

A CASE-STUDY OF THE EVALUATION AND  
USE OF SPECIAL TELEVISION PROGRAMS AS AN  
INSTRUCTIONAL AID IN VOCATIONAL AGRICULTURE

Thesis for the Degree of Ed. D.

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Charles Edward King

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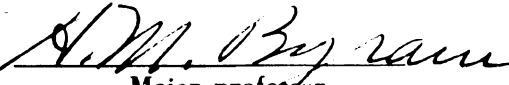
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A CASE-STUDY OF THE EVALUATION AND USE OF  
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**A CASE-STUDY OF THE EVALUATION AND USE OF SPECIAL  
TELEVISION PROGRAMS AS AN INSTRUCTIONAL AID  
IN VOCATIONAL AGRICULTURE**

By

**Charles Edward King**

**AN ABSTRACT**

**Submitted to the School of Graduate Studies of Michigan  
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for the degree of**

**DOCTOR OF EDUCATION**

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Purpose. (1) To present a chronological development of the Television Project, (2) to determine ways in which teachers of vocational agriculture used television programs and reference materials, (3) to evaluate these programs and materials when used as instructional aids in classes of vocational agriculture, (4) to determine criticisms of programs and materials and recommendations for future programs and materials.

Method. The chronological development was written from minutes of meetings, diary, and special notes. A case-study was made of ten teachers and class members in selected classes. Four instruments were completed by either the teachers or class members.

A class in nine schools was observed, a tape recording was made, and an observation report was prepared. Teachers were interviewed; a tape recording was made of each interview except one. Data which were largely secured by observing classes and interviewing teachers were described in a narrative report on each school. Ratings of programs, reported limitations, recommendations for presenting future programs, and adoption of farming practices related to topics with which television programs were and were not used were compared.

Findings and Interpretations. The information reported by teachers included: (1) 76 television programs used with seven adult, three young-farmer, and three high-school

classes; (2) classes in nine schools viewed programs on an organized basis, five television sets loaned by local dealers, and six sets located in the agricultural room; (3) from 17 to 25 activities or practices utilized (a) to inform administrators and other persons, (b) in organizing classes and in preparing for, conducting, following up, and evaluating instruction, (c) by only one teacher each or a small minority of teachers; (4) 17 problems were reported in using programs and references.

These ratings<sup>1</sup> were made: (1) scored items: adult and young farmers--2.82\*; high-school boys--2.46\*; (2) overall numerical ratings: adult and young farmers--7.35\*; high-school boys--6.57\*; teachers--7.33; (3) reception: adult and young farmers--3.07; high-school boys--1.84; teachers--3.20; (4) references: teachers--3.00. Farming practices were reported by farmers 480 times as "already in use when class started," 459 times as "partially or completely in use since class started," and 924 times as "have decided to use practice." Ratings on selected methods of presenting future programs: (1) highest: (a) high-school boys--3.53--"illustration by motion picture," (b) adult and young farmers and teachers--3.35, 3.67 respectively--"demonstration"; (2) lowest: all groups--1.16, 1.89, .88 respectively--"lecture."

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<sup>1</sup>All figures in this paragraph are mean values, and the maximum score was 4.00 on all figures except the three overall numerical ratings whose maximum score was 10.00

\*Significant at the one-percent level.



Eighty-nine and three-tenths, 87.5, and 100 percent respectively felt that programs "definitely" or "probably should be used" as a part of some meetings next year.

It was concluded: (1) a majority of teachers used programs as core of meeting; teachers and class members seemed to have needs which were both similar and different; (2) teachers had varying opinions on what they wanted television programs to do and on what they expected from programs; (3) quality of television programs and references appeared satisfactory; (4) there were some indications that programs and information were above knowledge-level of high-school boys; (5) television programs and references had some limitations.

It is recommended: (1) telecast programs on a more concentrated basis covering a shorter period; (2) prepare and telecast different programs for high-school classes; (3) use criticisms and recommendations in making changes in television programs and references; (4) offer programs next year on requested subject-matter areas; (5) send references and scripts to teachers one to two weeks prior to telecasts; (6) offer a television workshop and an in-service training program on television.

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## CHAPTER I

### INTRODUCTION

#### Statement of Problem

Many opinions have been stated, both orally and in writing, by educators and specialists in the fields of communications as to the use of educational television. Great claims have been made as to the need for and the importance of this medium to education.<sup>1</sup> However, very little experimental research has been conducted on the educational uses of television.

Realizing the characteristics of the medium and its potentialities for education, personnel at Michigan State College made the decision to telecast three series of television programs especially designed for class members attending adult and young-farmer classes under the supervision of local teachers of vocational agriculture. The programs, beginning on October 17, 1954, and ending on May 11, 1955, were titled Talking Sense and consisted of three series entitled: (1) "Getting Established in Farming," (2) Marketing," and (3) "Agricultural Policies." A miscellaneous group of programs which might be labelled "General Economic Topics of Interest to Farmers" was later added as a fourth series. The programs were produced and financed by the Department of

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<sup>1</sup>Carroll V. Newsom (ed.), A Television Policy for Education (Washington: American Council on Education, 1952), 265 pp.



Agricultural Economics, Michigan State College; and the Television Project<sup>2</sup> was jointly participated in by this Department; the Department of Vocational Education, Michigan State College; and the Division of Agricultural Education, Michigan Department of Public Instruction.<sup>3</sup>

The writer selected the Project for investigation, based upon the assumption that a continuous and concomitant study of these television series and the prepared reference materials should be made to evaluate them and to determine how they were used. Therefore, this problem was an attempt by a field study, using the case-study method, to determine by concurrent investigation and evaluation the use and effectiveness of these programs and supplementary reference materials when used as instructional aids in classes of vocational agriculture.

### Purposes of Study

More specifically, the purposes of this study were:

1. To present a chronological development of the Television Project, reporting the problems encountered and the decisions that were made.
2. To determine the ways in which teachers of vocational agriculture used the television programs and reference materials.

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<sup>2</sup>These programs and the supplementary reference materials are referred to throughout the study by the synonymous terms "Television Project" and "Project".

<sup>3</sup>A detailed explanation of how this Project was initiated and conducted is reported as Chapter II.

3. To evaluate these programs and materials when used as instructional aids in classes of vocational agriculture.
4. To determine the criticisms of the programs and materials and the recommendations for future programs and materials.

### A Concept of Educational Television

It was necessary that a base or frame of reference be established as a guide and to give direction to the Television Project. Therefore, this section is presented to set forth a construct of what educational television means and to set forth certain concepts relative to the use of educational television programs.

A large number of books and articles have been written explaining education, its objectives and purposes, the learning process, and the role of the teacher. Broadly defined, education may be considered to include all the experiences which an individual encounters and which change or modify his opinions, beliefs, knowledge, attitudes, ideas, abilities, and other phases of his development.

Much of an individual's education occurs outside of the confines of the classroom or school. His present and future behavior is influenced by: (1) the home and the church, (2) the demands and value-systems of the society, (3) his associates, and (4) the mass media of which television is one of the major influences.

Teaching then means guiding students in the selection of desirable and purposeful experiences, recognizing similarity and differences, and helping each individual to help himself in developing to his fullest capacity. Regardless of the efforts of the teacher, learning cannot take place until there has been mental and/or physical activity on the part of the student. Therefore, learning cannot be forced, and the role of the teacher is more that of providing motivation and of aiding the student in recognizing interests, in selecting and in evaluating incentives and goals, in broadening his concepts, and in developing his ability to determine and synthesize interrelationships.

Educational television is a medium which can assist the teacher and student in accomplishing the purposes of education. Broadly conceived, the term "educational television program" can include any program on television which causes a person to react in such a way that a desirable change in his behavior will result. Any program from which the individual can derive socially useful values and experiences may be said to be educational for him. Therefore, this explanation does not exclude the possibility that a part of or all of a commercial television program may be educational regardless of the originating agency. However, there is a greater possibility that the program will be educational if it is planned and produced by educators, who have a greater degree of understanding of the learning process, of the interests and needs of students, and of the objectives and purposes of education. "When programs are so planned, they can justifiably be called planned learning situations on



television, or educational television programs."<sup>4</sup> Expressed most succinctly, an educational television program is one whose major purpose is to inform or to instruct. Perhaps, a broader concept and meaning will need to be given to the term "educational" as applied to television than some educators have been willing to give at the present time.

An educational telecast<sup>5</sup> should meet certain specifications or should have certain qualifications which are included in the following statements:

1. It should have an educational purpose.
2. The telecast should be based upon the problems and needs of the viewer.
3. The viewer should be involved as a participant.
4. It should aid the viewer in growth and development.
5. The program should be planned for a specific audience rather than for a general audience.
6. It should present information in a logical sequence from week to week.
7. Its educational philosophy should be consistent with the values of a democratic society.
8. The design, format, and method of presentation should be flexible and unpedantic.
9. At all times its presentation should be factual and objective and "maintain a devotion to truth."

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<sup>4</sup>Harold E. Wigren, "Educational Television--Some Suggestions," Teachers College Record, 54:23, October, 1952, p. 26.

<sup>5</sup>Ibid., pp. 27-29.

10. The presentation should be "natural", and ornateness or polished performance is not a necessity.

These ten specifications or qualifications then mean that educational programs must be based upon sound principles of learning. They must be designed by persons who are experienced in the art of television as a medium of communication. Both the message and the technique of presenting the message are equally important. Therefore, the educator and the television technician must work together cooperatively if the most effective educational programs are to be available.

There is no cause for competition with commercial programs or even trying to compete with commercial stations. Both types of programs can actually complement each other: the commercial program will usually seek the general audience, while the educational program should be designed for the specific audience.

Television programs should not be expected to do the complete job of teaching, but they should be regarded as an additional aid to classroom instruction. There is still a necessary place for other instructional materials, such as films, filmstrips, slides, radio, recordings, charts, opaque projectors--and even the blackboard is still needed and is in vogue.

Educational television programs should be thoroughly integrated with the curriculum. The needs and problems of the students should be ascertained, and television programs may be utilized to provide a partial solution to some of these needs. For most effective viewing, these programs should be tied in with other planned activities and organized viewing groups. To hold to the concept that the planning of the curriculum should start with the television programs would seem to be erroneous.

It would seem to be obvious then that teachers must be involved in the planning and in the evaluating of educational television programs and in the evaluation of educational outcomes. The instruction, including the design of television programs, must be pre-planned and directional in intent to be most effective.

It seems reasonable to state that educators are responsible in part for providing a better way of life to persons in schools and outside of the school and that educational television can assist in the accomplishment of this objective. There is no doubt, based upon research, that television is a medium of great impact and importance for educational purposes. Programs can be designed for the education of youths and adults and for extension courses, credit courses, and "captive audiences." Therefore, the number of persons who can be reached is very large as the medium may be used for telecasting educational programs to the general public

and for telecasting special events and specially prepared programs to school groups.

### Importance of Study

The television medium has been recognized by educators as having great importance, but because of its newness there was a paucity of research on the uses of educational television, as reported previously. No experimental research has been conducted on the uses of educational television in the area of agricultural education, as far as the investigator could determine from the literature reviewed.

Schramm seems to recognize that research should be an integral part of all television activities in the near future. He states:

If 10 percent of the rather large sums now being raised for educational television were put into research and evaluation during the first five years of educational stations, the growth of the medium through its ugly duckling years to its productive adulthood would be immensely speeded up.<sup>6</sup>

McKune conducted a study on the use of the television medium as a means of teaching high-school pupils. He feels that: (1) research should be planned far enough in advance to make possible the utilization of effective research procedures, (2) research projects of this kind are of sufficient scope to require the employment of personnel who are

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<sup>6</sup>Wilbur Schramm, "TV Predictions Based on Research," Journal of the Association for Education by Radio and Television, 13:13, November, 1953.

technically trained in research procedure, and (3) the job of research is big enough to comprise a dissertation in itself. The areas which need research include: (1) the place of in-school viewing in the curriculum of schools participating; (2) methods by which the station, the production group, and the school can integrate their objectives and efforts; (3) the types of programs which produce desirable results; (4) methods of production which produce desirable results; (5) the motivation produced when students of the schools using television participate in the programs being viewed by classmates; and (6) the kind of writing, the quality, and the techniques which may be effectively used in relation to the subject matter area.<sup>7</sup>

Wigren is also aware of the importance and the scope of the research that is needed on educational television for, as he states:

Research is needed--and this might well be the basis of a future doctoral study--in determining whether changes in behavior occur because of educational television programs. This, after all, is the only basis for determining whether or not learning has taken place.<sup>8</sup>

The All College Television Committee of Michigan State College also recognize the newness of this medium and the need for experimentation. This Committee reports that:

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<sup>7</sup>Lawrence E. McKune, "Some Problems in Writing, Production, and Evaluation of Television Programs for In-Class Viewing" (unpublished Doctor's dissertation, The State University of Iowa, Iowa City, 1953), pp. 41-48.

<sup>8</sup>Harold E. Wigren, "Planning for the Development of Educational Television in Houston, Texas" (unpublished Doctor's dissertation, Teachers College, Columbia University, New York City, 1953), p. 117.

The Committee was aware that educational television is a sufficiently new field that few firm criteria of excellence can be found. Inevitably, there must be some experimentation and the college should be prepared for this. Evaluation techniques to determine the quality of the results naturally will need to be devised.<sup>9</sup>

It seemed inevitable that television would be used in some way in agricultural education, and, therefore, leadership should be provided to begin to ascertain the most effective means of utilizing this medium educationally rather than waiting until the methodology was partially forced upon the users by the pressures of sources outside of the field of agricultural education. As very little experimental research had been conducted concerning the utilization of this medium on an educational basis and none had been reported in agricultural education, a detailed investigation of the use of the medium was deemed desirable and necessary. Further, the determination of the problems which were encountered by the teachers and the delineation of specific areas of research and evaluative techniques were considered important.

There seemed to be a consensus of opinion among educators in agricultural education that generally instruction in local departments of vocational agriculture should be based upon the local situations and the problems of the class members. What would be the effects of televised programs and how could they be utilized in view of the above

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<sup>9</sup>"Report of the All College Committee on Television Courses for Credit," [Michigan State College, East Lansing: The President's Ad Hoc Committee on Television, 1954], p. 1. (Mimeographed).

concepts? Was there a place for the use of educational television in vocational agriculture? The importance of this study, therefore, seemed obvious based upon the existing situation with the Television Project and the apparent concept that an evaluation should be made of all educational activities and that evaluation is a part of the learning process. After a review of the literature, this Project was considered to be unique in many respects.<sup>10</sup>

#### Definition of Terms

The special terms used in this study are defined within the context and with meanings as used herein in order that they may be more clearly understood.

1. Teacher - This term is limited to the teachers of vocational agriculture.
2. Instructor - A term used synonymously with teacher.
3. Class member - A person attending classes taught by teachers of vocational agriculture.
4. Participating teacher - One of the ten teachers of vocational agriculture who participated in this study and supplied the data for the investigation.
5. Experimental teacher - Teachers of vocational agriculture who participated in the planning meetings with the Television Committee and in the two experimental

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<sup>10</sup> Ante, pp. 105-106.

television programs telecast in May and June, 1954.

6. Adult farmer - An individual, generally over twenty-six years of age, who is enrolled in a course of systematic instruction, established under public supervision and control and taught by the teacher of vocational agriculture.
7. Young farmer - An individual, generally from sixteen to twenty-six years of age, who is enrolled in a course of systematic instruction established under public supervision and control and taught by the teacher of vocational agriculture.
8. Vocational education in agriculture - Educational activities relating to training present and prospective farmers for proficiency in agriculture as a phase of the instructional program provided through the public schools with financial assistance from the Federal Government.<sup>11</sup>
9. Vocational agriculture - A term used synonymously with vocational education in agriculture.
10. Problem - A life situation which creates a difficulty, a state of suspense, confusion, and doubt and, therefore, requires thinking in its solution, not merely the findings of facts in a book.<sup>12</sup>

<sup>11</sup>Raymond A. Garner, "Practices of Teachers of Varying Proficiency in Conducting Programs of Supervised Farming in Vocational Agriculture in Michigan" (unpublished Doctor's dissertation, Michigan State College, East Lansing, 1951), p. 25.

<sup>12</sup>Lloyd J. Phipps and Glen C. Cook, Handbook on Teaching Agriculture (Danville, Illinois: The Interstate Printing Company, 1952), p. 125.



11. Problem-solving method - A teaching method in which the farming problems of the class members are the basis for the course of study and for the class instruction.
12. Approved practices - A procedure which is important for success in an enterprise or another phase of farming.<sup>13</sup>
13. Instructional aid - Any device used by a teacher to expedite learning and to help the student in the learning process.
14. Evaluation - A term used to denote the process of judging or appraising the worth of something or the product of such action.
15. Case-study - A procedure whereby all pertinent aspects of one thing or situation are considered. An individual, an institution, a community, or any group considered as an unit may be employed as the unit for study.<sup>14</sup>
16. Television Committee - An abbreviated term that refers to the Television Committee in Agricultural Education consisting of two staff members in Agricultural Education of the Department of Vocational Education, Michigan State College and two staff

<sup>13</sup>George P. Deyoe, Farming Programs in Vocational Agriculture (Danville, Illinois: The Interstate Printers and Publishers, 1953), p. 71

<sup>14</sup>Carter V. Good and Douglas E. Scates, Methods of Research (New York: Appleton-Century-Crofts, Inc., 1954), p. 726.

members in the Division of Agricultural Education,  
Michigan Department of Public Instruction.

