.

9. Develop experimental programs in adult education.
10. What is the status of adult education in the Central Region?
11. Determine the effect of federal, state, and local policies on adult education.
12. Pressure of high school teachers to do too many things.
(How to secure support for an adult teacher.)
13. Competition between high school and post high school institutions for adult students.
14. Determine effective methods of organizing adult education programs.
15. What is the effect of using a "base course" (i.e. ag business analysis) in planning an adult program?
16. Evaluate the effect of moving adult education programs from the local high school to a post high school institution.
17. Determination of adults being served by both the extension agent and vo-ag teacher.
18. Coordination of adult education with other agencies.
19. Determine characteristics of successful adult education programs.
20. How can we implement change through adult education programs?
21. What is the role of the high school agriculture teacher with respect to adult education?
22. What is the role of the post high school agriculture teacher with respect to adult education?
23. Determine pre-service and in-service problems associated with preparing teachers to teach adults.
24. How can we make effective use of approved adult teaching methods (workshops, seminars, etc.)?
25. How can we change the attitudes of local school administrations and school boards toward adult education?
26. Determine the philosophical base of State Department personnel, teacher educators, teachers, administrators and others towards adult education.
27. What are the characteristics of successful advisory committees?

28. How can we organize effective advisory committees?
29. Develop exemplary adult education programs.
30. Develop adult education programs for disadvantaged adults.
31. Attitudes of selected groups toward the responsibility for adult education.
32. Cooperative education programs in agricultural occupations for adults.
33. Broader scope of adult education in agriculture to include both on-farm and off-farm occupations.

Research Proposals

Area Vocational Technical Programs

I. Title of Research

Educational and Occupational Background of Post High School Instructors of Vocational and Technical Programs in Agriculture.

II. Statement of the Problem

One of the most significant changes in educational programs in agriculture in recent years has been the rapid growth of the post-secondary programs in area vocational schools and junior colleges. Removed from the administrative and supervisory ranks of the regular college systems and normal secondary school regulation, these programs have for the most part developed under their own independent set of rules. Their rules for student admission, course selection, length of training period and selection of teaching personnel, to name but a few items, have all been formulated as the post-secondary schools have developed.

One of the most outstanding breaks with the traditions of secondary and post-secondary education was in the required qualifications of teachers. A Bachelor's degree in education was no longer a license to teach. Some schools began to demand evidence of competence in the vocation to be taught and accepted experience in the industry as evidence of that competence. Rules for certification of teachers in some states were rewritten to permit persons who did not hold a teaching certificate

to teach. In some states, no degree was required.

Some controversy ensued over the best method of teacher preparation for the vocational programs. Such seemingly bright spots in the arguments of those advocating the exclusive use of persons trained in the industry were soon dimmed by questions such as "How does he maintain his competence when he is removed from industry?" or "How can you be sure he can teach just because he can do the job?". Those holding to the requirements of a teaching degree were also buffeted with questions like "How can you teach to work in an industry if you have never been there?" or "How can you gain a high degree of skill if you have never had an opportunity to practice?". And so the controversy continues.

Given these conditions of employment for post-secondary teachers, the problem of pre-service and in-service education remains. There are presently no organized pre-service or in-service programs for preparing teachers of occupational and technical programs in agriculture either to provide occupational competencies or to provide educational skills.

III. Purpose of the Study

The major purpose of this study is to determine what pre-service and in-service educational and occupational experience was obtained by present instructors of agriculture programs in post-secondary area vocational schools. Evaluation of preparation of present instructors by the instructor himself and by his administrator will be used to identify important educational and occupational needs. This information can then be used in designing pre-service and in-service teacher education programs for agriculture instructors in area vocational technical schools.

A second purpose is to identify the sources from which instructors of agriculture programs in post-secondary area vocational schools are drawn. Identification of these sources will provide one avenue of recruitment in fulfilling future instructor positions.

IV. Specific Objectives of the Study

- A. Determine the educational background of the instructors.
 - 1. Undergraduate and graduate majors and minors.
 - 2. In-service participation in workshops, seminars, etc.
- B. Determine the occupational background of the instructors.
 - 1. Years of teaching experience in major and minor areas.
 - 2. Types and years of non-teaching occupational experience.
- C. Identify pre-service and in-service educational and occupational needs for instructors.
 - 1. By instructor self-evaluation of prior training completed and in-service training needed.
 - 2. By immediate supervisor evaluation of instructors prior training and on-the-job performance.
- D. Identify the job held previous to becoming an agriculture instructor in an Area Vocational-Technical school.

V. Sampling Plan

A. Population and sample.

The population for this study consists of two separate but related groups: 1) teachers of agriculture in post-secondary vocational programs in area vocational schools and junior colleges and 2) the immediate supervisors of the teachers identified in the first population.

The teachers can best be identified by contact with supervisory personnel in the State Department of Education. A list should be compiled of all teachers so identified. Population 1 consists of the teachers on this list. Because of the small number of teachers in each state, the sample will consist of the entire population.

The population of immediate supervisors can best be identified by asking each teacher to name his immediate supervisor. In some cases the immediate supervisor will be an administrator of the school, in others he may be a department head or program director. The population will consist of all immediate supervisors of teachers of agriculture in the post-secondary vocational programs. The sample will consist of the immediate supervisors of those teachers who respond to the inquiry of this study.

B. Sampling plan.

In brief, the sampling plan for the two populations is:

Population 1 - Teachers

All teachers identified as responsible for teaching in vocational agriculture programs at the post-secondary area vocational school and junior college level.

Population 2 - Immediate supervisors.

All immediate supervisors who are identified by teachers who respond in population 1.

VI. Instrumentation.

The instrumentation will consist of three data collection instruments.

A. Descriptive instrument.

The first will be a descriptive instrument to collect information about the teacher, his training, his work experience and his perception of his needs for in-service education. Some specific areas of inquiry are listed below.

1. Education

- a. Undergraduate major and minor.
- b. Graduate major and minor (credit hours).

c. Types and length of in-service workshops (i.e. curriculum development, technical subject matter, instructional techniques).

2. Occupational experience.

a. Teaching experience.

- (1) Courses taught - major and minor.
- (2) Years of teaching experience in major and minor.
- (3) Other teaching experience.

b. Non-teaching experience.

- (1) Types of occupational experiences in agriculture (according to U.S.O.E. occupational code).
- (2) Months of employment.
- (3) Level of responsibility (i.e. unskilled, skilled, supervisory, etc.)
- (4) Other types of non-teaching occupational experience
 - (a) Armed forces connected work experience.
 - (b) Other.

3. Perception of training needs.

a. Occupational

b. Educational

(The instructor will be given a prepared checklist to assess his ability for each topic or competency. He will also be asked to indicate additional topics or competencies for which he feels a need for training.)