17. The Television Project - An abbreviated term which refers to the supplementary reference materials and the special series of television programs which were telecast from October 17, 1954, to May 11, 1955, by the Department of Agricultural Economics and cooperated in by the Department of Vocational Education, Michigan State College and the Division of Agricultural Education, Michigan Department of Public Instruction.
18. Project - An abbreviated term used synonymously with Television Project.
19. Television program - Any television program which was telecast as one program of the Television Project.
20. Educational television - Any televised program whose major purpose is to inform or to instruct.
21. Kinescope or television recording - A special process of photographing a television program on a bright television picture tube and recording the sound at the same time. The processed film may be shown by a standard 16 mm. projector or may be retelevised.
22. Reference materials - The source units, bulletins, scripts, and other prepared materials which were sent to the teachers of vocational agriculture.
23. Script - The mimeographed text which was prepared for the programs and from which the information

presented on the television programs was secured. These were sent to the teachers of vocational agriculture prior to each television program.

24. VHF - An abbreviated term which refers to Very-High Frequency, a term that is standardized to radio frequencies ranging from 30 to 300 megacycles/second. Channels 2 to 13 have been assigned to this section of the spectrum for television broadcasting.
25. UHF<sup>15</sup> - An abbreviated term which refers to Ultra-High Frequency, a term that is standardized to refer to frequencies of 300 to 3000 megacycles/second. Channels 14 to 83 have been assigned to this section of the spectrum for television broadcasting.
26. "Agricultural Policy" - The series title of the television programs used in the Television Project as a part of the Talking Sense television production and telecast the first week of each month during the period of October 6, 1954, to May 11, 1955.
27. "Marketing" - The series title of the television programs used in the Television Project as a part of the Talking Sense television production and telecast the second week of each month during the period of October 6, 1954, to May 11, 1955.

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<sup>15</sup>The VHF and UHF equipment are not compatible, i.e., television sets designed to receive the VHF signals only cannot receive the UHF signal. Older VHF sets can be adjusted to receive the UHF signal by the installation of a converter on the set. Most current television sets are constructed to receive both signals by turning a selector knob.

28. "Getting Started in Farming" - The series title of the television programs used in the Television Project as a part of the Talking Sense television production and telecast the third week of each month during the period of October 6, 1954, to May 11, 1955.
29. "General Economics Topics of Interest to Farmers" - The series title of the television programs used in the Television Project as a part of the Talking Sense television production and telecast the fourth week of each month during the period of October 6, 1954, to May 11, 1955.

Additional terms used throughout the study which have special meanings are defined or explained at appropriate points in the context.

#### Method of Investigation

A brief outline of the procedures used in conducting the study is presented here. A detailed description of each part of the investigation is presented in Chapter III. The major divisions of the investigation included:

- ✓ 1. Preparatory and Informative Activities of the Investigator. Since a part of this study included visitation and subjective evaluation, it was felt that special course work and participation in other activities of the Project were desirable.

✓ 2. Selecting the Research Design. Special notes, minutes of meetings, and a diary were the basis of the data from which the development of the Project was written. A case-study method was selected as the research technique which was most desirable for accomplishing the purposes of the study.

3. Selecting the Augmented Guidance Committee. A nine-man Committee consisting of persons working directly with the Project was selected to offer advice and to approve the research design and the forms and instruments.

✓ 4. Selecting the Participating Teachers. The criteria were established which were used as the basis for selecting the teachers in this study. Thirty-three teachers indicated on a survey form sent out by the Research Specialist of the staff in Agricultural Education that they would probably use the television programs in some way. Visitations to some of these teachers and other information narrowed the number down to twenty teachers who were then visited by the investigator. Finally, only ten teachers remained who completed their plans of using the programs, and they were selected as the participating teachers in this study.

✓ 5. Observing Classes in the Participating Schools. Nine out of the ten teachers were visited to observe their use of a television program with one class, and an observation form was filled out during and after the meetings. Tape recordings of the class meetings were made, and these were re-played and analyzed.

6. Preparing the Forms and Instruments. Form E, "Data Sheet for Recording Information on the Use of Each Television Program"; Form F, "General Data Sheet for Recording Information on the Use of the TV Series"; and a sheet of directions explaining their use were prepared and approved by the Guidance Committee and mailed to the teachers. Later, three additional instruments and a sheet of directions explaining their use were prepared and approved by this Committee. These were mailed to the teachers and included: (1) Form H, "Rating Sheet of 'Talking Sense' TV Programs (Class Members)"; (2) Form I, "Rating Sheet of 'Talking Sense' TV Programs and Other Reference Materials (Teachers)"; Form J, "Report of Farming Practices"; and (4) "Directions to the Teacher." The requested data which were called for on these forms were submitted by the teachers and the high-school, adult, and young-farmer class members, where applicable.

7. Preparing for and Conducting the Interview. An interview schedule was prepared and approved by the Guidance Committee. Each teacher was interviewed and notes were recorded on the interview schedule. A tape recording was made of all interviews except one. A detailed narrative report was written on each interview.

One of the major purposes of the study was to present a chronological development of the Television Project. Since this was the first project of its type and because it was different from other research and was unique in several ways,

the investigator considered it most important that a complete record be made. This record is reported as Chapter II.

## CHAPTER II

### THE CHRONOLOGICAL DEVELOPMENT OF THE TELEVISION PROJECT IN AGRICULTURAL EDUCATION

#### Early Activities of the Television Committee

In the early part of 1952 two members from the staff in Agricultural Education of the Department of Vocational Education at Michigan State College were appointed as a four-man Television Committee in Agricultural Education for Michigan. The Committee's responsibility was to study the development of the educational television activities of the College, which were in the developmental stage, and to make recommendations concerning ways in which this medium might be used effectively in agricultural education.

A program was prepared and presented on the television station of the College by the Chairman of the staff in Agricultural Education, and a kinescoped recording was made for future use. The theme consisted of the educational and experiential requirements for a teacher of vocational agriculture and of an explanation of the different activities in which he would be likely to participate in that position. Pictures were taken of activities in one of the student-teaching centers and on local farms and were used to supplement the explanation by pictorial means.



## Initiation of the Project and Experimental Programs

In April 1954 the Extension Service Specialist in Agricultural Policies<sup>1</sup> and the Chairman discussed the possibility and advisability of preparing a series of television programs for high-school boys enrolled in classes of vocational agriculture. During this conference, the decision was made that the subject matter area in which the programs might be developed would probably be more suitable for young farmers than for high-school boys. The television programs were to be produced and financed by the Department of Agricultural Economics, and the teachers were to be involved in the planning of programs, which were to be designed to meet their needs. The need for research on many aspects, of which this study was to become one, was recognized as a necessary and concomitant part of the Project. There was also a recognition that supplementary materials would need to be prepared to aid the teachers in the preparation and teaching of their classes.<sup>2</sup>

A meeting of the Television Committee was called, and at this meeting the above proposal was discussed. It was decided that the opinions of a selected group of teachers should be secured, and if they concurred in thinking that

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<sup>1</sup>Referred to hereafter as the Policies Specialist.

<sup>2</sup>This plan was later approved, and all of the programs were produced by Dr. Daniel W. Sturt, Agricultural Policies Specialist of the Department of Agricultural Economics. Extension groups, Farm Bureau groups, and other farm organizations used some of the television programs and the prepared materials in their meetings. However, only the activities which were related to agricultural education are reported herein.

the proposal had merit; they should be surveyed to determine the topics, the time for the television programs, and the method of presentation.

The investigator<sup>3</sup> secured a list of teachers from the records of the Division of Agricultural Education office who were teaching young-farmer classes and the topics that were being taught. A brief report concerning the proposed Project was made to the supervising and teacher education staffs, and the approval of these two staffs was received to implement the Project. At this time the investigator started a review of the literature on educational television and instructional films, which was to be used as a guide in the further development of the Project. A letter was sent to the personnel of various schools, universities, and television stations who were preparing educational programs, requesting information about their activities.

At the next meeting of the Television Committee selected teachers of vocational agriculture were present and offered suggestions on the items presented in the previous paragraphs. They further expressed an interest in the television programs and requested that the proposed plans be implemented. One pertinent question seemed to be in the minds of various people during the initial stages of the Project: should the evaluation be based upon the television programs per se, or should

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<sup>3</sup>The investigator was employed as an Instructor (part-time) in the Department of Vocational Education during the school year 1953-54. He also attended most of the meetings reported in this chapter.

it be based upon the entire class meeting in which the televised programs were used as an instructional aid? The consensus of opinion seemed to be the latter, namely, that the major evaluation should be based upon the entire class meeting or series of meetings in which the television programs were being used as an instructional aid. However, it was recognized that the production and format of the television programs and the degree to which the programs met the needs of the class as an instructional aid would also be evaluated.

The dates of May 27 and June 10, 1954, were selected for the televising of two experimental programs of thirty minutes length to young-farmer classes, and the topics to be presented were decided upon. Each experimental teacher agreed to submit a list of problems based upon the needs of his class members for use as the basis for the development of these television programs.

In order that direction might be given to the development of the Project, the Research Specialist of the staff in Agricultural Education<sup>4</sup> proposed a list of tentative purposes to guide this staff and the teachers which, with certain revisions and additions by the investigator, are presented below:

1. To provide teachers of vocational agriculture with technical assistance and consultant services in planning and teaching adult-farmer and young-farmer classes when using television as an instructional aid.

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<sup>4</sup>Hereafter referred to as the Research Specialist.

- a. To use a small group of teachers in planning young-farmer programs so that a series of television programs might complement instruction for young farmers.
  - b. To determine the needs of instructional materials and provide them through one of the many channels which may be used at Michigan State College.
  - c. To assist teachers in planning their instructional program for specific lessons so that materials that are made available through television, tapes, or printed matter may be used effectively.
2. To plan television programs which will more nearly meet the needs of groups of adult and young farmers who might be viewing as a part of an organized instructional program.
  3. To evaluate the effectiveness of presentations given by television upon organized groups.
  4. To assist teachers in planning instructional programs that will result in the adoption of approved practices.
  5. To help structure and determine a methodology of using the television medium as an instructional aid.
  6. To increase the number of adult and young-farmer classes in vocational agriculture and improve the attendance in those classes.

Upon receipt of the previously mentioned problems, the Policies Specialist and the Instructional Materials Specialist

of the staff in Agricultural Education<sup>5</sup> planned the content of the first experimental television program and the instructional materials which would be prepared and mailed to the experimental teachers. Later, these materials were mailed with a cover letter explaining the Project, and a request was made that it be given consideration and thought prior to the summer conference of teachers. It was announced that during the summer conference further consideration would be given to the Project, and plans would be made for getting the proposed activities started.

Prior to the first experimental television program (and the summer conference), rating forms were prepared for use by class members and teachers in evaluating this program and were mailed. A summarization of these forms and the opinions of the experimental teachers using the program were discussed at the next meeting of the Television Committee. A discussion of possible television topics to be telecast in the fall of 1954 was held. The topics of "Getting Started in Farming," "Marketing," and "Agricultural Policies" seemed to be three possible series.

On June 14, 1954, the Television Committee with selected teachers met to discuss the second experimental television program which had also been telecast and to make further plans. A summarized report of the rating sheets filled out by staff members, teachers, and class members was discussed;

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<sup>5</sup>Referred to hereafter as the Materials Specialist.

and ways of improving the televised programs were suggested. The teachers made the following recommendations in light of the experiences gained in using the two experimental programs:

1. That a television program should not be used oftener than every other meeting of the class.
2. That there should be some time in the class meeting for discussion prior to the telecast.
3. That the telecast should be based on problems which were current to the farmers.
4. That the telecast should include recent information not available to teachers in other publications.<sup>6</sup>

The three topics listed in the previous paragraph were selected as the basis for the presentation of three television series, and the teachers agreed to meet at a later date with suggested program topics and problems.<sup>7</sup>

#### Plans and Activities for the 1954-55 School Year

At this next meeting the problems were grouped, and approval was given to the Materials Specialist to plan the three series and the source units within the outlined framework. The dates of the televised programs were selected based upon a sample survey of selected teachers of vocational agriculture. The completed list of television programs with dates and with

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<sup>6</sup> [H. Paul Sweany], "The Use of Television in Agricultural Education (Tentative Report)," [Michigan State College, East Lansing: Department of Vocational Education], March 3, 1955, p. 1. (Mimeographed).

<sup>7</sup> In scheduling these series it was necessary to add a fourth series later which might be considered as "General Economics Topics of Interest to Farmers."

brief outlines was distributed to the teachers by the Policies Specialist.<sup>8</sup>

The Research Specialist prepared a "Memo of Relationships of Teachers of Vocational Agriculture to a Special Television Program" to be used as a guide in discussing the Project with interested teachers, especially at the summer conference of teachers. During this conference, held in July, the kinescoped recording of one of the experimental programs was shown; and the Project was discussed. Interested teachers selected the television programs which they thought might possibly be used by them.

In early August a panel<sup>9</sup> presented a tentative report of the proposed research of this Project and of the research on educational television to the personnel of the North-Central Research Conference in Agricultural Education and received their reactions and suggestions which were incorporated into the plans for the Project.

The Materials Specialist prepared and mailed the source units and other reference materials to the teachers who had indicated on a survey that they were planning to use selected television programs. The Policies Specialist distributed a letter to all teachers explaining the planned television programs and the availability of the kinescoped recordings.

Meetings were held with the teachers and the television and extension personnel in the Bay City and Grand Rapids<sup>10</sup>

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<sup>8</sup>Appendix A.

<sup>9</sup>Composed of the Chairman, the Research Specialist, a member of the Television Committee, and the investigator.

<sup>10</sup>All cities referred to in this chapter are in Michigan.

areas to determine the needs and to formulate plans for getting the kinescoped recordings used by the television stations in these two cities. Arrangements were made whereby the Bay City station would telecast the programs, using the kinescoped recordings, each Wednesday at 1:00 P.M.; and the Grand Rapids<sup>11</sup> station would televise the programs each Saturday at 12:30 P.M. The Bay City programs were to be presented seven days after the "live" telecast, by WKAR-TV in East Lansing; and the Grand Rapids station would telecast the programs seventeen days later.

In September 1954 a letter was mailed to selected teachers in the Central-Michigan area who had indicated an interest in the Project, inviting them to become a member of a Television Study Group. Persons were permitted to enroll for credit, if desired; and the purposes of the meetings were to discuss the problems encountered and the ways that the television programs, source units, and reference materials were used or might be used. Meetings were held throughout the school year to accomplish these purposes, to evaluate the programs, and to plan and discuss projects which individual teachers attending the meetings were investigating. The individual findings of this Group were incorporated into a composite report as one phase of the research on the Project.<sup>12</sup>

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<sup>11</sup>Both of these stations operate on a VHF channel.

<sup>12</sup>For the joint report by two members of the group see Burton K. Thorn and Charles E. King, "An Evaluation of the Television Program - Bulk-Handling of Milk," Michigan State College (East Lansing: Department of Vocational Education, February 28, 1955), 39 pp. (Duplicated by Ditto process.)



A script was prepared for each program of the three television series by personnel of the Department of Agricultural Economics; and the script, bulletins, and other reference materials were mailed to the teachers prior to the broadcast of each program.<sup>13</sup>

Teachers of vocational agriculture who received the source units and other materials were surveyed in October 1954 to determine the use that they planned to make of the television programs. This survey revealed that the teachers in thirty-three schools were using or were planning to use some of the programs with adult, young-farmers, or day-school classes.

Visits were made by the Research Specialist, the Materials Specialist, and the investigator to selected schools in three different areas to meet with the superintendents and teachers. The major purposes of these meetings were to determine: (1) the problems that the schools were encountering with the television programs; (2) the specific television programs which had been used or selected to be used; (3) the relationship of the television programs selected to the lesson topics selected for the class meetings; (4) the methodology of the class meetings with particular emphasis on the use of the television programs; (5) the adequacy of the source units, references, and other distributed instructional

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<sup>13</sup>All teachers who asked to be placed on the mailing list secured the source units, scripts, and other reference materials regardless of whether or not they used the television programs.

materials; and (6) the recommendations of the superintendents and of the teachers concerning improvements needed on the programs and reference materials. Adding these visits to those later made as a part of the departmental research, a total of twenty-three different schools were visited.

The Policies Specialist and the investigator later visited one of the schools to observe the use of television by the teacher because of his unique situation. He used the kinescoped recording which was telecast by the Bay City Station at 1:00 P.M., with his combined junior-senior class of vocational agriculture students. That night he used the "live" telecast from WKAR-TV with his young-farmer class.<sup>14</sup>

The Television Committee made plans for three in-service meetings concerning educational television, and these meetings were held in January 1955. Administrators and teachers were invited to attend these meetings. The meetings included a discussion of the experiences of teachers in using the television programs supplemented with recommendations which the staff in Agricultural Education could make as a result of their observations in the use of the programs. In addition, the Service Letter of the Department was used to include additional information regarding the use of television in classes in vocational agriculture as well as to give suggestions to teachers planning to use the programs later in the

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<sup>14</sup>Cal Orr, "TV Comes to the Classroom," Better Farming Methods, 27:46, March, 1955; Cal Orr, "TV Helps with 'Talking Sense'," Michigan Farmer, 223:45, February 19, 1955.

year. The schedule of programs over the Ann Arbor station was mailed to teachers who were in the coverage area of this station.<sup>15</sup>

A summarized report of the Project, as developed to date, was prepared and presented in March 1955 at the North-Central Regional Conference in Agricultural Education by the Research Specialist.