B. Performance and training evaluation.

1. Teachers

Teachers will be asked to evaluate their prior education for the performance of their job, both in terms of their educational and occupational training.

2. Immediate supervisors

The supervisors will be asked to evaluate two aspects of the teachers under their supervision: (1) preparation for the job and (2) performance on the job. Supervisors will be asked to rate the same list of skills and abilities as provided for the teacher's self-rating. In addition, they will be asked to rate the performance of the teacher on a selected list of criteria for teacher performance; the teacher performance scale will provide for a single score rating of overall teacher performance.

The instruments briefly outlined above will be prepared by the committee responsible for the conduct of the regional project. They may be tested on small samples of teachers not in the sample population

or judged by a jury of experts to be adequate for collecting the necessary data.

VII. Data Collection

Collection of data will be from three sources: (a) state departments (list of instructors), (b) instructors (background preparation and evaluation), and (c) immediate supervisors (evaluation). The committee responsible for the project will coordinate data collection in the region. The committee representative from each state will be responsible for collecting data in his state.

The procedures to be used in conducting this project, including the data collection procedure are shown in Figure 1.

VIII. Statistical Design

The statistical design is described in terms of the objectives of the project:

Objectives A, B, and D - Means, standard deviations, and frequency distributions would be used to describe and summarize the data.

Objective C - Means, standard deviations, and frequency distributions would be used to describe and summarize instructor self-evaluations of prior training completed and in-service training needed. These techniques would also be used to summarize immediate supervisor ratings of the instructors prior training. Chi-square would be used to determine if there were significant differences in the training of instructors rated high versus those rated low in on-the-job performance by their supervisors.

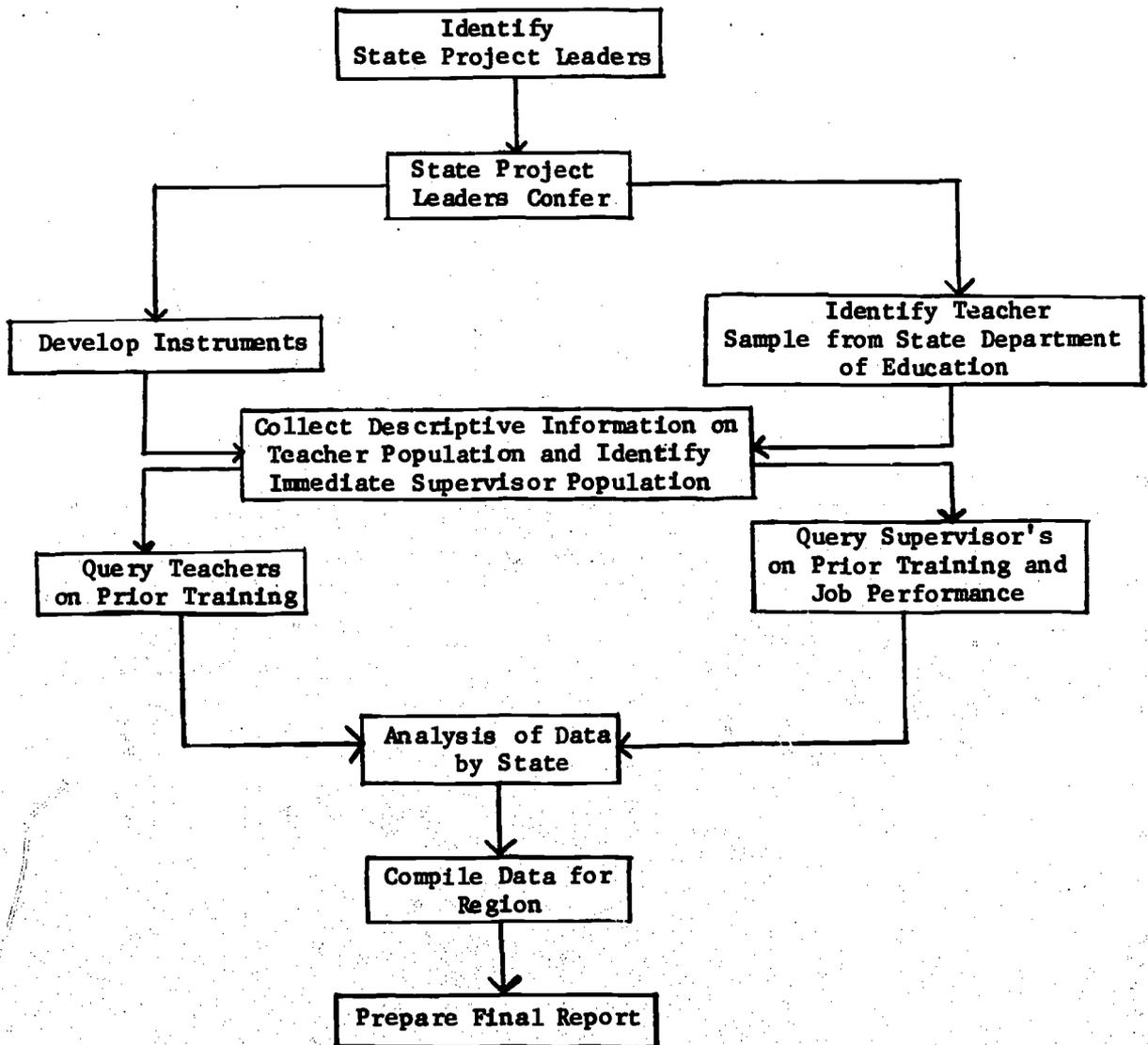
IX. Format for Reporting Results

The reports would be organized to provide answers to questions posed by the study's objectives. Both descriptive and inferential information would be reported.

State reports would be combined to form a regional final report.

Figure 1.

PROJECT PROCEDURAL FLOW CHART



X. Timetable for Implementing Research

November 1, 1970 - Appointment of project leader in each participating state, to act as a representative to the coordinating committee.

November 15, 1970 - Project leaders in each state begin organizing for project and developing tentative data collection instrument.

February 1970 - Meeting of all project leaders to finalize data collection instruments and procedures.

March-April, 1970 - Collect data in participating states.

June 15, 1970 - State reports completed; submit data to regional project coordinator for preparation of final regional report.

July 1970 - Report project findings to Central States Research Conference.

XI. Personnel Needed

- 1. Regional project coordinator**
- 2. Project leader in each participating state**
- 3. Supportive staff**

Junior and/or Community Colleges

I. Title of Research

Instructional Staff Model for Agricultural Programs in Junior and Community Colleges.

II. Statement of the Problem

Community and junior college programs in agriculture are on the increase. The increasing demands for opportunities for post-high school education have prompted many states to give renewed emphasis to the Development of junior and community college programs.

The traditional junior college programs which led to preparation for continuation in four year colleges and universities have undergone considerable change. System managers are aware of the large number of enrollees for whom one or two years of junior college instruction terminates the student's formal education. This fact has given rise to the development of programs which have utility for transfer to continuation of study for the baccalaureate degree or utility for pursuing a more immediate vocational interest. Courses and entire programs have been added which have utility for very specific kinds of educational pursuits or are adopted to a narrow range of occupational choices.

One of the programs finding an eager audience in the junior and community college is agriculture. With a high proportion of students coming from rural backgrounds, it is only natural that the interest in agriculture runs high. As new programs are added, however, the problems of staffing multiply. The traditional patterns of securing experienced

staff from the high schools or industry no longer seems adequate for the task. Because the teaching tasks and responsibilities are so varied from school to school, and within programs, it has been difficult to develop a description of the tasks for junior college teachers and even more difficult to prescribe the pre-service and in-service education necessary to insure that the teaching staff is adequately prepared to cope with their varied responsibilities.

III. Purpose of the Study

The purpose of this study is to determine the competencies of junior and community college instructors in agricultural programs. These competencies would be used to determine the content of teacher education programs for this group.

Competencies would be assessed in terms of the number of competencies performed and the amount of time spent using each of them. The frequency of use among these agriculture instructors along with the amount of time spent using each competency would be used to determine its importance for the instructor.

In compiling a list of competencies, the areas of responsibility included would be administration, advising and counseling, student placement, teaching methods, subject matter, and professional. Assessment of competencies or tasks in each of these areas should provide an accurate job description on which to base the teacher education program. This approach would provide an objective rather than purely subjective rationale for designing in-service and pre-service education programs for instructors in junior and community colleges.

IV. Specific Objectives of the Study

- A. To identify the instructors of agricultural programs in junior and community colleges.
- B. To prepare a potential list of job competencies in the areas:
 - 1. Administration.
 - 2. Advising and counseling.
 - 3. Student placement.
 - 4. Teaching methods.
 - 5. Subject matter.
 - 6. Professional.
- C. To identify those competencies important in designing teacher education programs for these instructors using the criteria:
 - 1. Frequency of competency use.
 - 2. Duration of competency use.

V. Sampling Plan

A. Population

The population for this study will be all junior and community college teachers of agriculture subjects with agriculture broadly defined to include both production and off-farm agriculture pursuits. The population will be identified by contact with the college administrator in charge of staffing.

B. Sampling Plan

Because the population at the present time is reasonably small, the sample will be 100% of the population.

VI. Instrumentation

One of the primary tasks of this project is to develop instruments suitable for assessing the competencies needed or used by junior and community college teachers. There are six major headings under which tasks will be identified. They are: 1) administration, 2) advising and counseling, 3) student placement, 4) teaching methods, 5) subject matter, and 6) professional.

The steps in developing the data instruments are:

1. Project leaders in each state review the available literature which describes the actual or theoretical tasks of junior and community college teachers, prepare a list of tasks and assign the tasks to one of the six major headings described above.
2. Combine the lists of tasks completed by project leaders into a comprehensive list of tasks.
3. Submit the comprehensive task list to a jury of experts composed of two teacher educators and three teachers (each from a different subject matter field, i.e. crops, soils, management, etc.) from each participating state.
4. Submit the subject matter section of the tentative instrument to another jury of experts to judge the adequacy of the competency lists for specific subject areas. At least one college staff member in each participating state should be selected to the jury reviewing the subject matter competencies in his speciality area.
5. Develop the final instrument following the report of the subject matter jury, leaving spaces for respondents to make voluntary additions to the list in each of six major areas. This process should be done by the regional committee. The instrument will require the respondent to estimate the frequency and amount of time spent in each task or competency.

VII. Data Collection

Initially the instructors and the subject matter which he teaches will be identified. A list of junior and community colleges offering agriculture programs will be secured from the state department. The administrator in charge of staffing at each of the colleges will be requested to submit a list of his agriculture instructors and their respective subject matter areas.

Each of these instructors will be mailed the instrument containing the list of competencies. All instructors will receive the same instrument even though it is anticipated that some of the subject matter competencies will not be relevant to some instructors. This procedure

should help to identify where programs overlap and where they are mutually exclusive.

A flow chart of the project's activities is shown in Figure 1.

VIII. Statistical Design

This study is basically a description of the competencies of junior and community college teachers. Therefore, the statistical treatment is limited to those statistics which adequately describe the data. The highest order statistical treatment which the data will allow will be employed.

The use of electronic equipment will be employed when possible to facilitate the collection of state data into a regional report.

IX. Timetable for Implementing Research

November 1, 1970 - Coordinating Committee selected

January 1, 1971 - Review of literature and tentative list of instructor tasks completed.

March 1, 1971 - Jury of experts evaluation of list complete; instructors of junior and community college agriculture programs in each identified.

March 15, 1971 - Coordinating committee finalizes instrument and data collection procedures.

June 1, 1971 - Data collected and summarized on regional basis.