Another survey form was prepared and mailed to approximately ninety teachers in March 1955 who were receiving the scripts and prepared reference materials. The purposes of this study were to determine: (1) the programs used, (2) which of the prepared materials were used and in what ways, (3) the teachers' plans for teaching adult and young-farmer classes for next year (1955-56), and (4) the suggested topics from which television programs might be prepared for next year. Some of these teachers who were using selected television programs had not anticipated that they would do so when the October survey was made.

### Research

The staff in Agricultural Education used several methods of research to evaluate both the experimental programs and those in the regular series. Some of these methods included

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<sup>15</sup>WPAG-TV in Ann Arbor started telecasting the kinescoped programs on December 20, 1954, and their telecasts of the programs were initially twenty-four days after the "live" telecast from WKAR-TV. After a few programs, the telecasts were changed to twelve days after the WKAR-TV broadcast.

the Television Study Group and the surveys described previously. The over-all purposes of the departmental research, as reported by Sweany were:

1. To study the methods used in classes using the telecasts.
2. To determine the effectiveness of the programs in terms of quality and the effect on practices of farmers.
3. To determine the reaction of teachers and students to the telecasts used in class sessions. <sup>16</sup>

Two research studies, consisting of a doctoral dissertation and a master's thesis, were conducted by two graduate students in the department.

#### Tentative Recommendations for 1955-56

Sweany reported the following tentative recommendations for 1955-56, based upon a study of the use of the television programs<sup>17</sup> and upon the results of the tentative research:

1. That television programs be planned for use in classes of vocational agriculture in 1955-56.
2. That the results of the March survey be used to determine subjects for the television programs.
3. That an advisory group of teachers be used in making plans for television programs in 1955-56.
4. That personnel from other departments in the School of Agriculture be used on programs dealing with production and marketing.
5. That a survey of teachers using the programs be made to determine the best time for telecasts. <sup>18</sup>

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<sup>16</sup> [Sweany], op. cit., p. 3.

<sup>17</sup> The last television program or television recording on each station was telecast on the following dates: (1) East Lansing (WKAR-TV)--May 11, 1955; (2) Bay City (WNEM-TV)--May 18; (3) Grand Rapids (WOOD-TV)--May 28; and (4) Ann Arbor (WPAG-TV)--May 23.

<sup>18</sup> [Sweany], op. cit., p. 4.

At the time of this writing it seemed very likely that the Project would be continued for another year.

## CHAPTER III

### PLANNING AND CONDUCTING THE STUDY

In this chapter a brief accounting of the activities undertaken by the investigator to prepare himself for this research and his relationships to the Television Project are reported. After describing the method of the investigation in detail, the interviewing techniques which were used to secure one part of the data are presented. The sources of additional information and the forms and instruments which were used to secure them are reported next. Finally, the scope and the limitations of the study are reported, and the assumptions upon which the investigation was based are stated.

#### Preparatory and Informative Activities of the Investigator

An interest was developed in the Project from its beginning in April 1954 and immediately a phase of it was selected to comprise this study. Special courses in the use of audio-visual materials and methods<sup>1</sup> and in communications and communications research<sup>2</sup> were taken, and a television workshop<sup>3</sup> was attended in order to be prepared, to a more

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<sup>1</sup>Education 475: a course designed for teaching the principles and usage of visual aid materials; such as projectors, radio, television, charts, camera, flannelgraphs, etc.

<sup>2</sup>Sociology 571, 575, and 585: three courses covering communications research and research on the sources of information and adoption of farming innovations by farmers.

<sup>3</sup>Speech 435: a three-week television workshop covering all phases of educational television including operation of the equipment and production.

satisfactory degree, to undertake the investigation. While working in the Department of Vocational Education, the investigator utilized a small portion of his time in reviewing the literature as a basis for securing information which could be used by the staff in giving direction to the Project. Rating forms were developed for use by the teachers who participated in the two experimental television programs.

Additional activities participated in, but which were not a direct part of this study included: (1) attending most of the meetings which were held concerning all phases of the Television Project, (2) participating as a member of a panel making a report at the North-Central Regional Research Conference in Agricultural Education, (3) enrolling as a member of the Television Study Group and jointly evaluating and preparing a statistical report on one of the television programs with another member, (4) visiting schools with the Research Specialist and Materials Specialist, (5) attending three in-service meetings on educational television, and (6) viewing eighteen of the television programs telecast as a part of the Project.

### Selecting the Research Design

As one of the purposes of this study was to present a chronological development of the Television Project in Agricultural Education, careful notes, minutes of various meetings,

and a diary were kept; and Chapter II was written from these data.

Because of the uniqueness of this Project and the newness of educational television there was a paucity of information in the literature which could be applied directly to this study. From the experiences gained in various courses, from discussions with numerous persons working with educational television, and from participation in the activities reported in the above section, including the two experimental programs; the detailed plans for the study were formulated.

A case-study<sup>4</sup> method of investigation was selected as being the most desirable to accomplish the purposes and to provide the needed flexibility. As the Project was experimental and unlike any previous research, as far as could be ascertained from the available literature, it did not lend itself to formal, statistical analysis. Further, the teachers who were going to use some of the programs could not be determined until late in the year. Some of the teachers who had initially decided to use selected programs decided, for various reasons, not to complete these plans. Each teacher was also using different and varying numbers of television

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<sup>4</sup>Carter V. Good and Douglas E. Scates, Methods of Research (New York: Appleton-Century-Crofts, Inc., 1954), pp. 726-799; Ernest W. Burgess, "Statistics and Case Studies as Methods of Sociological Research," Sociology and Social Research, 12:99, November-December, 1927; Katherine Jocher, "The Case Method in Social Research," Social Forces, 7:203, December, 1928; Carter V. Good, A. S. Barr, and Douglas E. Scates, Methodology of Educational Research (New York: Appleton-Century-Crofts, Inc., 1936), pp. 565-593.



programs and was making changes continually in his teaching methodology, based upon empirical study. Since one of the major aims of the study was to define more clearly the special problems and the methods of use by the participating teachers, the case-study approach seemed to fit the research design best, whereby each teacher could be interviewed in detail at the completion of the series of class meetings.

### Selecting the Augmented Guidance Committee

An Augmented Guidance Committee was selected to offer suggestions concerning the research design and the forms and instruments and to approve them before they were used. Selected personnel consisted of two staff members of the Department of Agricultural Economics and two members of the staff in Agricultural Education of the Department of Vocational Education, all of whom were directly involved with the Project; two consultants of the Division of Agricultural Education, Michigan Department of Public Instruction who were also on the Television Committee; and the Producer-Coordinator for Television, School of Education. After the participating teachers were selected, two of them were added to the Committee making a total of nine members.<sup>5</sup> These men were selected because of their experience in either education or agricultural education, their experience with educational television, or the fact that they were closely associated with the Project. Other

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<sup>5</sup>Appendix B.

persons experienced in communications research, in research design, and in educational television were consulted although they were not on the Committee. This Committee was largely used in an advisory capacity; and the investigator maintained the prerogative of taking what seemed to be a consensus of opinion and the best recommendations, based upon the purposes of the study, and incorporating them in the research design and in the forms and instruments. After revisions, the forms and instruments were submitted individually to the Committee members by mail or in person, and if there were no major individual changes recommended nor minor changes recommended on which there was a consensus of opinion, the forms and instruments were considered to have been approved by the Committee.

### Selecting the Participating Teachers

The criteria for selecting the teachers who would participate in the study were established and included the following:

1. The department is located within a reasonable driving distance from East Lansing.
2. The department can receive the television programs.
3. An adult or young-farmer class is being taught.
4. The teacher is using the televised programs with his adult or young-farmer class.
5. The teacher will agree to participate in this study to the extent of:

- a. Permitting the observation of one class and a tape recording of the program (the tape recording may be omitted if the teacher desires).
- b. Keeping certain requested information and data and making these data available as part of an interview.
- c. Administering a rating and evaluation form to the class members.
- d. Filling out a rating and evaluation form and a report on the adoption of approved practices.

6. After certain teachers have been eliminated by the five factors above, those remaining will be selected on the basis of years of teaching experience and the quality of the adult or young-farmer program, based upon a verbal consensus of the staff in Agricultural Education.

The procedure for securing the teachers who met these criteria was initiated. The Research Specialist had received returns from a survey form, and thirty-three teachers<sup>6</sup> had indicated that they might use some of the television programs in some way. With this information at hand the Research Specialist, Material Specialist, and the investigator spent three non-consecutive days visiting sixteen schools either individually or, where driving distance prevented, collectively.

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<sup>6</sup>For a list of the schools where these teachers were instructing see Appendix C.

Each teacher was asked what television programs he had used or was planning to use and whether or not he would be willing to participate in the study, to permit the investigator to visit one adult or young-farmer class and to make a tape-recording, and to make available certain information on forms filled out by himself and the class members.<sup>7</sup>

Based upon the findings of these visits and some additional information already known or secured, it seemed probable that twenty teachers in fifteen schools would meet the criteria of usage sufficiently to be utilized in the study. Because of previous experience and the differences in the situations in the schools it was considered essential to make a personal visit to these schools to ascertain the plans of the teachers and to determine whether or not they would participate in the study. The superintendents of the schools were written<sup>8</sup>, explaining the purposes of the visits, and were asked to inform their teachers concerning the proposed visit.

In the meantime two forms and a sheet of directions<sup>9</sup>, explaining their use, were developed. Form E<sup>10</sup> consisted of two sheets upon which the teachers were to record their use and evaluation of each individual television program, and the form was to be filled out on each program used. Form F<sup>11</sup> consisted of four sheets upon which the teachers were to record information which was to be used later as the basis for providing information during the interview.

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<sup>7</sup>For a copy of the form used see Appendix D.

<sup>8</sup>Appendix E.      <sup>9</sup>Appendix F.      <sup>10</sup>Appendix G.      <sup>11</sup>Appendix H.

The above fifteen schools were visited during one week, and the desired information was secured. The superintendents or other administrators were consulted each time that the schools were visited while conducting the study. Forms E and F and the sheet of directions described in the previous paragraph were explained and left with the teachers who were making enough use of the television programs that they met the criteria of the study. All teachers who were asked agreed to participate in the study to the extent described previously. After these visits were completed, it seemed that thirteen teachers in ten schools met the criteria and that two teachers in one school were undecided as to their use of television. A teacher in still another school was added later. Three teachers were unable to complete their plans because of changing positions of employment, and one teacher had difficulty in scheduling, leaving ten teachers who completed their plans. Since such a small number of teachers were utilizing the television programs on an organized basis and all who were asked agreed to participate and were within a reasonable driving distance, it was considered desirable to include all ten of these teachers although one teacher was using the programs with high-school boys only. The criterion--that the teachers be selected on the basis of years of teaching experience and the quality of the adult or young-farmer educational program--was, therefore, not invoked. The above ten teachers<sup>12</sup> and

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<sup>12</sup>Appendix I.

the class members of selected classes of vocational agriculture were the basis of the detailed information and data reported in this study.

### Observing a Class in the Participating Schools

An additional letter was written to the teachers of the ten participating schools except one to select dates of visitation to one of the classes taught by the teachers, and a carbon copy of the letter was sent to the superintendents. One class in each of the nine schools was observed once during a period of nine weeks to determine the ways in which the television programs were used in the classes. The observation forms<sup>13</sup> which had been developed previously were filled out, and tape recordings of the class meetings were made.

The tape recording of each class meeting was replayed, studied, and analyzed either on the same day that the class was observed or not later than the following day. The information secured from the tape recording plus comments and interpretations by the investigator were reported on an "Analysis of Tape Recordings" Form<sup>14</sup> which was very similar to the observation form.

### Preparing the Forms and Instruments

Throughout the planning phase and while conducting this study, the concept was held that the television programs

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<sup>13</sup>Appendix J.

<sup>14</sup>Appendix K.

should not be evaluated per se, but that they should be evaluated as an instructional aid which was used as a part of the class meetings, as reported previously. Therefore, two types of evaluation and evaluative instruments seemed desirable: (1) a rating of the television programs by the teachers and class members as to how well they met the needs of the class members and as to the strong-points and limitations of the programs, and (2) the changes in behavior as evidenced by the adoption of approved practices.

Three instruments and a sheet of directions explaining the desired procedures to be used in administering the forms were prepared. Form H<sup>15</sup> consisted of three sheets upon which all class members were to rate the television programs as a part of the class activities. Form I<sup>16</sup>, was to be filled out by the participating teachers as to their rating of the television programs and the reference materials as a part of the class activities. The form was composed of four sheets. Form J<sup>17</sup>, consisting of four slightly different sheets and including as many additional sheets as needed by the respective teachers, was also to be filled out by the teachers as to the farming practices adopted by the farmers. The form was so designed that practices as related to topics with which television programs had been used and had not been used could be reported. In addition, general practices which did not

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<sup>15</sup>Appendix L.

<sup>16</sup>Appendix M.

<sup>17</sup>Appendix N.

fit into either of these two categories could be reported on another section of the form. The directions<sup>18</sup> suggested that the rating form for class members be administered at the last meeting or as close to the last meeting as desirable and that the ratings were to be a composite rating of all programs viewed and should be based upon the programs as a part of the class meetings.

According to the planned research design, these instruments were to be used on a trial basis and revised, based upon weaknesses found in the trial study. However, as all of the schools which met the established criteria were included in this study, this procedure was not possible. Form H was carried to the last class which was visited for observational purposes and was administered by the teacher to the four persons present. The class members were unobtrusively observed while filling out this form, and notes were made concerning the questions asked of the teacher. After the class members had completed filling out the forms, they were questioned about certain statements and phrases which were difficult to interpret, and a record was made of these. All three of the forms and the sheet of directions were submitted the next day to a seminar class of graduate students in vocational education for their reactions and suggestions. All of the suggestions of both groups were minor and consisted

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<sup>18</sup>Appendix O.



largely of recommendations: (1) that key words be underscored, (2) that certain phrases which might be considered biased be reworded, and (3) that the concept, that the evaluation of the programs were to be considered in light of their use as an instructional aid, be pointed out more specifically. These recommendations were incorporated into a revision of the instruments and were mailed to the teachers participating in the study. Because of the flexibility of Form H, it was felt that the changes did not affect the validity or reliability of the ratings given by the personnel in the school where it was first used. The investigator also felt that this meticulous study and revision satisfied the objective, as planned in the research design, of having these instruments used on a trial basis.

#### Preparing for and Conducting the Interview

It was felt that additional information was needed which was not requested on the above forms and which could not be secured satisfactorily by any method other than by an interview with the teachers. For example, it was considered desirable and of value to this study to find out why certain programs: (1) were or were not used, (2) were considered "good" or "poor", and (3) met or failed to meet the needs of teachers and class members. Therefore, since the schools were participating in a pioneering project, a "focused"

interview technique was decided upon as the best method for securing this information along with the investigator's personal observation and recording of class activities described previously.

To those who might feel that a questionnaire is more objective and factual than the interview Parten, and Stoke and Lehman<sup>19</sup> point out the weaknesses of this method of gathering information. Parten feels that the mail schedule advantages over the personal interview are offset mostly by many serious drawbacks and states that "because most people would rather talk than write, questionnaires must be made very interesting to induce responses."<sup>20</sup>

Good, Barr, and Scates, in recognizing the value of the interview, state that many data can be secured by this technique which would not be secured through a distributed reply blank. In addition, the investigator can follow up leads which are provided by the interviewee.<sup>21</sup>

Merton and Kendall favor the focused interview for it enables the investigator to question more deeply into the feelings of the respondent and determine why. They state:

It is not enough for the interviewer to learn that an informant regarded a situation as "unpleasant" . . . He must discover precisely what "unpleasant" denotes .

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<sup>19</sup>Stuart N. Stoke and Harvey C. Lehman, "Influence of Self-Interest Upon Questionnaire Replies," School and Society, 32: 436, September 27, 1930.

<sup>20</sup>Mildred Parten, Surveys, Polls, and Samples (New York: Harper and Brothers, 1950), pp. 95-96.

<sup>21</sup>Good, Barr, and Scates, op. cit., p. 378.

in this context; what further feelings were called into play; . . .<sup>22</sup>

Lazarfeld also favors the use of the "open-end interview" which he identifies by the initials "OI" and states that "we need more detailed knowledge as to what the answers of our respondents mean, on what specific points their opinions are based, in what larger motivational contexts they belong, etc."<sup>23</sup>

The planned interview technique and the situations in the schools being investigated seemed to meet the four characteristics as presented by Merton and Kendall.<sup>24</sup> The type of questions which might have been asked included the structured and the unstructured. In explaining the unstructured question, Merton and Kendall state:

In the focused interview, then, an unstructured question is one which does not fix attention on any specific aspect of the stimulus situation or of the response; it is, so to speak, a blank page to be filled in by the subject.<sup>25</sup>

As to the type of questions to be asked and a method of preparing an interview form, Bingham and Moore suggest that the interviewer should decide upon just what information is wanted. While definite questions are not necessary, general

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<sup>22</sup>Robert K. Merton and Patricia L. Kendall, "The Focused Interview," The American Journal of Sociology, 51:541-542, May, 1946.