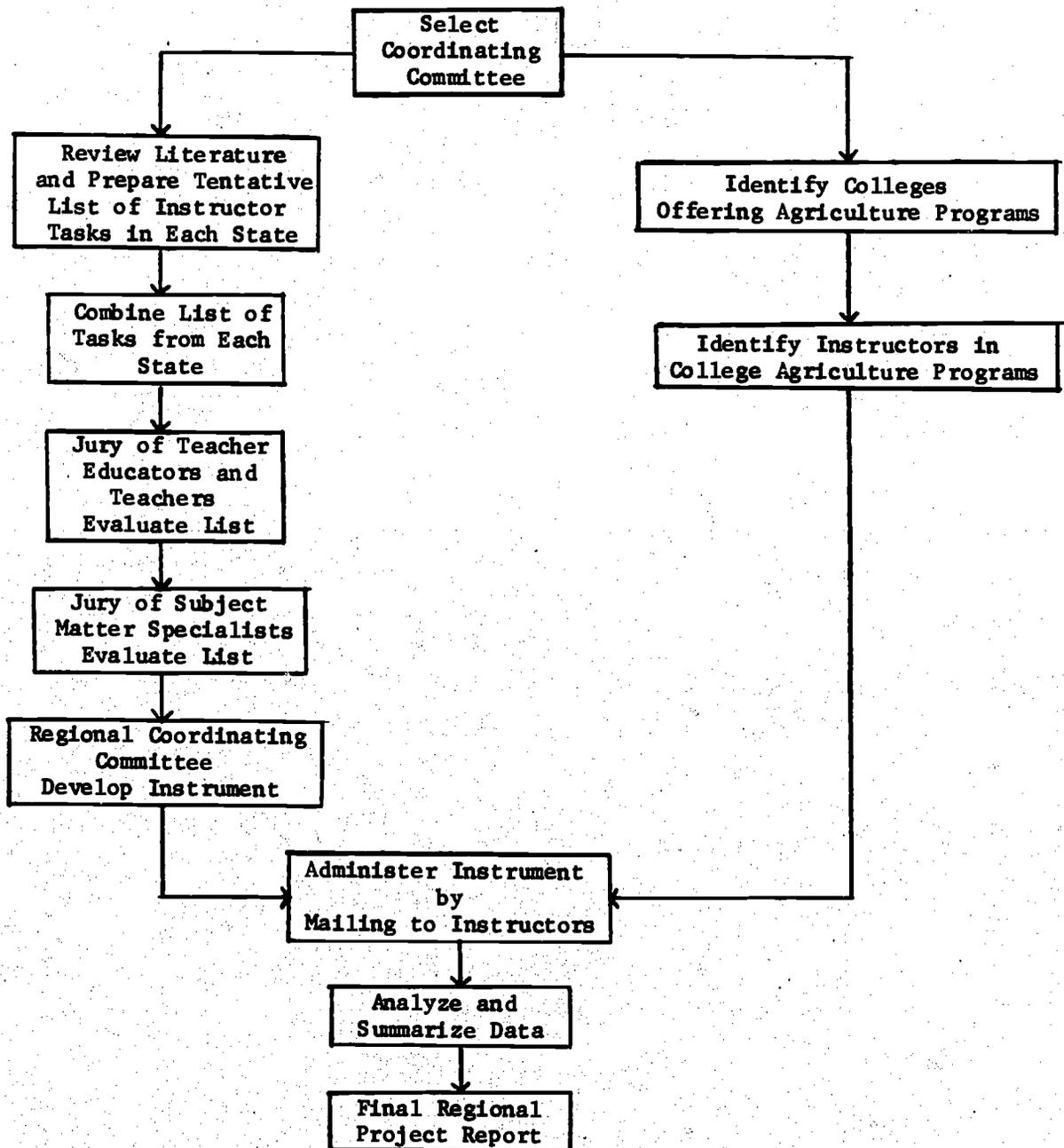
July 1, 1971 - Final report completed for presentation at Central States Regional Conference.

X. Personnel Needs

1. Regional project coordinator with supportive staff.
2. State project leader with supportive staff.

Figure 1.

FLOWCHART OF PROJECT ACTIVITIES



Young Farmer Programs

I. Title of Research

Development and Assessment of the Effectiveness of a Teacher Workshop as a Means of Promoting Establishment and Continuation of Effective Young Farmer Programs in the Central Region.

II. Statement of the Problem

The training of young men to assume positions as farm operators, owners and managers is an important part of the vocational agriculture program. In order for this task to be accomplished, it is necessary to have a corps of teachers capable of planning, implementing and evaluating local programs for young farmers. This corps of teachers must be supplied with certain kinds of basic information if they are to succeed. They must be able to determine the clientele with whom they can effectively work, be knowledgeable of the educational needs of their potential young farmer clientele and possess the capability of managing the organizational, administrative, and educational tasks requisite to successful program operation.

Teachers must also develop a philosophy which defines the priority level for the education of young farmers. They must be motivated to assign a portion of their resources to continuing education for the young farmer.

Programs for young farmers have not kept pace with the continuing need for education. Most states in the Central Region have experienced a decline in the number of schools which have active young farmer programs. Schools do not adequately serve the number of young men who

begin farming, even as the number of farmers experiences some decline. The major problem is to reverse the trend in the reduced opportunities for young men to get effective on-the-job training in farm operation and management.

To concentrate education of teachers in the pre-service training program only means that effective program implementation is delayed until the potential teachers are established in their communities as teachers of agriculture. Effective young farmer programs cannot afford to wait. Some means of in-service education must be provided to assist teachers already in the field to implement and continue new or expanded young farmer programs. The concentrated workshop approach to in-service education is one means of accomplishing this task.

III. Purposes of the Study

The general purpose of this study is to establish a procedure for training young farmer teachers in in-service training programs using the workshop as the media for providing instruction. The project will produce guidelines for establishing the workshop, procedures for selecting teacher clientele, an outline of workshop procedure and techniques for evaluating workshop success.

IV. Specific Objectives of the Study

- A. To plan a workshop to introduce ways and means of
 1. Starting young farmer programs.
 2. Conducting young farmer programs.
- B. To conduct a teacher workshop that would result in the establishment of pilot programs for continuing education for young farmers.
- C. To evaluate the effectiveness of the teacher workshops in the establishment of effective educational programs for young farmers.

V. Plan for Workshop Development

A. Selecting Participants

A purposive sample of teachers in each state would be selected to participate in the workshops. Twelve to fifteen teachers would be selected using the criteria:

1. Teacher's status with other teachers in the area or state.
2. Teacher's experience in teaching agriculture.
3. Teacher's experience in teaching adult farmers.

Participants would be selected by a state committee composed of a state supervisor, teacher educator, and two teachers.

B. Procedure for Planning and Organizing Workshop Activities.

A regional coordination committee composed of one representative from each participating state would be selected. This committee will serve to define and standardize the workshop procedures. The general procedures for the workshop are shown in Figure 1.

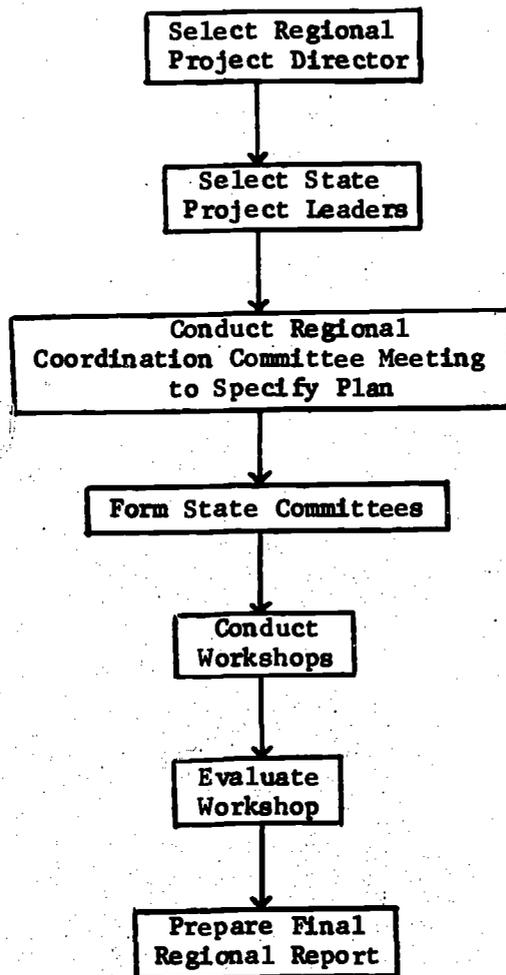
Each state will follow the same content outline for the workshops as a means of reducing the difference between workshops.

The proposed outline is:

1. Overview of the project.
2. Development and use of surveys in organizing, conducting, and evaluating young farmer programs.
3. Pre-planning for local young farmer programs.
 - a. Using advisory committees.
 - b. Involving local administration.
 - c. Promoting the program.
 - d. Developing a program calendar.
 - e. Evaluating a local program.
4. Development of a first year plan for a young farmer program.
5. Public relations (local and statewide) for an innovative pilot program.

Figure 1.

PROCEDURES FOR WORKSHOP ORGANIZATION.



Each of the workshops will be evaluated as to its success in a particular state. Evaluation will be in terms of participant reactions to the workshop and the young farmer programs which are established following the workshop. The regional coordinating committee will plan and finalize the instruments to be used in the evaluation. Two instruments are to be developed: (a) general workshop evaluation to be completed by teachers and (b) follow-up form to be completed by teachers six months after workshop. The evaluation will be analyzed and summarized as a part of the final regional report.

VI. Timetable for Implementing Workshop

November 1, 1970 - Appoint a regional project coordinator.

November 30, 1970 - Appoint and conduct meeting of regional coordination committee (one representative from each participating state).

January 1971 - Finalize workshop procedures.

February 1971 - Select workshop participants.

March 1971 - Conduct workshops.

September 1971 - Follow-up evaluation of workshop participants.

October 15, 1971 - Regional Final Report.

VII. Personnel Needed.

1. Regional Coordinator.
2. State project leader and supporting staff in each state.

Adult Farmer Programs

I. Title of Research

Alternative Staffing Patterns for Programs in Adult Education in Agriculture.

II. Statement of the Problem

Traditionally the high school vo-ag teacher has had the primary responsibility for providing adult education in agriculture. These programs have been limited primarily to constituents of the local school service area. Although most communities have several other agencies or organizations providing some forms of adult education, there has been little or no concerted effort to coordinate these programs.

Most adult education programs conducted by the vo-ag teachers have been aimed at adult and young farmers. There has been little effort to provide adult education for employers or employees in other types of agricultural businesses. With more attention focused on the off-farm aspects of agriculture education, teachers and other educators are looking for ways to serve this newly identified clientele.

While traditionally each educational agency has gone its separate way, more and more of the educators are finding advantage in cooperative effort. Some have found working together on some or all phases of their educational mission an enjoyable and rewarding way in which to accomplish a given educational task. Others, however, have not experienced success with cooperative efforts.

With a large educational mission defined, it is important to examine the cooperative efforts that have taken place to determine their strengths and weaknesses. In this way, it may be possible to determine the combination of educational resources that are most effective for some specific kinds of educational goals. For example, in teaching an enterprise unit in dairy cattle feeding, it may be most effective in terms of both the number of people reached and the quality of the instruction if the administration and conduct of the class is shared by two or more of the educational agencies. They can bring into play the expertise of several of the educators in an attack on a common problem. On the other hand, it may be evident that certain kinds of instructions can be most effectively handled by a single agency.

One of the problems in vocational agriculture is that it is not possible to define the degree of cooperation that now exists. The fairly autonomous nature of adult programs in agriculture has permitted a variety of staffing patterns and organizational procedures. It is important to identify what the staffing and organizational patterns are and how effective they have been in meeting their educational goals.

III. Purpose of Study

In view of the problem defined above, the purpose of the study will be to define the relationships now existing between agriculture teachers and other persons which he uses in providing adult agriculture education. The information which is gathered will be used to answer the questions: (a) with whom does he cooperate, (b) how does he cooperate, and (c) how successful was the cooperation. Answers to these questions should identify common successful cooperative relationships as an input to

pre-service and in-service education for instructors. The information could also result in the identification of exemplary cooperative arrangements which may be generalizable to other situations. These exemplary cooperative arrangements could serve as models to meet the needs of the newly identified clientele in off-farm occupation.

IV. Specific Objectives of the Study

- A. To identify with whom the agriculture instructor cooperates in providing an adult agriculture education program.
- B. To identify how the cooperation takes place.
- C. To identify the success of the cooperative arrangement.

V. Sampling Plan

The population for this study is all of the programs of vocational agriculture in the secondary and post-secondary schools which enroll adults in continuing programs of agriculture education. Because in some states the involvement in adult education programs is limited, the sample will include the entire population. The sample can be identified by contact with the state departments of education in the respective states.

VI. Instrumentation

The instrument will be developed by the project coordination committee. The organization of the instrument will follow the format:

<u>Kind of Activity</u>	<u>With Whom Cooperated</u>	<u>How Cooperate</u>	<u>Evaluation of Cooperative Effort</u>
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Under the "kind of activity" column, the respondent will be asked to list various activities (i.e. enterprise class in dairy management, field day on fertilizers) in which he cooperated with other persons or agencies. For each of the activities so listed, the respondent should then be able

to indicate the title of the person or the agency with whom he cooperated. Under the heading, "how cooperated", the respondent will be given a choice of means by which cooperation took place (i.e. as teacher, resource person, advisory committee, publicity, etc.). The various means of cooperating will be given as part of the printed instrument. Each means will be identified by a number. The respondent will just list the number of the means by which he cooperated with a given person or agency. Allowance must be made for indication of more than one means of cooperation for a given person or agency.

The column of the instrument entitled "evaluation of cooperative effort" will be used to obtain an indication of the success of the cooperative activity. A five point scale will be used as the basis for evaluation. The five points will be:

5. Very successful.
4. Moderately successful.
3. Undecided.
2. Moderately unsuccessful.
1. Very unsuccessful.

Respondents will again choose the number which best indicates the degree of success with a given cooperative activity.

VII. Collecting Data

Questionnaires will be sent to the head teacher of each department in the sample groups. Two follow-up letters will be delivered to non-respondents at two week intervals.