<sup>23</sup>Paul F. Lazarfeld, "The Controversy Over Detailed Interviews," The Public Opinion Quarterly, 8:49, Spring, 1944.

<sup>24</sup>Merton and Kendall, op. cit., p. 541.

<sup>25</sup>Ibid., p. 546.

questions should be clearly in mind in order that when an opportunity comes to lead the conversation toward an answer, it will be recognized. This also permits the recognition of the answer and classification of it under the proper heading in the outline.<sup>26</sup>

It was recognized that the way in which the questions were stated was most important and that the danger of bias was imminent. Blankenship, NORC<sup>27</sup>, Cantril, and Bingham and Moore also agree to the importance of the wording of a question and the way in which it is asked. Blankenship describes how to conduct surveys and polls and recommends that questions be worded uniformly.<sup>28</sup> Cantril states that "the extent to which the wording of questions affects the answers obtained depends almost entirely on the degree to which the respondent's mental context is solidly structured."<sup>29</sup>

An effort was made to be as unbiased as possible in preparing the interview schedule and conducting the interviews. The conclusions that had been drawn from the literature and from the experiences with the Project were placed in writing in order that the biases might be recognized. An "open-end"

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<sup>26</sup>Walter V. Bingham and Bruce V. Moore, How to Interview (third revised edition; New York: Harper and Brothers, 1941), p. 35.

<sup>27</sup>Interviewing for NORC, University of Denver (Denver: Colorado: National Opinion Research Center, 1946), p. 17.

<sup>28</sup>Albert B. Blankenship, Consumer and Opinion Research (New York: Harper and Brothers, 1943), p. 25.

<sup>29</sup>Hadley Cantril, Gauging Public Opinion (Princeton, New Jersey: Princeton University Press, 1944), p. 48.

interview schedule was prepared and studied carefully and recognized biases in the wording of questions were omitted. The Augmented Guidance Committee was asked to be particularly watchful for bias as they reviewed the interview schedule.<sup>30</sup>

It was planned in the research design that this instrument would be used on a trial basis and revised as needed, but as explained previously, this was not possible. It was felt that the flexibility of the instrument would permit minor changes, if they proved to be desirable, without affecting its validity and reliability. It was not found necessary to make any changes after the interviews were started.

Letters<sup>31</sup> were written to the participating teachers suggesting a date for the interviews, and the general nature of the desired information was explained. Carbon copies of the letters were sent to the superintendents or other administrators.

The problem and possibilities of injecting bias in the follow-up questions and the interviews were also recognized by the interviewer. Parten points out the possibility of bias and distortion because of the "human equation" factor as she states that most opinion surveyors instruct their interviewers to ask the question exactly as printed on the schedule.<sup>32</sup> Crespi also seems to recognize the dangers of bias and warns those interviewing to be aware of bias in all of their activities, questions, and interview techniques and

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<sup>30</sup>Appendix P.

<sup>31</sup>Appendix Q.

<sup>32</sup>Parten, op. cit., p. 81.

states that "the obvious way to forestall preamble bias is to cut out the preamble."<sup>33</sup> However, he recognizes that some questions demand placement in a context and, therefore, the explanatory statements must be framed so that they do not favor any of the positions regarding the issue. Persons writing for NORC also make the suggestion to interviewers that they "don't discuss issues with respondents. As an unbiased reporter of the opinions of others, you are not at liberty to disclose your own."<sup>34</sup>

The teachers were interviewed in accordance with the dates and times established in the correspondence, and each interview required approximately one and one-half hours. While this amount of time might be considered somewhat short, it should be remembered that some of the information about each school was already known, for example, the ways in which the television set was secured. In starting the interviews, the establishment of rapport was not considered a problem. The investigator was known by most of the teachers prior to the start of the Project. During the development of the Project, he had other occasions to meet and to work with these teachers. He had also written them concerning the development of this study and had visited all classes except one<sup>35</sup> previously. From the beginning the teachers had been assured that complete anonymity would be maintained.

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<sup>33</sup>Leo P. Crespi, "The Interview Effect in Polling," The Public Opinion Quarterly, 12:105, Spring, 1948.

<sup>34</sup>Interviewing for NORC, op. cit., p. 13.

<sup>35</sup>School I.

Generally, the interviewer attempted to play the role recommended by Macoby and Macoby that "ideally, then the interviewer should appear to be (to some degree) an 'expert' seeking additional information from an informed person who has detailed knowledge or opinions to contribute."<sup>36</sup> A tape recording was made of each interview except one<sup>37</sup>, and the key points of all statements were recorded under the proper questions. This information was re-read to each teacher at the close of the interview to determine its accuracy. Even if the replies had not been recorded verbatim or to those who might criticize the one situation where the interview was not recorded verbatim, the personnel writing for NORC state:

You don't need a knowledge of shorthand to record everything the respondent says in reply to a free-answer question. In the first place, few of the answers you receive, even after probing, will be longer than one or two sentences. In the second place, only a few persons talk so fast that you have trouble keeping up with them.<sup>38</sup>

The information written in outline form and the tape recordings were used as the basis for writing a complete report of several long-hand pages on each interview. In no situation did more than one and one-half hours lapse between the completion of the interview and the beginning of the writing of the complete

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<sup>36</sup>Eleanor E. Macoby and Nathan Macoby, "The Interview: A Tool of Social Science," Handbook of Social Psychology, Vol. I, Gardner Lindzey, editor (Cambridge, Massachusetts: Addison-Wesley Publishing Company, Inc., 1954), p. 463.

<sup>37</sup>This interview, with the teacher of School C, was cancelled on the date first planned. As the teacher was coming to a meeting at the College on a later date, the interview was planned for and conducted then to save the interviewer a two hundred-mile drive. The available time and place of the interview prevented the making of a tape recording.

<sup>38</sup>Interviewing for NORC, op. cit., p. 50.

report. The narrative report of each interview was completed before it was necessary to conduct another interview.

In each case, and more especially during the first few cases, the tape recordings were first replayed and studied by both the investigator and his wife for leading or biased questions, "putting words into the interviewee's mouth," and the expressions of opinions and the giving of information by the interviewer. No claim is made that all bias was removed although, as explained previously, all reasonable effort was exerted to make the interviews as bias free as possible. Even had the interviews been practiced before, "experts" to remove all possible bias, there was the possibility that the biases of these "experts" might have affected the selected interview pattern.

#### Securing Data on the Forms and Instruments

As reported previously, it was believed from the beginning of the Project that the programs would be more suitable and desirable for adult and young-farmer classes than for high-school boys enrolled in vocational agriculture. Therefore, the major emphasis in the study was placed upon the use of the programs with the former groups. However, because of the small number of participating teachers and the fact that three teachers did use these programs with high-school classes, it was considered desirable to include the ratings



on the programs by these pupils. These data might also provide some indications as to whether or not the programs were less suitable for these pupils than for the adult and young farmers, although this was not one of the original purposes of the study.

Four teachers submitted Form E on twenty-two individual television programs which were used by them with nine class meetings of high-school boys and with thirteen class meetings of adult and young-farmers.

Form H was submitted by fifty-seven high-school boys from the three schools using the programs with this group. The classes in two of these schools were combined junior-senior classes, and the pupils in the other school included all who were enrolled in vocational agriculture. Form H was also submitted by 70 adult and young-farmers who were enrolled in five adult classes and three young-farmer classes in seven schools. None of these forms was filled out by the class members in two schools. One teacher taught both an adult and young-farmer class in his school.

All teachers submitted Form I which was an overall rating of the television programs and reference materials, and the ratings were based upon their combined uses of these with all classes: adult, young-farmer, and high-school, where applicable.

Six of the teachers submitted Form J which included the farming practices adopted by the class members in five adult-

farmer classes and two young-farmer classes. One teacher only used the programs with the high-school classes, and the other three teachers stated that very few, if any, practices were adopted by the class members and also that they had no way of knowing which practices were adopted.

The data which were largely secured by observing the classes and by interviewing the teachers were recorded and described in a narrative report on each school. These are reported in Chapter V.

These data were also grouped and summarized to point out the differences and similarities in the activities and practices used in the various schools. Activities and practices were utilized in some schools, and situations existed which were specific to one school only. It was also deemed desirable to list the practices which were used in organizing the classes and in instructing when the television programs and prepared reference materials were used. In addition, the data which were secured by the forms and instruments were also summarized and analyzed. Ratings of the programs, reported limitations, and recommendations for presenting future programs were compared. The adoption of farming practices related to topics with which television programs were and were not used were also compared. These summarized and analyzed data and the more detailed description of the methodology of the analysis and comparison are presented in Chapter VI.

### Scope of Study

Because of the uniqueness of this Project and the fact that, as far as the writer had been able to ascertain, this was the first time that a project of this type had been undertaken, there were many facets that could have been investigated. However, as other personnel were concerned with certain aspects of the Project and all of the facets could not be included in a study of this scope, the study was only concerned with the following:

1. The study included the activities of the ten participating teachers and the data which were secured from them and the class members in selected classes. However, some limited information which was considered pertinent was secured from other teachers during the visitations that were made to select these participating teachers. This information included only the physical limitation which prevented their using the television programs.

2. The study included only the data which were based upon the use of programs telecast from October 6, 1954, to May 11, 1955, as a part of the Project. However, other programs were used by the teachers, and this fact is reported in the appropriate parts of this study.

3. Various teachers and class members viewed and used different television programs in varying numbers. The data reported on the ratings forms were, therefore, limited to these selected programs.

4. The approved practices which were reported as "partially or completely in use since class started" or "have decided to use practice" were limited to those initiated from October 6, 1954, to the time that Form J was submitted (approximately May 1 to June 15, 1955).

5. The hypothesis was held from the beginning that the type of programs and subject matter that were to be presented would be more desirable and suitable for adult and young-farmer class members than for high-school pupils. Therefore, the data that were secured from the high-school pupils were limited to the Form H's which were filled out by these pupils and the Form E's which were completed by the teachers on the programs used with this group. However, the fact that programs were used with these boys and that forms were completed by them is reported in the narrative presentations on each school in Chapter V.

#### Limitations of the Study

The write acknowledges certain limitations to this study. As one of the criteria upon which the teachers were selected was that they were using the television programs, the number of teachers who participated was rather small. It seemed reasonable to conclude that the newness of the Project was responsible for the lack of the use of the programs by some of the teachers. In addition, it is known from the information

that was secured during visits to certain schools that the following factors caused other teachers not to use the programs: (1) the programs were telecast by an UHF station in one area, (2) some schools were located beyond the distance of the broadcast signal, and (3) the hour or the day of the telecasts did not coincide with the hour or the day that the classes met.

The number of programs and the programs used in the various schools differed. Therefore, the data which were secured in this study were based upon different programs and different total numbers of programs.

As no forms were available which were suitable for this study, they had to be designed by the investigator. Therefore, the study was limited by any weaknesses that were present in the various forms, and the validity and reliability of the forms were not determined. Many items required a subjective evaluation by the respondents and were subject to their interpretations of the items and terms and any biases which these persons may have had.

The rating forms which were filled out by the teachers and class members required an overall rating of the programs viewed and used. The respondents' ratings necessarily were based upon recall, and the last program viewed was probably more firmly entrenched in their minds. Even within a given school, the class members differed as to the number of programs

viewed. One school did not use the programs on an organized basis during the class meetings, but the class members had to view the programs independently away from the school.

In addition, a smaller number of respondents submitted the rating forms than the number of respondents enrolled in the classes. These forms were filled out near the end of the series of class meetings by the adult and young farmers in some of the schools. In other schools the teacher had Form H filled out by some of the farmers during individual farm visits. Several of the Form H's had one or more items which were not rated by the respondents. The data which were submitted on the adoption of approved practices were also secured objectively near the end of the class meetings by some teachers, whereas others secured the information during individual farm visits. The reporting of these practices by the farmers were largely dependent on recall by them. Therefore, there was a possibility that the information submitted on these forms and the ratings were not representative of all class members enrolled. The data submitted by the class members were also subject to the explanations and directions given by the teachers in administering the form although detailed directions were sent along with the forms to the teachers. The investigator was present when the forms were administered to one class and considered the explanation and reasons given to the respondents to be somewhat biased.

Only four teachers submitted Form E on twenty-two individual programs, and only six teachers reported the adoption of any approved practices. Again, there was a possibility that these data were not completely representative of all teachers and all adult and young farmers.

Because of the nature of the research design there was a lack of exactness in the way in which many of the data could be organized. Generally, the scope and nature of the study were rather broad which also limited the exactness and definiteness of analyzing and reporting the data. However, the type of research design used was considered desirable as this study was a pioneer investigation of the use of educational television in vocational agriculture.

Another limiting factor was that the time between the teaching of certain approved practices and the collection of the information on their adoption was relatively short. It was to be expected that farmers could not adopt some of the more complex practices in the time period available. Perhaps, if this study were to be followed up in later years, additional evidence of the adoption of practices would be secured.

Any weaknesses which were inherently present in the interview and case-study techniques were further limitations. As this method of investigation was selected as being most desirable, only limited statistical treatment could be given to the data because of the many variables which were present.

As the Project was new, many changes and variables were in evidence and these could not be controlled. Further, no control groups were utilized. The small number of teachers involved would also have limited the statistical analysis that might have been made of these data. However, it is the belief of the investigator that the major purposes for conducting the study could not have been accomplished if all of the data had been secured in such a way that they could have been quantified and tested statistically for significance.

Perhaps, one of the major limitations was the use of the interview technique. Other investigators might have organized the interview schedule and reported the interview data differently. The interview data reported by the teachers were of necessity based to some extent upon recall and were subject to the understanding and interpretations given to certain statements by the investigator. The organization, analysis, and reporting of the data were subject to the treatment given to them by the writer. There is the possibility that some of his biases were present in the interview and in the organization and analysis of all data, findings, and conclusions. However, as reported previously, the investigator labored assiduously in trying to keep out as much bias as possible.

The findings and conclusions have not been interpreted in a cause and effect relationship. The data that were reported were probably caused by many interacting factors, some



of which were not even reported in the study. The results should not be necessarily interpreted as being caused directly by the use of the television programs and reference materials. Certainly, there was probably a diversity of differences in the abilities of the participating teachers, and no consideration was given to these differences in analyzing the data.

Finally, this study included ten teachers of vocational agriculture in Michigan and their class members in selected classes of vocational agriculture. Any interpretation of findings, conclusions, and recommendations are necessarily based upon the findings of these teachers and class members. Consequently, these data should be interpreted in light of this limitation. It is possible that the findings of this study have application to other teachers of vocational agriculture, but they should be used with caution.

Other limitations as related to specific items, activities, and the way in which the study was conducted are presented at appropriate places in the context.

### Assumptions

It was necessary that certain assumptions be made in order to establish a frame of reference upon which this study might be based. These assumptions were:

1. That classes of systematic instruction for adult and young farmers were desirable and a responsibility of

public schools under the supervision of the local teachers of vocational agriculture.

2. That instruction could be evaluated most effectively by determining the amount of understanding developed and the degree to which the individuals continued their learning on the farms and put their knowledge into practice.

3. That the evaluation of the Project should be based upon the entire series of class meetings of which the televised programs with the concomitant reference materials were a part and were used as instructional aids and not just on the television programs per se.

4. That the most effective way of evaluating the Project was to determine the degree and extent to which the television programs fitted into the instructional programs and met the needs of the teachers and class members.

5. That the adoption of approved practices by farmers was desirable, where applicable.

6. That the television series and programs as planned were more suitable to the needs, knowledge-levels, and age-levels of the adult and young farmers than the high-school boys in vocational agriculture.

7. That the items and the information which were requested on the various forms were those which were the most desirable for accomplishing the purposes of this study and that they satisfactorily measured what the programs should be expected to accomplish.

8. That the data which were reported by the teachers and class members either on the forms, during the interviews, or informally were valid, reliable, and correct to the best of their knowledge and beliefs.

9. That the problem-solving method, as generally understood and used by educators in agricultural education and teachers of vocational agriculture, was presently the most effective methodology for teaching vocational agriculture.

10. That the research design, as planned and used, was the most desirable method for accomplishing the stated and implied purposes of this investigation.

11. That the point-values assigned to selected items on Forms H and I were satisfactory and provided accurate results.

12. That the use of an Augmented Guidance Committee was desirable and that these persons were well-qualified to advise as to the research design and the forms and instruments.

Other assumptions as related to specific situations and activities are presented at appropriate points in the context.

## CHAPTER IV

### REVIEW OF LITERATURE

The purpose of this chapter is to present a review of selected research and literature which were related to this investigation. The research which seemed more important for this study is reported at the beginning of each of the following sections and in greater length than those of lesser importance. The annotated bibliographies of studies in agricultural education which were reported in publications entitled Summaries of Studies in Agricultural Education<sup>1</sup> were reviewed. However, no studies were reported on any phase of educational television in these Summaries.