VIII. Analyzing the Data

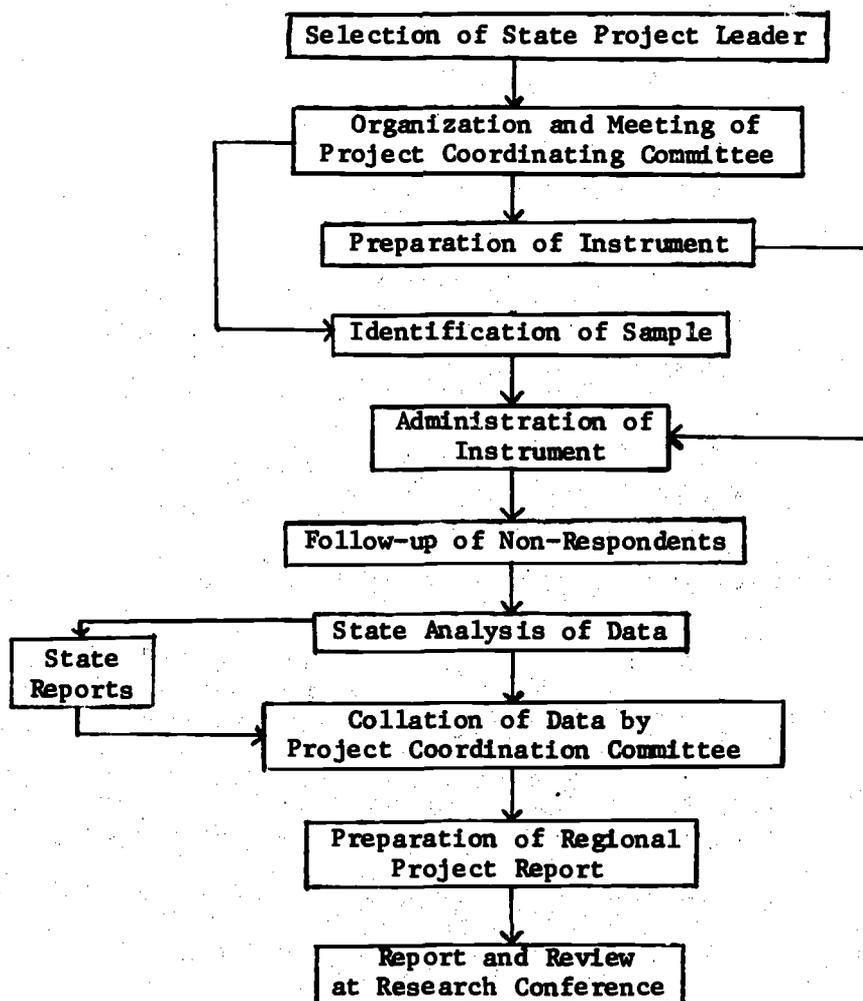
The questionnaire will be reviewed by the project leader and each instructional activity coded to fit the categories defined by the project coordinating committee (i.e. enterprise classes, field trips, tours, etc.). The data will then be summarized to describe the cooperative efforts in

terms of kinds of activities in which they cooperate, the agencies cooperating and the nature of the cooperative activity. Simple descriptive statistics will be used to define the data.

The portion of the questionnaire related to the effectiveness of the various cooperative efforts will be scaled using the Likert scaling technique and analyzed accordingly.

IX. Procedures

The procedures to be followed in this study are presented in the following diagram:



X. Timetable for Implementing Study

November 1, 1970 - Appoint regional project coordinator.

November 30, 1970 - Selection and meeting of project coordination committee.

January 30, 1971 - Finalize instrument and identify sample.

February 15, 1971 - Administer instrument.

May 1, 1971 - Analyze data for state reports.

June 1, 1971 - Colate data and prepare final regional report for presentation at Central Research Conference.

XI. Personnel Needed

A. Regional Project Coordinator

B. State Project Directors

C. Supportive Staff

Paper Presentations

PROJECT MINI-SCORE¹

David Wheeler, University of Minnesota

Current reviews of the literature concerned with counseling vocational students, (Ghiselli 1966, Prediger 1968) make apparent that insufficient research has been done to assess the interrelationships among various measures of individual abilities and needs and how these measures may be used effectively in the vocational counseling process. Because vocational counselors deal with many different training programs designed to prepare persons for diverse occupational families, this lack of precise counseling information is critical. Project MINI-SCORE, funded by the U.S.O.E. in 1966 for a six year project duration, has the objective of identifying such criteria which can be helpful in counseling potential post-high school vocational-technical students toward occupations which require abilities and other personal characteristics similar to their own. Data has been gathered and is currently being analyzed to determine which and how much of each of a variety of measures are useful to the process of counseling and admitting students to full-time vocational-technical training.

Description of Project Development

In order to set up a sufficient data bank on student characteristics, counselors were identified in each of 24 cooperating post-high schools to

¹Project MINI-SCORE (Minnesota Student Characteristics and Occupationally Related Education) is supported by a grant from the Division of Comprehensive and Vocational Research, Office of Education, U.S. Department of Health, Education, and Welfare under the formal title "The Characteristics of Full-Time Students in Post Secondary Trade Schools." Project No. HRD 5-0148.

help with an initial testing program (Phase I, see Figure 1). Personnel and material cost associated with the testing program was financed by the Project.

From September 1, 1966, through October 1, 1968, 17,500 applicants were tested using the following standardized tests or test batteries: (1) the written portions of the General Aptitude Test Battery (GATB, Form B), (2) the Minnesota Vocational Interest Inventory (MVII), (3) the Minnesota Importance Questionnaire (MIQ), (4) the Sixteen Personality Factors Questionnaire - Form C (16-PF), and (5) the Vocational Development Inventory (VDI). A personal information form was also included. Minnesota Scholastic Aptitude Test (MSAT) scores were obtained from the Minnesota Statewide Testing Program office for a majority of the applicants. Most high school students in Minnesota take the test during their junior year in high school.

These instruments were selected because it was felt that they were measures of most of the important variables related to vocational choice. Testing centers agreed to test all applicants within their district. All tests were scored by the test publishers and returned to MINI-SCORE headquarters in IBM card form. A computerized system of editing, clean up, and storage of data was developed to facilitate accurate, fast, and financially feasible handling and analysis of applicant information and test data.

Following application to the schools, students were admitted based on whatever criteria the schools had previously used. As those students who were admitted subsequently either graduated or dropped out, this information was forwarded by the schools to the Project Office (Phase II, see Figure 1).

Follow-up Procedure

One year after successful completion of their respective vocational curriculums all graduates in the study were followed up (Phase III, see Figure 1). The follow-up questionnaire was designed to gather data on such factors as additional training since graduation, employment status, work history since graduation, and salary data. Included in the form was the Minnesota Satisfaction Questionnaire (MSQ), a standardized instrument designed to measure "job satisfaction". If the student was employed, he was asked to provide the name and address of his immediate on-the-job supervisor, who was then contacted. The supervisor was asked to fill out the Minnesota Satisfactoriness Scale (MSS), an instrument designed to assess the satisfactoriness of the student from the employer's point of view.

Project-Related Research Efforts

Since the project began in 1966, a number of research efforts have been completed dealing with developing effective operations systems and investigating methods of data analysis. Other Project research efforts have developed normative data based on successful graduation from vocational-technical programs. A centralized statewide vocational testing program has been developed and is currently being funded through the Minnesota State Department of Education which is using this normative data and the systems developed by the Project.

Some of the questions addressed by Project MINI-SCORE are listed below. Research reports of the research relating to most of the questions are available.

I. Research Efforts Using Applicant Data

1. What are some of the characteristics of people applying to the Area Vocational-Technical Schools of Minnesota?

2. How independent are the measures derived from the test battery?
3. Do persons enrolling in the different vocational programs possess traits in common?

II. Research Efforts Using Graduate Data

1. How do the area vocational-technical school graduates compare with other selected school populations in the State of Minnesota?
2. Are there measurable differences between graduates of different vocational programs on the factors measured by the instruments used in the Project?
3. How can data which differentiates graduates from different programs be summarized for counseling purposes?
4. Are the factors measured by the instruments used in the Project MINI-SCORE useful in the process of predicting if persons will graduate or drop from given curricula?

III. Research Efforts Relating to Follow-up

1. What procedures can be developed to optimize vocational student follow-up returns?
2. What happens to graduates of the Minnesota area vocational-technical schools?

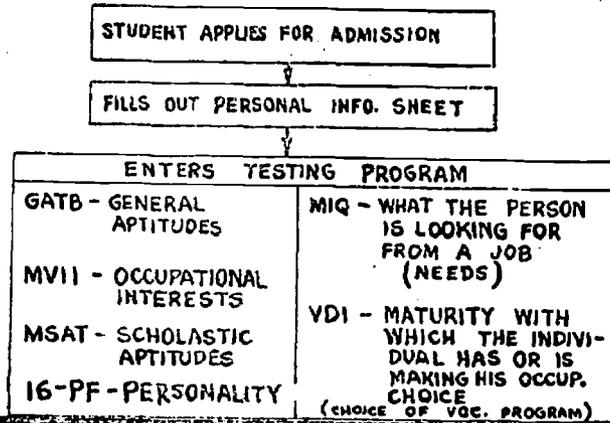
Future Plans

Data are now becoming available in sufficient quantity to apply these methods to predicting on-the-job success resulting in information which will be useful for future counseling of vocational students and prediction of vocational success (Phase IV, see Figure 1).

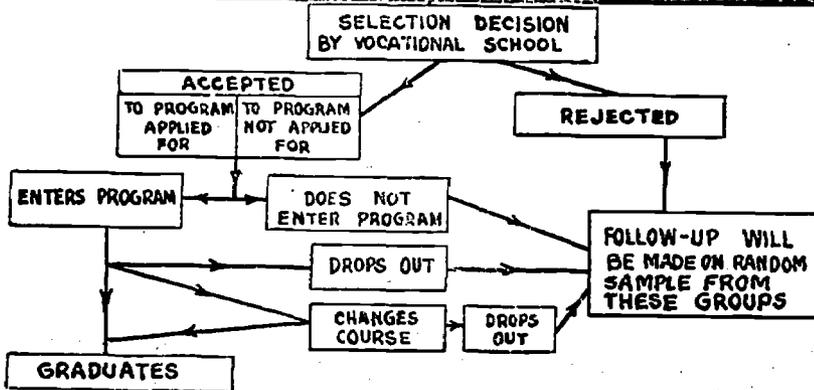
Figure 1

Path of Students Through Project MINI-SCORE

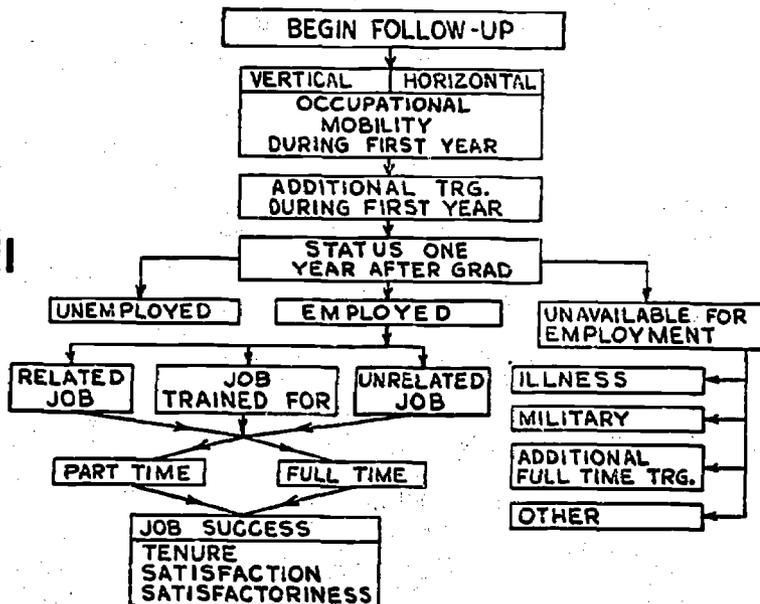
Phase I



Phase II



Phase III



NEWS AND VIEWS FROM WASHINGTON

Dr. Philip Teske, U.S.O.E.

Research and Development Problem Areas

The following is an overview of the problem areas upon which CER vocational education research and development will focus.

1. Attributes of Students with Special Needs

A major problem in this area is to develop an organized base of information about the special characteristics, capabilities, and career development program needs of the disadvantaged. Techniques for inventorying the attributes of the disadvantaged need to be designed and efficient methods for delivering the information to program developers and administrators must be created.

2. Manpower and Job Information

While there are several major problem areas in this broad category, a principle task of research is to assure that job, manpower, labor market, and demographic data are: continuously generated; current; and appropriately utilized by, and specific to the needs of, different students, teachers, counselors, curriculum developers, and administrative planners. This information, related to the needs of different user groups with differing characteristics and with special emphasis on meeting the educational needs of the disadvantaged will contribute to the development of: 1) effective Occupational Orientation Programs which facilitate the transition from school to work, 2) relevant Curriculum Designs which reflect current and anticipated job and skill requirements, and 3) efficient Program Planning and Evaluation which permits the vocational education system to meet the educational needs of students.

3. Program Planning, Management and Evaluation Systems and Techniques

Still to be accomplished are major research efforts that will provide tested alternative program planning, management and evaluation systems with specifications for their appropriate use by state and local personnel. The current void of tested systems contributes to the difficulty of providing evidence of accountability to the community at large and various policy making bodies concerned with the allocations of resources to assure relevant vocational offerings to all clientele groups. Alternative systems and techniques must be developed and demonstrated and programs must be developed to facilitate the adoption of the systems in a variety of vocational education systems.

4. Curricula and Instructional Systems

Researchers should be cognizant of the need to develop and demonstrate curriculum development methods and processes, prototypic models of curricula for new and changing occupations including implications for preparation of teachers for the new curricula, and models of vocational instructional systems that will provide the graduate with the knowledges, skills and attitudes essential for his entry and advancement in employment.