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<sup>1</sup>Summaries of Studies in Agricultural Education, U. S. Office of Education, Vocational Education Bulletin No. 180, Agricultural Series No. 18 (Washington: U. S. Government Printing Office, 1935), 196 pp.; Supplement No. 1 (Danville, Illinois: Interstate Printers and Publishers, 1943), 199 pp.; Supplement No. 2, U. S. Office of Education, Vocational Division Bulletin No. 237, Agricultural Series No. 57 (Washington: U. S. Government Printing Office, 1948), 120 pp.; Supplement No. 3, U. S. Office of Education, Vocational Division Bulletin No. 242, Agricultural Series No. 59 (Washington: U. S. Government Printing Office, 1950), 61 pp.; Supplement No. 4, U. S. Office of Education, Vocational Division Bulletin No. 246, Agricultural Series No. 61 (Washington: U. S. Government Printing Office, 1951), 48 pp.; Supplement No. 5, U. S. Office of Education, Vocational Division Bulletin No. 248, Agricultural Series No. 62 (Washington: U. S. Government Printing Office, 1952), 62 pp.; Supplement No. 6, U. S. Department of Health, Education, and Welfare, Vocational Division Bulletin No. 251, Agricultural Series No. 63 (Washington: U. S. Government Printing Office, 1953), 100 pp.; Supplement No. 7, U. S. Department of Health, Education, and Welfare, Vocational Division Bulletin No. 253, Agricultural Series No. 64 (Washington: U. S. Government Printing Office, 1954), 75 pp.; Supplement No. 8, U. S. Department of Health, Education, and Welfare, Vocational Division Bulletin No. 256, Agricultural Series No. 66 (Washington: U. S. Government Printing Office, 1955), 108 pp.

The first section of this chapter includes the research on educational television. The categorization of these studies is explained in the introductory part of the section. The studies are followed by a summary of the research on educational television.

The research on instructional films is reported in the second section which also includes a summarization of this research.

A final section includes a listing of the unique aspects of the Television Project and of this investigation.

#### Research on Educational Television

A large number of books, articles, and miscellaneous publications have been written by educators and specialists in the field of communications concerning the use of educational television, and many opinions have been expressed by these persons.<sup>2</sup> Seemingly, more materials were written on this subject from 1950 to 1953 than at any other period.

On March 22, 1951, the Federal Communications Commission "proposed that 209 of the television frequencies be tentatively set aside for establishment of non-commercial education."<sup>3</sup> Eight hundred thirty-eight schools, colleges, and educational organizations filed statements with the Commission in support

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<sup>2</sup>Carroll V. Newsom (ed.), A Television Policy for Education (Washington: American Council on Education, 1952), 265 pp.

<sup>3</sup>Harold E. Wigren, "Educational Television - Some Suggestions," Teachers College Record, 54:23, October, 1952, p. 24.

of the educational reservations.<sup>4</sup> The above activities were, perhaps, largely responsible for a large majority of the publications about television.

A consensus of the major thoughts and statements are subsumed in the following<sup>5</sup>:

1. The educators are responsible for providing a better way of life and television can help speed up this objective.

2. Television is a medium of great impact and importance for educational purposes.

3. Now that the medium is available for education, what is going to be done about it?

4. Programs can be designed for adult education, youth education, extension courses, credit courses, and "captive audiences."

5. Television should have first priority in the thinking and activities of educators and educational organizations.

6. The medium cannot do the complete instructional job but should be an aid to class instruction, adapted by the good teacher to the needs of the students.

7. The number of persons who may be reached is very large.

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<sup>4</sup>Ibid.

<sup>5</sup>Newsom, op. cit., 265 pp.; the Twentieth to Twenty-Third Yearbooks (1950-1953) of the Institute for Education by Radio; O. Joe Olson (ed.), Education on the Air (Columbus, Ohio: Ohio State University Press); various articles in The American School Board Journal, Adult Education, Higher Education, School and Society, The Elementary School Journal, and The Journal of the Association for Education by Radio and Television magazines from 1951-1954.

8. Since either the televised programs may be the primary source with the classroom instruction built around this source, or the programs may be prepared to fit into a previously established methodology and subject-matter area, which shall it be?

9. Television may be used for telecasting educational programs to the general public, for telecasting special events to school groups, and for telecasting specially prepared programs for school groups.

10. Educational television programs will be viewed by people without any organized or promotional activities.

11. The medium is the solution to the problems involved in educating the masses and in making education a continuous process throughout life.

Most of the formal studies concerning television were designed to determine the viewing habits of audiences.<sup>6</sup> Comparatively speaking, very little research has been conducted on the use and evaluation of educational television. The research which has been reported can be categorized into these five groups:

1. Comparisons of the television medium with other methods of training large numbers of Armed Forces personnel--these studies were the most formal, with controlled variables, that were reported.

2. Doctoral dissertations by Hard, McKune, and Wigren.

3. The use of television for the dissemination of information to a mass audience by the Cooperative Extension Service.

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<sup>6</sup>J. D. Finn, "Television and Education: A Review of Research," Audio-Visual Communication Review, 1:106, Spring, 1953.

4. Telecourses at Western Reserve University and the University of Houston.

5. The actual use of television where the assumption seemed to have been made that it was effective and the studies were made to determine ways of using it more effectively --for example, the Kansas Medical School, Philadelphia Public Schools, Seattle Public Schools, Michigan State College, Los Angeles Public Schools, and New Jersey Teachers College at Montclair.<sup>7</sup>

#### Studies Conducted by Armed Forces

A research project was conducted by the Special Devices Center, U. S. Navy to compare the effectiveness of teaching officers and enlisted men by television, television recordings, and regular classroom procedures. Personnel at three Navy stations each were taught by these three methods, and the officers and enlisted men were in separate groups and were taught a different course. The same lesson plans were used for all methods of instruction, the groups were equated statistically, and a pretest and a post-test were administered. It was found that: (1) "80 percent of comparisons showed television as good as or better than local instructors,"<sup>8</sup> (2) "75 percent

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<sup>7</sup> These research studies are documented in the next section when each study is individually reported.

<sup>8</sup> Training by Television - The Comparative Effectiveness of Instruction by Television, Television Recordings, and Conventional Classroom Procedures, U. S. Navy, Human Engineering Project 20-E-5a, SDC Report 476-02-2 (Port Washington, L. I., New York: Special Devices Center, [n. d.]), p. 15.



of comparisons showed recordings as good as or better than local instructors,"<sup>9</sup> and (3) "84 percent of comparisons showed recordings as good as television."<sup>10</sup>

As to what makes the difference between poor and good television programs, it was found that: (1) direct narration was effective, (2) animated films seemed to be effective, and (3) the poorest television lessons were programs which spent much time dramatizing the lesson material while the instructor, describing the action, was not shown on the screen.

The viewing personnel found three programs too theoretical and insufficiently practical and three other programs too long. Small but significant numbers criticized insufficient use of visual aids and too little opportunity for asking questions.

The evaluation staff criticized certain production techniques: (1) the camera angles, (2) changing the screen presentation, (3) angle shots of blackboards and charts, (4) too little time on the charts and models, (5) too little attention on the density of words or new ideas, and (6) the conveying of meaning was often times overlooked. They further concluded that the television picture of a speaker is better than the voice alone; but when showing a model or mechanism, it is better to show it rather than the instructor.<sup>11</sup>

The Naval Advisory Group recommended that more and better visual aids should be used and that better instructors should

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<sup>9</sup>Ibid., p. 16.

<sup>10</sup>Ibid., p. 17.

<sup>11</sup>Ibid., p. 21.

be selected who were free from peculiarities in speech and annoying mannerisms.<sup>12</sup>

The study did not present any information as to the proficiency of the instructors using the different methods, whether the better instructors were used on the television programs, whether the televised programs were rehearsed, or what visual aids the classroom instructor had used in comparison with those used on the television programs. The statement was made that "traditional" and "lecture" procedures were used by the classroom instructors, but the explanation did not clearly state the method of presentation that was used by this group. The pretest and post-test consisted of multiple-choice questions which only measured the increase in the amount of factual information. No attempt was made to determine the changes in behavior as evidenced by the adoption of recommended procedures.

Another study was conducted by the Special Devices Center to determine the amount of learning and retention from viewing televised programs. Three thousand reservists in an unselected sample, ranging from Private to Colonel, in 160 groups viewed eight television programs.<sup>13</sup> They were pre-tested and post-tested with three groups of questions. A special staff prepared each lesson and professional actors were used.

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<sup>12</sup>Ibid., pp. 21-22.

<sup>13</sup>Training by Television - A Study in Learning and Retention, U. S. Navy, Human Engineering Project 20-E-5a, SDC Report 476-02-3 (Port Washington, L. I., New York: Special Devices Center, [n.d.]), 24 pp.

Officers had a gradual loss after six weeks but retained 85 percent of the material learned, and the enlisted men had a 65 percent retention after a lapse of six weeks. The percentage gains in answers based upon treatment were: (1) narration alone--21.8, (2) narration plus meaningful film--34.2, (3) narration plus atmospheric film--14, (4) narration with drama--28.5, and (5) drama alone--11.5. The percentage gains based upon how the topics were treated were: (1) explicit--19.2, (2) sketchy--2.1, and (3) not covered--2.1.

The following criticisms were made concerning the television programs: (1) the visual aids in the first five programs needed improvement; (2) there was too much material in a one-hour lesson; (3) the purpose of the course was not clear, and the programs became a combination of an orientation and technical course; and (4) too many topics were covered, the maps and charts were hard to read, and the lessons were presented too rapidly.

The evaluation staff, in studying the differences between good and poor teaching, concluded that for the best teaching: (1) it should be clear and direct, (2) visual aids should be used, (3) the lesson and materials need to be presented in logical order, (4) the professional writers need the help of psycho-educational specialists for they tend to lose sight of facts and ideas which are to be taught, and (5) "filler" materials need to be removed as they interfere with the lesson materials.

The authors drew three conclusions which were pertinent to the Television Project: (1) more than half of the reservists preferred television to conventional classroom procedures and said that the programs were more instructive than the average training films, (2) the most effective teaching methods used were narrative combined with drama or films that explained and amplified what the narrator was talking about, and (3) the amount of learning was directly related to the explicitness of the treatment.

The Quartermaster Training Command conducted a study to determine, in part, the effectiveness of instruction via television as compared to regular classroom instruction.<sup>14</sup> The experiment consisted of sixty ROTC Quartermaster students in the control group who were taught in the classroom, forty-seven students in the experimental group who were taught by television, and ten students who were studio participants. Forty-two known reservists also participated although five hundred reservists of all ranks, branches, and services were invited to participate. Four programs were presented on four successive days and the same instructor, methods of instruction, scripts, and audio-visual aids were used with both the control and experimental groups. However, the television groups were shown a two to three-minute introductory film on

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<sup>14</sup>Quartermaster Training Command Educational-Television Study, Quartermaster Training Command, Army - Fort Lee, Va. - 2416-14-Jun-54-400 (Fort Lee, Virginia: Quartermaster School, 1954), 5 pp. with Annexes.

the first and last days which showed soldiers in combat feeding under extreme, cold-weather conditions. The instructor was inexperienced with the television medium and used four students in the studio to give himself a feeling of security. A thirty-two-item objective test was administered on the Monday following the last program on Thursday.

The average score of the classroom (control) group was 27.7 or 86.7 percent and the television (experimental) group's score was 26.5 or 82.8 percent. When the studio-participating students' scores were averaged with the experimental group scores, the percentage increased to 87.8 percent. As reported in the study, the "academic percentile rank averages" of both groups were later computed, and the television group's average of 40.47 correlated  $+ .11$  with the scores on the test; the classroom group's "percentile rank average" of 44.95 correlated  $+ .01$  with their test scores. As would be expected by examining the above figures, there were no significant differences between the scores of the two groups. A large majority considered the television programs about the same or more interesting and effective than classroom methods and rated the programs as generally "very good", with a smaller number of students rating the programs as either "superior" or "fair". The findings of this study do not agree with those of the Special Devices Center, U. S. Navy.

The investigators of this experiment drew three conclusions which also seemed pertinent to the Television Project:

(1) the effectiveness of instruction by television seemed to be equal to classroom methods [It should be recognized that this effectiveness, however, was based upon the immediate learning of factual information]; (2) the television programs were at least equal to or more interesting than classroom instruction, and one hour was the maximum recommended viewing time; and (3) instructors needed to know simple but important techniques and the differences in instructing by television. Certain recognized weaknesses included the following:

(1) the instructor at times moved too quickly; (2) he did not allow sufficient time for note-taking and needed to get used to the camera being close to him and expect certain activities to go wrong; and (3) some printing was too small, incorrect colors were used, and there was a "halo" effect when black and white colors were used together.

In a three-month test of trainees in the U. S. Army Signal Corps at Camp Gordon, Georgia, the Human Resources Research Office of George Washington University found that:

(1) Normal instruction time in one electronics course was cut in half when the course was presented on TV with visual gimmicks, e. g., close-ups, cutaway models; (2) TV students remembered what they had learned as well as and often better than, students taught by regular classroom instructors; and (3) men with low I. Q.'s benefited most, did far better on examinations than their counterparts in regular classes. <sup>15</sup>

No information was given about the research design, whether or not the compared groups were equated, or how the regular classes were taught.

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<sup>15</sup>Time, 65:72, March 28, 1955.

The findings of this study and the Special Devices Center Studies--namely, that personnel learn more, remember it better, and require less time for instruction when television is used than when regular classroom procedures are used--did not seem consistent with the findings of communications research, namely, that "face-to-face" contact was more effective than indirect contact.

### Doctoral Dissertations

McKune reported his study in which a series of television programs on guidance and counseling were telecast by Iowa State College to high-school pupils. He used two experiments to evaluate the effectiveness of these programs:

The first experiment was a kind of measure of delayed recall. Data for the study were obtained from students in consolidated and small-town high schools. The subjects were divided into three general groups. The first, or Group A, was composed of 126 students who had viewed all of the "Guideposts" telecasts, the live performances used for this study; the second, or Group B, 146 students who had not viewed "Guideposts" but had watched a guidance program of another type over the same station; . . . the third, or Group C, 144 students who had no access to the program being tested or other televised guidance series.<sup>16</sup>

The primary tool used in the evaluation was a sixty-one item, multiple-choice test which, as it was administered, was recognized by the author as having certain weaknesses. The test scores were treated statistically to determine if there was

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<sup>16</sup>Lawrence E. McKune, "Some Problems in Writing, Production, and Evaluation of Television Programs for In-Class Viewing" (unpublished Doctor's dissertation, The State University of Iowa, Iowa City, 1953), p. 37.

a significant difference. "Since these data yield no statistically significant difference and the nature of the experiment was exploratory, no further interpretation was made."<sup>17</sup>

A second experiment was conducted in an attempt to learn something about the immediate recall of viewers of the "Guideposts" programs. Pretests were administered to sixty-seven students prior to the viewing of six kinescoped recordings, and post-tests were administered immediately thereafter. McKune reported that "results show that for each of six kinescopes the mean gain in test score was greater than can be attributed to chance variations in testing."<sup>18</sup>

Hard conducted a study to measure the effectiveness of the use of three definite quantities of scientific concepts. A television program was produced, and a kinescoped recording was made and shown to matched groups of freshmen divided into three segments. The first segments were shown fifteen terms in fifteen minutes, the second segments were shown twenty terms in nineteen minutes, and the third segments were shown twenty-five terms in twenty-five minutes. Each of the experimental groups had the above terms superimposed upon the kinescoped recording.<sup>19</sup>

An immediate "recall" test was administered after the recordings were viewed. Three minutes, four minutes, and

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<sup>17</sup>Ibid., p. 39.

<sup>18</sup>Ibid., p. 41.

<sup>19</sup>C. Gustav Hard, "An Adaptation of a Course for Television Teaching of Horticulture" (unpublished Doctor's dissertation, Michigan State College, East Lansing, 1954), 109 pp.



five minutes were allowed the fifteen-term, twenty-term, and twenty-five-term segments respectively. A "comperhensive" test in which the students were asked to select the term which best fitted the explanation or definition was conducted immediately after the "recall" test. The segments were provided nine, thirteen, and seventeen minutes respectively to complete the examination. Hard found that superimposition did not alter significantly the percentage of terms comprehended or recalled and concluded that superimpositions were not worthwhile.

The author did not explain the technique that was used to match the groups, nor the basis for deciding upon the additional time that was permitted the groups which were shown more terms. His findings and conclusions were contrary to most of the research and accepted conclusions of communication-research specialists, namely, that superimpositions are significant for learning and retention and are worthwhile.

Wigren, in another doctoral dissertation, investigated the uses of educational television and made recommendations concerning ways in which it might be used effectively. He states:

Specifically, . . . , programs need: to involve the learners more in what is being taught; to give the learners the opportunity to participate in as many ways as possible; to be careful not to teach too much at one time; to remember that proper pacing is important when presenting information; to build on the preceding one, thus making it possible to relate the present telecast to what has gone on before or to

what is to come later; and to suggest ways in which the learner can keep right on learning when the program is over.<sup>20</sup>

In helping the viewer to understand the program content and in making it more meaningful to him, Wigren recommends:

First, cover only a few points on any one program . . . Second, choose vocabulary wisely and in terms of the particular audience to whom the program is aimed. . . Third, start with what the viewer knows and move out to what he does not know. . . Fourth, make use of summarizations. . .<sup>21</sup>

#### Studies Conducted by Personnel in the Cooperative Extension Service

A study was conducted by the United States Department of Agriculture to determine the effectiveness of an eleven-program series of twelve-minute demonstrations entitled, "Let's Make a Dress."<sup>22</sup> Considering all eleven programs in the series, the average "attendance" was 40 percent of the total audience. Seven out of eight women said that they learned new things about dress making, and eight in ten reported that the demonstrations helped with things most needed.

The personal interview data indicated that the television demonstrations, supplemented by a bulletin and printed materials, were highly effective in teaching dress-making ideas

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<sup>20</sup>Harold E. Wigren, "Planning for the Development of Educational Television in Houston, Texas" (unpublished Doctor's dissertation, Teachers College, Columbia University, New York City, 1953), pp. 82-83.

<sup>21</sup>Ibid., pp. 46-48.

<sup>22</sup>Meredith C. Wilson and Edward O. Moe, Effectiveness of Television in Teaching Sewing Practices, U. S. Department of Agriculture, Extension Service Circular No. 466 (Washington: U. S. Government Printing Office, 1951), 35 pp.

and improved practices. The data further pointed out the importance of a bulletin or other printed matter as a supplement to the television demonstrations. The audience was very strongly of the opinion that twelve-minute demonstrations were of insufficient length for optimum results. One practice which was learned had actually been used by 46.5 percent of the viewers, and the percentage using practices increased from 31.6 percent for those viewing one to three programs to 59.4 percent for those viewing seven to eleven programs. Almost 98 percent of the women interviewed wanted more television programs on sewing. The investigators concluded that the high interest of this limited audience in more television programs on sewing indicated the potentialities of television as an effective medium for conducting an adult-education program.

Gauger reported a study in which four programs on corn production were televised on four consecutive Tuesday nights on WOI-TV.<sup>23</sup> Each county was urged to develop its own plans for coordinating the television program with local county programs. The project was promoted through the use of news articles, radio, circular letters, publication packets, and contacts with groups. After each program a discussion was held in which viewers gave their reactions to the television program and the information which was telecast. An opinionnaire

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<sup>23</sup>C. J. Gauger, "Evaluation of Results of the 'Corn Production' TV Program in Story County, Iowa," Report ST-493 (Nevada, Iowa, [n. d.]), 27 pp. (Duplicated by Ditto process.)

type of evaluation sheet was mailed to the viewers to be filled out and returned, along with an invitation to request pertinent bulletins. A "Final Evaluation Blank" was sent to all persons who had sent in one or more reports on individual shows. The form asked for such information as the suitability of the time of the telecast, plans for using the ideas presented, problems, values of the series, and suggestions.

Responses were made by 226 individuals who returned 445 reports on the individual television shows as well as 152 final evaluations. Gauger presented seven conclusions which seemed pertinent to the Television Project for they embodied certain concepts which seemed to represent a consensus of opinion of the persons involved with the Project:

1. Television is unquestionably an effective way of getting new ideas to farm people. . . .
2. It would seem to be most effective as a motivating device rather than one which we can depend on to do the entire job of teaching new techniques.
3. The people who answered our questionnaire felt definitely that follow-up meetings and publications are important to getting the most out of the programs.
- . . . . .
5. It you wish a coordinated program, then it is essential to bring together all the folks involved at the planning stage. . . .
6. It would appear, based upon our limited experience in Story County, that discussion meetings can best be set-up as part of the regular programs of existing groups. . . .
7. It is essential that planning be done well in advance of programs so that coordination can be accomplished.
8. We cannot sit idly by with expectations that television will do the job for us. . . . Achieving its full potential challenges the best efforts, and creative ideas of all agricultural educators. . . .<sup>24</sup>

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<sup>24</sup>Ibid., pp. 20-21.

In a study by Williams at Iowa State College an attempt was made to determine the effectiveness of television as a medium for teaching clothing construction. Nine programs entitled "Make a Dress, TV" were telecast to four viewing groups: Group A received television only; Group B received television and printed materials; Group C received television and assistance by the home demonstration agent; and Group D received television, printed materials, and assistance by the home demonstration agent.<sup>25</sup>

She found from the data, collected by personal interview, that better knowledge was received concerning clothing construction processes by a sizable number of women. There appeared to be little difference in the results obtained by using the four different methods. Thirty-five percent completed the entire series and the number of viewers gradually decreased. Group D viewed more programs than any other group.

Williams concluded that a shorter series which included less subject matter might cause more women to participate in similar programs in the future. Most of the women considered a thirty-minute program to be of a satisfactory length.

Mulder conducted a study in which four television programs were televised to seventeen viewing groups consisting of 110 women in six counties on the subject of "Understanding

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<sup>25</sup>Elsie K. Williams, "Effectiveness of Television as a Medium for Clothing Construction" (unpublished Master's thesis, Iowa State College, Ames, 1953).

Your Children."<sup>26</sup> She found that sixteen women completed the twenty-four item pretest and post-test with a 1 percent increase in the mean scores on the post-test. While the data were not tested statistically, cursory examination would indicate that they were not significant.

She concluded that: (1) the preconditioning period was a crucial point in the success of the viewing group method, and during this period the purpose and scope of the project must be understood by all those interested in organizing a viewing group; (2) under more favorable conditions it appeared that the viewing group method had potentiality for extension teaching; and (3) the extension specialist would be able to reach more people in less time and travel and with less cost, and a segment of the population not ordinarily available through normal extension channels could be reached by television.

Davis reported a study conducted at Iowa State College in February 1952 in which 800 women in Franklin County, Iowa were organized into "coffee groups" to view a series of home economics television programs entitled "Sizing Up Your Windows."<sup>27</sup> No evaluative information concerning the effectiveness of the series was presented in the report.

A television audience survey was conducted by McAllister and Whitcomb at Wilmington, Delaware to determine the interest

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<sup>26</sup> Dorothy Mulder, "An Experiment in the Use of Television for Organized Viewing Groups" (unpublished Master's thesis, Michigan State College, East Lansing, 1954), 97 pp.

<sup>27</sup> James Davis, "A Report of Four Educational Television Programs," Iowa State College, Ames: WOI-TV, 1952, cited by Dorothy Mulder, Ibid., p. 13.

in a series of television lessons on homemaking subjects.<sup>28</sup> Sixty percent of the women interviewed expressed an interest and listed home furnishings as their first choice, followed by child care and foods next in order of preference. The evening hours were suggested as the most suitable time, and the hours from one to three o'clock in the afternoon was their next choice. A program of thirty-minutes length was suggested by a majority of the interviewees.

#### Research on Telecourses Conducted by Universities

In a study at the University of Houston three groups of students were given a course in introductory psychology. Group A viewed the course by television and attended a seminar at the campus, based upon the assigned readings and television programs; Group B viewed the televised programs and completed home-study problems in a manual; Group C received the regular classroom instruction. The mean scores on the same final examination were: (1) Group A--99.04, (2) Group B--98.00, and (3) Group C--96.11.<sup>29</sup> The differences in the mean scores were not statistically significant; and as nothing was reported concerning the equating of the groups, it appeared that the groups were selected, based upon their enrollment in a given section of the course, without consideration of individual or group differences.

<sup>28</sup>W. T. McAllister and I. R. Whitcomb, TV for Delaware Homemakers, University of Delaware, Special Circular Number 3, Newark: Cooperative Extension Service, 1951, cited by Dorothy Mulder, Ibid., p. 12.

<sup>29</sup>Richard I. Evans, "Summary of Research Findings Concerning Educational TV at the University of Houston," Houston: University of Houston, 1954, cited by Dorothy Mulder, Ibid., p. 13.

Millis of Western Reserve University reported the results of a telecourse in general psychology which was presented on the Cleveland station. Sixty-six persons enrolled in the course with thirty-four completing the course and taking the final examination. The median test score was sixty-seven compared with a median score of fifty-four for the students taking the regular course at the University using traditional classroom procedures. However, it was recognized that the people taking the course by television were self-selected and hand-picked and were older and more experienced than the regular students.<sup>30</sup> It also appeared that no technique or statistical design was used to equate the two groups.

Michigan State College reported its policies concerning educational television and telecourses; and stating its concepts of the way to utilize the medium, the All College Television Committee "recommended that the school and departments consider the television courses as an integral part of their educational responsibility."<sup>31</sup>

### Studies Concerning Ways of Improving the Use of Educational Television

Personnel in various schools and school systems have undertaken research programs in the effective use of educational

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<sup>30</sup>John S. Millis, "Formal Education By Television," A Television Policy for Education, Carroll V. Newsom, editor. (Washington: American Council on Education, 1952), pp. 40-41.

<sup>31</sup>"Report of the All College Committee on Television Courses for Credit" [Michigan State College, East Lansing: The President's Ad Hoc Committee on Television, 1954], p. 4. (Mimeographed)



television and have utilized it as an instructional aid. As the television activities in the Los Angeles school system were based upon concepts similar to those which were used as a guide in the investigation and evaluation of the Television Project, the plans and purposes, as reported by Lange, are presented in detail.

The Los Angeles Schools in 1952 proposed an experimental project in television in which twenty-five elementary schools were to participate. The supervisors, administrators, and teachers participated in the program-planning and in writing study-guides so that the specific needs of teachers and classes would be met.<sup>32</sup>

Another project was proposed for the experimental use of television in the secondary schools and stated as its purpose:

To study the value of television as a teaching aid to be used by the teacher to bring to the classroom facilities and experiences not otherwise available. The facilities and experiences are to be closely related to the current instructional program of the class.<sup>33</sup>

The committee reported the following standards for television planning which seemed pertinent:

1. The telecasts should be developed out of the curriculum.
2. The telecasts should be a part of the instructional program and should bring to the classroom material not available otherwise.

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<sup>32</sup>"A Plan for the Experimental Use of Television in the Los Angeles City Elementary Schools" (Curriculum Division, Los Angeles City School Districts, Los Angeles: The Television Committee, February 11, 1952.) , p. 2. (Mimeographed)

<sup>33</sup>Ibid., p. 1.

3. The telecast should include three parts:
  - a. The introduction should state the objective of the telecast and its place in the instructional program of the subject.
  - b. The main body of the program should utilize excellent teaching practices, concepts, American ideals, and be in keeping with the Point of View of the Los Angeles City Schools.
  - c. The conclusion should summarize important learning outcomes and show how the original purpose of the telecast has been accomplished.
4. The AUDIO-VISUAL SECTION will be responsible for the preparation and distribution of study guides well in advance of the program. <sup>34</sup>

In order that the use of television would be properly integrated into the educational program, these standards for classroom use were established:

1. The telecast should be viewed in a regular class situation with the regular teacher of the class.
2. The telecast is to be used only if it has a definite place in the current instructional program of the class.
3. The telecast is to be used only as an aid to implement the regular instructional program of the class.
4. The participating teachers will be responsible for the proper use of the study guides in preparing the class for the program and in conducting follow-up activities. <sup>35</sup>

The committee recommended that "a continuing and adequate appraisal of both the instructional value of the telecasts and their effectiveness as a teaching aid should be made by the participating teachers in close cooperation with those responsible for the planning."<sup>36</sup>

Probably, the most extensive research program in the effective use of educational television was that undertaken

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<sup>34</sup>Ibid., p. 2.    <sup>35</sup>Ibid., p. 3.    <sup>36</sup>Ibid.

by the New Jersey State Teachers College at Montclair. DuMont reported the two general aims and the ten specific objectives which were developed by the personnel of the college.<sup>37</sup>

Kelly and Conrad reported a five-year project started at the same college in November 1953. A project called "A Study of the Effectiveness of Television in Relation to Current Problems in Teaching" was initiated to formulate and test basic principles relating to the impact of television on the following twelve impact areas: (1) the pupil, (2) the individual teacher, (3) the teaching profession, (4) methods of teacher education, (5) school administration, (6) the constituent community, (7) ancillary educational specialties, (8) the curriculum, (9) school architecture, (10) educational television equipment, (11) educational television transmission, and (12) educational television production.<sup>38</sup> Among twenty general evaluative statements, based upon all of the separate problems and projects studied up to the present time, the investigators reported that "classroom television need not replace films, filmstrips, slides, or radio in the schools. On occasion, it should make masterful use of all of these media of instruction."<sup>39</sup>

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<sup>37</sup>Allen B. DuMont, "Educational Television," A Television Policy for Education, Carroll V. Newsom, editor (Washington: American Council on Education, 1952), pp. 17-18.

<sup>38</sup>George A. Kelly and Lawrence H. Conrad, "Report on Classroom Television 1954," New Jersey State Teachers College at Montclair (Montclair: The Montclair State Teachers College Television in Education Project, 1954), p. 1. (Mimeographed)

<sup>39</sup>Ibid., p. 28.

Conrad reported a special one-day project which was also conducted at the New Jersey State Teachers College at Montclair. Eight television lessons were transmitted to specially prepared television receivers in thirteen public schools in the towns of Montclair and Bloomfield on April 30, 1952, from 8:50 A.M. to 3:20 P.M. The evaluation was based upon 50 forms turned in by educational visitors who were present to view the activities; 60 score sheets filled out by participating teachers; 1650 evaluation forms filled out by the viewing students; a discussion at the end of the day with educators, participating teachers, and the investigator's own staff; and letters.<sup>40</sup>

The investigator reported what was learned about educational television that: (1) it is most effective when it brings experiences, materials, and demonstrations not readily available; (2) the telecaster must possess enthusiasm, a knowledge of teaching principles, and special qualities of voice and manner; (3) teachers should be planners; (4) the programs should be limited and not include too much materials; (5) preparation before classroom reception is always desirable; and (6) the twenty to thirty-minute program fits best and leaves proper discussion time.<sup>41</sup>

King, in reporting activities of the New Jersey Research Project, stated that teachers participating in the project have a:

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<sup>40</sup>Lawrence H. Conrad, Educational Television Moves Forward, New Jersey State Teachers College at Montclair (Montclair: The Montclair State Teachers College Television in Education Project, April 30, 1952), 39 pp.

<sup>41</sup>Conrad, op. cit., pp. 37-38.

. . . strong desire to use TV as an integral part of their regular classroom teaching, rather than as a "frill". Teachers are looking upon TV as one more audio-visual aid available for use in their regular teaching program. <sup>42</sup>

There seemed to be a consensus of opinion among the elementary administrators concerning the contents of effective educational programs that: (1) teachers want the contents of the program to be authoritative, and they want the person presenting the program to give the information in such a way that desirable learnings will result, (2) the content of a good educational program should be such that a teacher cannot duplicate it, (3) the content should be presented in such a way that it leads to inquiry, and (4) a good television program must be one which acknowledges the child as being of prime importance. Based upon the experimentation, the investigators discovered that: (1) the background of a good educational television program must have eye appeal, the camera work must be as accurate as a teacher's pointer, and the sound and voices must be easily understood; and (2) educational television programs must be planned by and for teachers and must be a part of the regular school curriculum in order to be successful. <sup>43</sup>

Thorn and King evaluated one of the programs in the Television Project entitled "Bulk-Handling of Milk" by administering a thirty-three item pretest and post-test,

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<sup>42</sup>William H. King, "What Teachers Expect from Educational Television," The Instructor, AV Supplement, June, 1954, p. 7.

<sup>43</sup>Ibid., p. 8.

based upon the prepared script, to the class members in four classes of vocational agriculture. While recognizing that several limitations were present, they found that the gain in the mean scores in two of the schools was significant and that the gain was not significant in the other two schools. A rank correlation of  $+ .55$  was obtained between the individual scores on the pretest and post-test. They concluded that: (1) "the knowledge of the subject matter known by the respondents prior to the TV program was rather high, and (2) the subject matter presented by the TV program was, therefore, below the general knowledge-level of the class."<sup>44</sup>

The University of Kansas School of Medicine has been experimenting with closed-circuit television since 1949.<sup>45</sup> The Philadelphia Public School personnel have probably utilized the television medium to a greater degree than any other public school system.<sup>46</sup> McDole, in reporting the

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<sup>44</sup>Burton K. Thorn and Charles E. King, "An Evaluation of the Television Program - 'Bulk-Handling of Milk'," Michigan State College (East Lansing: Department of Vocational Education, February 28, 1955), p. 9. (Duplicated by Ditto process.).

<sup>45</sup>Paul W. Schafer, "The Kansas Television Experiment," (Reprinted article with additions from The Journal of the American Medical Association, June 6, 1953, Vol. 152, pp. 554-557), 12 pp; Paul W. Schafer, "Television at the University of Kansas Medical Center," The Journal of the American Medical Association, 152:78, May 2, 1953.