The lack of validated curriculum construction methodologies, compounded by the rapid social and technological changes occurring, necessitate new methods for developing, revising and continuously updating curricula. The expansion of knowledge, technological advances, and the increasing specialization of the labor force dictate the development and revision of curricula and curriculum materials. The subject matter content, curriculum materials, methods of instruction, training aids and devices, facilities and equipment, and evaluation of the student must be integrated into an effective and efficient instructional system.

5. Personnel Development Models

To design, test and implement durable and effective methods and procedures for identifying training needs, updating and orienting vocational and technical education personnel for new and emerging roles in various institutional and organizational settings, and to provide prototypic models for personnel development is a rigorous task of the researcher interested in personnel development. Models must be generated which will eliminate the critical numerical and qualitative shortages of leadership, administrative and instructional and supporting personnel in vocational education.

6. Alternative Systems for Career Development and Planning

Some researchers should direct their attention to the tasks necessary to develop, field test, and evaluate alternative systems for career development and planning. To provide equivalent educational and occupational alternatives to that vast majority of noncollege bound youth who are not prepared to adequately cope with the many facets of career development and planning including vocational choice, worker adjustment, and subsequent adjustments at key points in a worker's work history must remain as one of the goals of the vocational educator.

7. Innovation-Diffusion-Adoption Strategies

To lessen the time lag which exists between the introduction of an appropriate innovation and its adoption by vocational educational agencies; this is the task. Articulated subsystems within vocational education which provide deliberate mechanisms for moving from research to practice need further development. Systematic diffusion networks need to be developed and implemented which will assure the effective and rapid utilization of innovative R & D products.

STATUS REPORT ON FY71 VOCATIONAL EDUCATION APPROPRIATIONS

	FY 70 Appropriation	FY 70 Adjusted	FY 71 House (Passed)	FY 71 Senate (Committee)	FY 71 Senate (Passed)	FY 71 Joint Conf. Report
B Basic Grants	300,336,000	300,336,000	350,336,000*	346,336,000*		350,336,000*
102(c) State Adv. Councils	2,800,000	2,380,000	2,380,000	2,380,000	Same	2,380,000
National Adv. Councils	200,000	200,000	330,000	330,000	as	330,000
C Research and Training	17,000,000	- 0 -	50% of D	10% of B*	Senate	10% of B*
D Exemplary Programs	13,000,000	13,000,000	20,000,000*	16,000,000*	Committee	16,000,000*
I Curriculum Dev.	880,000	880,000	Part of D	4,000,000		4,000,000*
Sec 131(b) R & D in States	1,100,000	1,100,000	Part of D	50% of C		50% of C
E Residential Schools	- 0 -	- 0 -	- 0 -	4,000,000*		- 0 -
F Consumer & H. Econ. Ed.	15,500,000	15,000,000	17,000,000*	25,000,000*		21,250,000*
G Cooperative Programs	14,000,000	14,000,000	18,500,000*	18,500,000*		18,500,000*
H Work Study	5,000,000	4,250,000	5,500,000*	5,500,000*		5,500,000*
102(b) Special Needs	20,000,000	17,000,000	20,000,000*	20,000,000*		20,000,000*
Prog. Planning, Res. & Eval. (ESEA) Sec. 402	1,000,000	900,000	900,000	900,000		900,000
Adult Basic Education	50,000,000	50,000,000	55,000,000*	55,000,000*		55,000,000
Total		419,046,000	490,446,000*	497,946,000*		494,196,000*

* Specified in the Appropriation Act. (For Joint Conference Report, the * means cited in the report)

Business Session

R. Paul Marvin - Chairman

Items of Business

1. **Site of Next Years Conference**

Indiana accepted to host the Central States Regional Conference in Agriculture Education in 1971. South Dakota tentatively accepted for 1972. It was agreed that the week of August 2-6 was the best time to hold the 1971 Conference. The theme of the 1971 Conference will be decided by the host state.

2. **Follow-up on Research Proposals Developed at Conference**

Personnel from Minnesota will make the initial contact with head teacher educators in each state in the Central Region concerning participation in the four research proposals. Ralph Benton, from Southern Illinois University, will serve as regional coordinator for the research projects.

3. **1970 Conference**

Paul Sweany moved that we give the personnel from Minnesota a vote of appreciation for a well-planned and well-conducted conference.

4. **Conference was adjourned.**

Conference Staff

General Conference Chairmen - Edgar Persons
R. Paul Marvin

General Conference Secretary - George Copa

Staff Secretary - Mrs. Jeanine Stage

Session Chairmen - R. Paul Marvin
Donald Priebe
Hilding Gadda
Odell Barduson
Forrest Bear

Session Recorders - Gerald Matteson
Hilbert Hoof
Paul Hemp
Gary Leske
Alfred Manneback

Reception Host and Hostess - Dr. and Mrs. Harry Kitts

Director of Area Vocational-
Technical School,
Alexandria, Minnesota - Vernon Maack

Assistant Director - Area
Vocational-Technical School
Alexandria, Minnesota - Raymond Ahlfors

Technical Consultant - Dr. Phil Teske, U.S.O.E.
David Wheeler, University of
Minnesota

Conference Participants

Conference participants are listed by the workshop session in which they participated.

Area Vocational Technical Programs

Charles Urbanic, Ohio State University (Chairman)
W. Forrest Bear, University of Minnesota (Recorder)
Hilding Gadda, South Dakota State University
E. E. Clannin, Purdue University
Hilbert Hoof, Iowa State University
Alfred Manneback, University of Kentucky
Odell Barduson, Minnesota State Department of Education
George Copa, University of Minnesota
Donald Sargeant, University of Minnesota Technical College, Crookston

Junior and Community College Programs

Richard Wilson, Ohio State University (Chairman)
Ralph Benton, Southern Illinois University (Recorder)
Kenneth James, Illinois State University
Fred Pumper, Western Illinois University
Hollie Thomas, University of Illinois
N. L. McCaslin, Iowa State University
Charles Byers, University of Kentucky
Paul Sweany, Michigan State University
Bosco Lee, University of Minnesota
Truman Tilleraas, University of Minnesota Technical College, Crookston
Roy Dillon, University of Nebraska
Maynard Iverson, Ohio State University

Young Farmer Programs

William Hamilton, Purdue University (Chairman)
David Williams, University of Illinois (Recorder)
Harold Crawford, Iowa State University
E. W. Gustafson, South Dakota State Department of Education
R. Paul Marvin, University of Minnesota

Adult Farmer Programs

Gordon Ferguson, Michigan State University (Chairman)
Dale Zikmund, University of Nebraska (Recorder)
Don Priebe, North Dakota State University
Paul Hemp, University of Illinois
Alan Kahler, Iowa State University
Gerald Matteson, Wisconsin State University, River Falls
Gary Leske, South Dakota State University
Edgar Persons, University of Minnesota