<sup>46</sup>Report of the Television-Radio Activities, School-Community Relations Office, School District of Philadelphia, The Board of Education (Philadelphia: The Board of Education Print Shop, September 1953), 35 pp.

television activities of the Seattle Public Schools, stated that 176 programs involving 1511 teachers and school children were produced during the 1953-54 school year.<sup>47</sup> Educational broadcasters, as reported by Cooley, have defined their purposes in six statements of aims.<sup>48</sup> While the types of research and the techniques and methods of evaluation differed, the over-all objectives, as also reported in the previous studies, seemed to be that of improving the instructional program of the schools. The general conclusions which seemed to have been drawn were that: (1) television could not do the entire job of teaching, (2) teachers must participate in the planning of these programs, and (3) a continuous appraisal should be made of the television programs by the producers and by the teachers who used them.

#### Summary of the Research on Educational Television

Generally, the research that was reported has been of these types:

1. A comparison of results by using tests which were designed to measure factual information.
2. Weaknesses in the production and programming techniques.
3. A comparison of viewing kinescoped recordings vs. incidental, unplanned learning.

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<sup>47</sup>Wana B. McDole, "Seattle Public Schools Complete Three Years of Telecasting," Seattle Public Schools (Seattle, Washington: Department of Public Relations, June 18, 1954), 10 pp. (Mimeographed).

<sup>48</sup>Hazel Cooley, Vision in Television (New York: Channel Press Publishers, 1952), p. 33.

4. A comparison of a subsidiary study of superimpositions.

5. A study of the reactions of groups of people to educational television programs.

6. A study of what educational television is and recommendations for its use in an instructional program.

7. In one study only, the number of practices that were adopted as the result of television viewing.

Some of the research appeared to have certain limitations, for groups were not equated, and it seemed to be somewhat evident in some of the studies that special preparation was made by television instructors and special visual aids were available, although not directly reported. The formal studies measured the results of television viewing per se but seemingly did not consider it as an instructional aid to be used with the class by the instructor during a part of the class meetings. None of the studies reported the way in which television was used by the teachers in a class situation. Some of the studies also reported somewhat generalized findings, such as more people could be reached by the use of television, and viewing personnel thought educational television programs were a "good idea". While some of the studies recommended that the viewers and teachers who used the programs should participate in the planning of the television programs, only one of them actually reported



that this was done, and none reported in what way these persons were to participate.

Several predictions are made by the investigator about educational television which were supported by the research. The medium will command attention as, perhaps, no other teacher, and people will learn from it. People will learn not only facts but also attitudes, some motor skills, sometimes critical thinking, and problem-solving. If educational television is properly used, it may be expected to impart facts and demonstration procedures at least as effectively as an average classroom teacher. Perhaps, it may be as effective as an excellent teacher. However, the effective use of educational television is considerably different from the effective use of commercial television and, therefore, requires different methods. Basically, it will require the utilization of desirable teaching principles and the use of the medium as a part of an "educational package". Teachers will need to be involved in the planning and evaluation, and additional instructional aids will need to be used to supplement or to complement the use of the medium. Up to the present time the special characteristics of educational television have not been utilized to their best advantage, and much of the various presentations could have been broadcast by radio. However, as educators learn to use the medium, they will pass beyond the stage of "photographing illustrated lectures" and will learn how to combine and to harmonize the

auditory and visual communications. This amalgamation is the essence of both educational television and instructional films.

There are other conclusions which appear to be justified from the research although they have not been specifically pointed out by the studies reported. The television medium has certain advantages and special characteristics, but it also has some disadvantages. While it has a definite place in the instructional program and in the educational process, it is only one of many instructional aids which teachers may use. Although it is an aid to classroom instruction, it is not a replacement of the teachers. The medium has excellent public relations value for education and can stimulate, motivate, and cause a desire for inquiry. Outstanding teachers can be made into effective "television teachers" with only minor training, and the intercommunication aspects of learning and of teaching can be preserved by use of the proper techniques. Educational television appears to be an effective medium for the mass training of Armed Services personnel and for continuing the education of all people by either formal or informal learning. Most important, it should be recognized that its effectiveness depends upon what is placed before the cameras and how the teachers and viewing personnel utilize it.

The literature also, either directly or indirectly, indicated several questions which needed to be answered

although it was not the purpose of this investigation to answer any or all of them directly or completely. These are subsumed in these interrogations:

1. What should be the content of various educational programs and who is to make the decisions?

2. Should the televised programs be used for motivation, information, problem-solving, summary, and/or instigating additional study and learning?

3. How can the programs be integrated with classroom teaching and activities?

4. How can the instructor best follow up the presentation to help students continue the learning, which was initiated in the class, out on the farm?

5. Under what circumstances is television better than some other visual aid and under what situations can it be used most effectively?

6. How often should televised programs be used?

7. What effect will the programs have upon organized instructional programs for adult and young farmers?

8. To what extent will the programs determine the course content?

9. Can televised programs replace the instructor, at least in part, since farmers can independently receive the programs at home?

10. How can television programs and their use be best evaluated?

## Research on Instructional Films

The research on the uses of educational television was somewhat meager, and, therefore, studies involving the research on instructional films were reviewed. In addition, it may be assumed that there are no essential differences between educational television and educational sound films so far as the learning process is concerned except two: (1) the greater immediacy and liveness of television and its vastly greater potential audience for any one showing, and (2) the greater degree of control (interviewing, repetition, timing) which the teacher has. When allowance is made for these differences, the research on sound film can be added to that on educational television and a twenty-year baseline can be established from which the potentialities of this medium can be prognosticated.

Hoban and Van Ormer reported a study in which all instructional film research from 1918 to 1950 was reviewed.<sup>49</sup> They presented five values of instructional films which are quoted, in part:

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<sup>49</sup>Charles F. Hoban, Jr. and Edward B. Van Ormer, Instructional Film Research 1918-1950, U. S. Navy, Navexos P-977, Technical Report No. SDC 269-7-19 (Port Washington, L. I., New York: Special Devices Center, October 1951), pages numbered in nine sections. This report is the most complete and extensive review of the research on instructional films, and the project was carried out during a two and one-half year period by the Instructional Film Research Program at the Pennsylvania State College, jointly sponsored by the Department of the Army and Department of the Navy. The study included a review of 301 articles, books, abstracts, and other materials (see pp. B-1 to B-14 for the bibliography) and 18 Technical Reports of the Instructional Film Research Program (see p. C-1).



1. People learn from films.
2. When effective and appropriate films are properly used, people learn more in less time and are better able to retain what they have learned.
3. Instructional films may stimulate other learning activities.
4. Certain films may facilitate thinking and problem solving.
5. Appropriate films are equivalent to at least an average teacher, and sometimes even to an excellent instructor insofar as the instructor's function is communicating the facts or demonstrating the procedures.<sup>50</sup>

It was evident from the studies on film research that the influence of motion pictures on behavior was dynamic. Film influence depended upon the content and use of the film, the psychological make-up of the audience, and the social and instructional characteristics of the situation in which the film was presented.

The investigators reported ten summary principles governing the influence of films which they developed from their extensive and intensive research, covering a period of two and one-half years, and, in part, these are presented below:

1. PRINCIPLE OF REINFORCEMENT:

Films have greatest influence when their content reinforces and extends previous knowledge, attitudes, and motivations of the audience. They have least influence when previous knowledge is inadequate, and when their content is antagonistic or contrary to the existing attitudes and motivation of the audience.

2. PRINCIPLE OF SPECIFICITY:

The influence of a motion picture is more specific than general.

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<sup>50</sup> Ibid., pp. 9-1 and 9-2.

3. PRINCIPLE OF RELEVANCE:

The influence of a motion picture is greater when the content of the film is directly relevant to the audience reaction that it is intended to influence.

4. PRINCIPLE OF AUDIENCE VARIABILITY:

Reactions to a motion picture vary with most or all of the following factors: film literacy, abstract intelligence, formal education, age, sex, previous experience with the subject, and prejudice or predisposition toward the subject.

5. PRINCIPLE OF VISUAL PRIMACY:

The influence of a motion picture is primarily in the strength of the visual presentation, and secondarily, in the narration or commentary. It is relatively unaffected by "slickness" of production as long as meaning is clear.

6. PRINCIPLE OF PICTORIAL CONTEXT:

An audience responds selectively to motion pictures, reacting to those things which it finds familiar and significant in the pictorial context in which the action takes place.

7. PRINCIPLE OF SUBJECTIVITY:

Individuals respond to a motion picture most efficiently when the pictorial content is subjective for them.

8. PRINCIPLE OF RATE OF DEVELOPMENT:

Rate of development influences the instructional impact of a picture on its audience.

9. PRINCIPLE OF INSTRUCTIONAL VARIABLES:

Established instructional techniques, properly built into the film or applied by the instructor, substantially increase the instructional effectiveness of a film.

10. PRINCIPLE OF INSTRUCTOR LEADERSHIP:

The leadership qualities of the instructor affect the efficiency with which his class will learn from the film or filmstrip. <sup>51</sup>

Hoban and Van Ormer reported four general conclusions or observations concerning the influences of motion pictures and a way of improving films and their instructional use.

These statements, in part, included the following:

1. When NECESSARY and DESIRED learning is dependent upon a background of experience possessed to only a slight degree by the learner, the advantage of the film over other media, especially for rapid mass instruction, may be most evident.

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<sup>51</sup>Ibid., pp. 9-3 to 9-8.

2. The actual influence of a given motion picture is frequently less than its anticipated influence.
3. If motion pictures are to teach, they must be made as tools of teaching, rather than merely as examples of cinema art.
4. If the effectiveness of motion pictures in instruction is to be increased, improvement must be made by all involved, not simply by the producer. <sup>52</sup>

Schuller presented a summary of some of the principal conclusions concerning educational motion pictures based upon the research of Dale, Hoban, Knowlton and Tilton, Roulon, Arnspiger, Wise, Van Ormer, and Wittich and Fowlkes:

1. Films are effective in conveying factual information.
2. Films significantly aid the pupil in understanding information.
3. Films increase retention of knowledge.
4. Methods of using films substantially affect learning results achieved through their use. . . . The evidence strongly indicates that the following techniques, if properly applied, significantly increase learning from films: <sup>53</sup>
  - a. Orienting the group on what it is going to see and/or summarizing what it has seen.
  - b. Announcing that a check-up or test on learning will be given after a film.
  - c. Reviewing the important points (with variation) within the film and/or showing the film, in part or as a whole, more than once.
  - d. Carrying on group participation of some kind during or after a film showing.
  - e. Informing the learner of how much he has learned. Giving test results or answers or making applications as soon as possible. <sup>54</sup>

The way in which an instructor teaches and uses visual aids is more important than what he uses.

Meierhenry reported several studies in a four-year research project involving up to seventy high schools and

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<sup>52</sup> Ibid., pp. 9-8 to 9-9.

<sup>53</sup> Charles F. Schuller (ed.) The School Administrator and His Audio-Visual Program, National Education Association (Washington: Department of Audio-Visual Instruction, 1954), pp. 11-16.

<sup>54</sup> Ibid., p. 16.



more than twenty thousand pupils in Nebraska. The studies during the 1946-47 and 1947-48 school years used two types of tests, namely, a standardized subject-matter test and a film test. The same test was used as a pretest and a post-test, and all of the tests were statistically reliable.

In summary, the amount of subject matter learned was about the same, based upon the results of standardized tests. The film group learned more of the material presented by the film. The value of the films seemed largely to be an enrichment value in that visual presentation could be made which, otherwise, would only be available through verbalization.

The conclusion was made that selected motion pictures demonstrated clearly, "as measured by the film tests, their usefulness in supplying a significant number of learning experiences not ordinarily made available to the students in these subjects."<sup>55</sup> On most subjects there were no significant differences in the standardized groups, although the insignificant differences more often than not favored the experimental groups.

The project was continued during the school years 1948-49 and 1949-50 to determine if motion pictures modify beliefs and to determine the effects of intelligence. Experimental and control groups were selected, and the experimental groups

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<sup>55</sup> Wesley C. Meierhenry, Enriching the Curriculum Through Motion Pictures (Lincoln, Nebraska: University of Nebraska Press, 1952), p. 87.

were shown a series of films about the United Nations, while the control groups were taught in the usual way. However, many of the control groups received some instruction about the United Nations. The change in beliefs of the experimental groups was significant. One conclusion drawn from the interviews with the randomly sampled interviewees was that study-guides could increase the effectiveness of motion pictures.

A further study was made to determine the effects of the following factors upon the students' learning by films:

(1) teaching experience of the instructors, (2) educational level of the instructors, (3) school size, (4) class size, and (5) preparation of the teacher in the use of audio-visual materials. None of the above factors was found to be statistically significant. Motion pictures did not seem to have the same effects in all subjects. This may have been due to the nature of the motion pictures available in each subject and to the types of audio-visual materials used in the class in addition to the films.

A study conducted by the Research Branch, Information and Education Division of the War Department attempted to assess the effects of various special films, radio programs, and devices. Experimental and control groups varying from five hundred to fifteen hundred soldiers were used. Three functions of the films were tested: their ability (1) to communicate certain background facts of the war, (2) to

induce more favorable opinions and attitudes, and (3) to increase the motivation and willingness to serve in the Armed Forces.<sup>56</sup>

It was found that two films were no more effective than one in the ability to persuade and that all of the media were effective in communicating information. No significant difference was found in favor of the films for "motivation" and for causing "willingness to serve in the army."

The investigators concluded that all media and devices were effective in communicating information and in imparting skills and that all were much less effective in modifying opinions or in increasing motivations. The films were found to be less effective for motivation than for general opinion.

Weaver and Bollinger reported a study carried out at Yale University to determine the influence of motivation and participation on the teaching effectiveness of a film. Four different versions of the film were prepared, each giving exactly the same factual presentation with identical materials and accompanying commentary, but either "motivating" and/or "participating" questions were inserted into three of these versions. The investigators concluded "that even the relatively crude procedure used for increasing pupil participation can materially increase effectiveness of an educational

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<sup>56</sup> Carl T. Hovland, Arthur A. Lumsdaine, and Fred D. Sheffield, Experiments on Mass Communications (Princeton, New Jersey: Princeton University Press, 1949), 345 pp.

film."<sup>57</sup> The results also suggested that: (1) the insertion of orienting questions preceding the presentation of the factual material may aid in learning, and (2) the teachers may use existing films to advantage by interspersing questions before and between sections of a film; a film may also be shown twice to obtain the advantage that can be produced by this method.

Bentley made an experimental evaluation of certain audiovisual aids in vocational agriculture as related to the home garden, swine production, and pasture production enterprises. He found that the mean of the experimental group was significantly higher than the mean of the control group in only two out of eight comparisons.<sup>58</sup>

#### Summary of Film Research

Certain limitations were found in reviewing the literature on instructional film research which should be recognized in evaluating the general conclusions that were presented: (1) many data were not treated statistically to determine if the improvement by the films was significant; (2) non-discriminating terms, for example "relatively", were used in describing the findings; (3) the control of pertinent variables and the experimental designs were questionable,<sup>59</sup> (4) over-

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<sup>57</sup> Gilbert G. Weaver and Elroy W. Bollinger, Visual Aids (New York: D. Van Nostrand Company, Inc., 1949), p. 383.

<sup>58</sup> Ralph R. Bentley, "An Experimental Evaluation of Certain Audio Visual Aids in Vo-Ag," Agricultural Education, 20:136, January, 1948.

<sup>59</sup> Hoban and Van Ormer, op. cit., Foreword.

generalizations were made from limited data, and (5) the way in which the films were used by the instructors greatly determined the results.

While the reader should keep the above limitations in mind, the research showed definitely that experimental groups exceeded the control groups on film tests where the control groups secured their information by incidental methods. On standardized tests measuring the amount of factual information learned by both groups, the increased scores of the experimental groups were not significant. Films changed beliefs and opinions, but generally there was more of a modification than conversion. No research was found where a comparison was made of the effectiveness of teaching certain information by films and by the "regular" classroom procedures with all other variables held constant. In many of the studies the films were used as a supplement to certain materials, textbooks, or classroom instruction. Therefore, it was to be expected that the results from viewing films would show greater gains for the experimental groups.

In evaluating the use of films it should be recognized that certain films can present what otherwise would not be available because of timeliness and cost. In addition, the enrichment value of films, such as broader concepts, motivations, and development of interests, are hard to measure. Films themselves do not provide the solution to all instructional

problems; but, rather, the way in which the instructor uses the films is, perhaps, the most pertinent factor in determining what the results will be.

### Uniqueness of the Television Project and This Study

As reported in previous chapters, no experimental research on the uses of educational television in the area of agricultural education has been reported, as far as the investigator could determine. After careful review of the literature, this statement was still found to be correct. Personnel responsible for radio and television education and selected personnel on the television-station staff of the College also concurred in this finding, especially as to current research which has not been reported. Therefore, the Television Project and this investigation seemed unique in respect to the following seven factors:

1. The problems and needs of the viewers were determined and then a television series and specific programs were prepared to attempt to meet these needs in part. Teachers participated in the planning and organization of the series.

2. Source units were prepared and mailed to the using teachers prior to the beginning of the programs. A script of the program and other reference materials were mailed to the teachers weekly and prior to each program.

3. The television programs were organized into three continuous series and a fourth series was added later.

4. The subject-matter area of the programs was agriculture.

5. The television programs--thirty minutes in length--were used as one of several instructional aids in class meetings lasting approximately one hour for high-school pupils and two hours for the adult and young farmers.

6. The evaluation was based largely upon the understandings developed, decisions made, and the progress that farmers made toward the adoption of approved practices.

7. Each class was visited by the investigator and a tape recording was made and later replayed to study the use of the programs. The participating teachers were interviewed at the conclusion of the series to determine the ways in which the programs were used and to determine the teachers' evaluations of these programs and reference materials.

## CHAPTER V

### THE USE, EVALUATION, AND RECOMMENDATIONS OF THE TELEVISION PROGRAMS AND REFERENCE MATERIALS BY SCHOOLS

The data on each school are presented in this chapter. As reported previously, the teachers in each of the ten participating schools were interviewed by the investigator and notes were written on the interview schedule. A tape recording was made of each interview except one, and a narrative report was written on each school from the notes and the tape recording. This report was largely the basis for the individual reports by schools which are presented herein. However, they have been supplemented by the information which was secured by observing a class meeting in each school except one and by a discussion with the teacher during this visitation.

No explanation is made of the methodology of using the television programs with the high-school boys except for the one teacher who only used the programs with this group. However, the fact that the programs were used with these pupils is pointed out, where applicable. Form H, the rating form of the television programs filled out by class members, was submitted by the high-school pupils; and this fact is also reported, where applicable.

The investigator has endeavored to present the data from each school objectively without any evaluation or interpretation



on his part. All evaluative statements which are presented in the reports on each school are the opinions of the reporting teacher, as far as correctly interpreted by the interviewer, unless otherwise specified.

The data appear to be more complete on some schools than others. This can be accounted for by, at least, three factors: (1) some teachers made more use of the programs than others, (2) data were submitted by certain teachers on some of the forms and instruments which the other teachers did not secure, and (3) a part of the teachers reported more detailed information during the interviews than did others.

### School A

#### Types of Farming

The area in which this school was located has been classified as Area 8.<sup>1</sup> The area was an outstanding crop producing area, both for cash crops and feed crops. When adequately drained, the soils were highly productive. The yields for the cash crops, such as field beans, sugar beets, and wheat, were some of the highest in the state. Some of the farmers had gone to a strictly cash crop farming program. However, most of them still raised more feed crops--corn, oats, and forage.

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<sup>1</sup>The Department of Agricultural Economics has classified the state of Michigan into Areas 1 to 17 based upon the types of farming and the types of soils which are most prevalent in each area.

Dairy was the major livestock enterprise. On the forty-two farms which submitted a report to the Department of Agricultural Economics in 1953, 95 percent had dairy cows, 52 percent had hogs, 69 percent poultry, 21 percent beef, and only 10 percent had sheep.

The farms were usually small with three-quarters of them containing 140 acres or less. About 70 percent of the farms were classified as commercial farms. The percentage of farmers working off the farms in this area was relatively low.<sup>2</sup>

More specifically, the farms in the school service area were located close to a fairly large city. As would be expected, the part-time farming in this area was somewhat high. Much of the land was a sandy or poorly-drained, clay soil bordering on a sub-marginal use for cultivated crops.

Cash crops of sugar beets, field beans, and vegetables were raised on the farms having a relatively high fertility level. Dairying was the major livestock enterprise.

### Personal Information

At the time of the interview the teacher in this school was 34 years old and held the Bachelor of Science degree in agricultural education. He had completed six quarter-hours of courses in technical agriculture and twelve hours of professional education courses beyond the Bachelor's degree,

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<sup>2</sup>John C. Doneth, Farming Today, Department of Agricultural Economics, Michigan State College, A. Ec. 538, Area 8 (East Lansing: Cooperative Extension Service, 1954), 24 pp.

but he had not taken any audio-visual courses. He taught institutional-on-the-farm trainees for three years and vocational agriculture for three years, all in the above school. This year he taught one general science class, three high-school classes of vocational agriculture with an enrollment of fifty-five, and two adult-farmer classes with an enrollment of one hundred fifty. Six adult-farmer classes were taught prior to this year on the basis of two classes per year. One young-farmer class was also taught previously. Eight out of eleven in-service meetings were attended by this teacher.

#### Interpretation and Relationships

The television schedule was duplicated and distributed to the members of the adult class and to the high-school boys in vocational agriculture. It was also published in the local newspaper.

The principal was kept informed by visits from staff members in Agricultural Education and by the investigator who discussed educational television in general and the Project with him during each visit. He also received letters concerning the television activities and visits to the school. He attended the in-service television meeting which was held at this school.

### Content and Methodology

A duplicated list of subject-matter areas and specific topics under each area were distributed to the adult farmers at the first meeting, and their selections of topics for the series were checked by them. At the second meeting the tabulated and summarized results were presented, and dates for each meeting were decided upon. The television schedule was presented and discussed, and four of these programs were selected. The dates of various meetings were re-arranged in order that the selected programs might be viewed prior to the meetings in which the selected topics were studied and discussed.

The television programs were not viewed as a part of the class meetings because of the time that they were broadcast. The farmers were told about the selected television programs which would be telecast between meetings and about specific points and information to look for. Some of the class members viewed the programs independently at home or went to the home of a friend. The teacher next prepared an outline to be used in teaching the class. The reference materials were studied and used by the teacher in preparation for the meetings. Selected parts or questions based upon the reference materials were duplicated for use with the class. Generally, the teacher tried to secure additional copies of certain bulletins which seemed desirable for class distribution from the local county agent. However, they were usually not available.

In teaching the classes the instructor usually prepared questions based upon the reference materials. These were considered with the class in a question and answer discussion. Several resource persons were invited in for some of the meetings, and a part of these meetings were turned over to them. At the meeting attended by the investigator the following materials were distributed to the class: (1) a bulletin, (2) a reprinted magazine article, (3) a duplicated article on the topic, and (4) duplicated sheets of pertinent points. Two resource persons were present. Five of the class members had viewed the television program which was based upon the topic under discussion. However, no special use was made of the people or their information, and the fact that they had viewed the program was not evident except for a showing of hands in response to the specific question concerning the number of viewers. The average number of persons who viewed the four selected programs was eight.

This procedure was somewhat different from previous years. Comments were made by the teacher concerning information which had been presented on the televised programs. Reference materials and scripts had been received and were available for the selected topics which were studied.

Follow-up activities consisted of tours and farm demonstrations. The teacher also made farm visits and aided individual farmers in implementing approved practices.

The reference materials which were mailed to the teacher were utilized for informing the farmers about the content of the television programs, for preparing the outlines for the class meetings, and for preparing the questions described previously. Some of the materials were summarized, including pertinent facts, and were duplicated for class distribution. Additional copies of some of the reference materials were secured for the class members.

An evaluation sheet was prepared and was filled out by the class members at the last meeting. A sheet of approved practices was also filled out. A subjective evaluation was made by the instructor based upon attendance, comments, and general reactions of the members. The teacher had the forms which were used in this study filled out or secured the necessary information to fill out the forms himself. These were studied by him.

### Evaluation

The main value of the television programs was that they seemed to cause a closer coordination and a better understanding between the teacher, class members, and the information presented by the programs.

It was recommended that the reference materials be mailed earlier and that the source of additional copies of references be included. It was also suggested that these references be made available from this source.

Certain criticisms of the television programs included the following: (1) many of the charts were either too small or so constructed that they could not be read, (2) there was too much lecturing, and (3) the camera was often not on the charts which were being discussed. It was suggested that these criticisms be corrected. In addition, recommendations were made that the time of the telecast be changed to a night hour and that the name of the television series be changed. The camera should be on the charts while they are being discussed rather than on the person who is talking. The topics should be more timely and seasonal.

Television programs were requested for next year for high-school classes of vocational agriculture and for adult-farmer classes. The subject-matter areas which were requested included, in order of priority, crops and soils, livestock, vegetables, marketing, and landscaping.

#### Special Problems Encountered

The reference materials arrived too late during the latter part of the series to permit effective planning. Other bulletins or reference materials listed in the references were needed but were not available from the county agent. Only about one-third to one-fourth of the class members had seen the selected television programs. Others wanted to view them but were unable to do so because of the time of broadcasting.

### Activities Special to This Case<sup>3, 4</sup>

This was the only school which did not view the programs on an organized basis. This was also the only case in which all of the viewing of the television programs was done independently and away from the school. The reception of the programs on the sets in this area was excellent. A duplicated television schedule was prepared and distributed to all class members. Evaluation sheets were distributed to the class, and the meetings were rated by them. In addition, the adoption of approved practices was secured by having a check-list filled out by the members. In the opinion of the investigator, more reference materials were duplicated or secured from other sources and distributed to the class than by any other teacher.

Reference materials were considered to be very important and essential as instructional aids even if the television programs were not used. All of the materials and scripts were filed for future use.

The teacher viewed most of the television programs although he used only three with the class. As reported previously, the programs were not viewed in an organized fashion. No special use was made of those persons who had viewed the television programs unless some reference was made to the

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<sup>3</sup>The television programs used in each of the ten schools is shown in Appendix R.

<sup>4</sup>The data on the numbers of class meetings, class members, and the titles of class series taught are shown in Table II, Chapter VI.



program or questions were asked. This situation did develop on several occasions.

The teacher felt that he needed additional help and understanding of educational television and its use in an instructional program. He recommended that a special course be offered in the near future on the preparation and presentation of television programs and the effective use of television by the teachers. He also felt that the Project had certain "indirect" values which included the in-service meetings on television and the discussion concerning the use of television with the investigator.

### School B

#### Types of Farming

The area in which this school was located has been classified as Area 5, and dairy and general farming predominated. The important secondary enterprises were hogs, poultry, and sheep. Most of the crops grown--hay, pasture, corn, and oats--were for feed. While wheat was the major cash crop, white field beans and sugar beets were important on some farms. Wheat acreage had nearly doubled during the last ten years and the acreage of hay and pasture had declined. The number of farms had declined, especially general farms, and there was greater emphasis on fewer but larger enterprises.

The soils were medium to high in fertility. Lansing, Flint, and Jackson were the major markets for whole milk. Much of the milk and other products went to Detroit and Grand Rapids, which were outside the area.

One hundred thirteen acres was the average size of farms in this area. About 30 to 40 percent of the farms were classified as part-time and residential.<sup>5</sup>

The service area of this school was located near a large industrial area, and the part-time farming in the area was rather high as many farmers worked in the industrial plants. Generally, the soils in the area were of average or slightly above average fertility. Dairying was the major livestock enterprise followed by hogs and other types of livestock.

#### Personal Information

When the interview was made, the teacher in this school was thirty-three years old and held the Bachelor of Science degree in agriculture. He had completed all of the professional courses in agricultural education required for a teaching certificate after receiving this degree. In addition, he had completed six quarter-hours of professional courses and a three quarter-hour course on educational television. He had taught vocational agriculture for eight years, all in the above school. This year he taught one

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<sup>5</sup> John C. Doneth, Farming Today, Department of Agricultural Economics, Michigan State College, A. Ec. 536, Area 5 (East Lansing: Cooperative Extension Service, 1954), 24 pp.

biology class, three classes of high-school vocational agriculture with an enrollment of forty, and one adult-farmer class with an enrollment of thirty-four. Five classes of adult farmers and one young-farmer class were taught prior to this year. Eighteen out of twenty-two in-service meetings were attended by him.

### Interpretation and Relationships

The superintendent was informed of the television activities by discussing the television schedule with him. He secured a television set for the school, and the teacher was instrumental in influencing the superintendent to secure the set and to try the television programs for this year. The television in-service meeting was attended by him. The various scripts were discussed with him, and he agreed to teach the biology class on special days when it was desirable that the high-school boys view special television programs. However, no programs were used with the high-school boys although plans were made to that effect.

A few favorable comments were made by other teachers and students about the use of television. No comments were made to the teacher by people in the community. At least, no adverse comments or complaints were heard by him.

### Content and Methodology

The teacher selected the television "Marketing" series and sent letters to the adult farmers announcing the series,

the topics of the meetings, and the date of the first meeting. The specific topics were based upon the television programs in the above series. A meeting was held bi-weekly, and the television programs of the above series were telecast monthly. The class meetings which were held between each television program were largely used in presenting and discussing subject matter which was to be telecast on the next program.

The teacher secured statistical data, in preparing for the meetings, to show a need for the information presented. The source units were utilized, and any reference materials which were available were studied. The scripts and other mailed reference materials were the major source of information except when they did not arrive in time.

In general, the class was set for 8:00 P.M., but only about one-half of the group had arrived by 8:15, and some did not arrive until 8:30. Usually, a discussion was started and specific points to look for in the television programs were pointed out. The class moved from the agricultural room to the study-hall to view the programs. On one night a film was shown, and the group then viewed the program without any orientation. After the television programs, comments were secured. Questions were usually asked by members of the class or the teacher. Ideas were exchanged and if any additional data were available, they were presented

and discussed. Approximately thirty minutes were spent in a discussion of the television programs, and then some other topic was discussed.

On the night that the investigator was present the script was utilized for presenting pertinent facts and information, and the charts in the script were projected onto the screen by the opaque projector and were discussed. The additional discussion after the television program was on liming. The teacher agreed to decide later what the topic of discussion for the next meeting would be and to put a notice in the local paper.

The activities to bring out discussions and "get the facts" were similar to previous years. Since the references were mailed to the teacher, there was less difficulty in securing and planning the needed reference materials. More references than previously were also available. Having television programs and moving the group to the study-hall were also different situations from previous years.

Usually, the discussion ended without too many decisions but was "tied together" at the next meeting as a follow-up activity. The non-television meetings were used to plan the meetings when the television programs would be used. Additional follow-up activities included individual farm visitation, at which time other information and assistance was provided.

The source units and other reference materials were used by the teacher in preparing for the meetings and becoming familiar with the subject matter. They were also used as source materials during the meetings.

The instruction and class meetings were evaluated previously by determining the practices adopted, through the discussions with the individual farmers. An effort was made to visit the farmers at least twice per year, but some had not been visited once in two years. An attendance record was kept each year. The same procedure was used this year. In addition, the forms which were utilized in this study were a source of evaluative information.

### Evaluation

The programs provided much helpful information. The reference materials were valuable aids in preparing and teaching the classes and were considered to be very adequate. It was recommended that the reference materials be sent out two weeks in advance of the telecasts.

The programs had several strong-points which included the use of visual aids, the visual presentation of information, and the use of the interview method as a type of format. The major criticism was that the programs did not hold the interest of the class.

It was recommended that the series be concentrated over a shorter period of time. Programs were requested next year

for high-school classes in vocational agriculture, adult farmers, and young farmers. The two recommended subject-matter areas were farm mechanics (gasoline engines) and soil and water management.

### Problems Encountered

Farmers desired to view certain programs at home but were unable to do so because the programs were telecast on an UHF channel, and the sets were not converted to receive this frequency. Reference materials were received too late for use with several of the meetings. The major problem was determining in advance what subject matter the television programs would present and deciding what part of the information that the teacher should prepare for and plan to present. The attendance gradually decreased until only three or four farmers were present at the last few meetings. There was mechanical difficulty with the set during one of the meetings, and the program could not be received except for approximately the first ten minutes.

### Activities Specific to This Case

The teacher desired to use a few of the television programs in the "Getting Started in Farming" series with his high-school boys, but the plans did not materialize. The meetings were held in the agricultural room, and the class moved to the study-hall in another building to view the programs. The quality of the reception was most satisfactory

except for the one situation explained in the previous paragraph. This teacher was the only one who selected one of the four television series and used it exclusively and consistently.

The superintendent secured the loan of a television set from a local dealer, and the board of education bought the antenna. The set was installed in the study-hall in the main school building.

### School C

#### Types of Farming

This school was located in the northern tip of Area 6 which was the metropolitan area of southeastern Michigan and contained Detroit and a number of smaller cities. The off-farm work opportunities and the nearby markets were the best of any area in the state.

The topography varied from hilly to level. The average size farms were about one hundred acres.

The major feed crops were corn, oats, wheat, and hay. Relatively less corn and more hay and pasture were raised because of the heavier and wetter soil in the eastern part. Field beans, sugar beets, wheat, and garden and truck crops were the major crops grown in the area for cash. The most important enterprise was dairying, and fluid milk was almost the only source of income on many farms. The second most



important enterprise was cattle, most generally a by-product of dairying.<sup>6</sup>

There were three types of farming in the service area of this school. The soils in one of these three areas was very sandy and was close to being sub-marginal for cropping purposes, and dairying was the major enterprise. The second area had a rather heavy type of soil, and the topography was hilly or rolling. Dairy was also the major enterprise. The third area was a flat, highly fertile area in which cash crops of field beans, beets, and wheat were raised. The part-time farming in this overall service area was relatively low.

### Personal Information

At the time of the interview the teacher was twenty-seven years old and held the Bachelor of Science degree in agricultural education. He had completed one course in audio-visual education, twelve quarter-hours in technical agriculture courses, and twenty-eight quarter-hours of professional education courses. He had taught vocational agriculture for four years--all in the same school. This year he taught three high-school classes of vocational agriculture with an enrollment of sixty-seven students, one farm mechanics class with an enrollment of eighteen, and one young-farmer class

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<sup>6</sup>John C. Doneth, Farming Today, Department of Agricultural Economics, Michigan State College, A. Ec. 537, Areas 6, 7 (East Lansing: Cooperative Extension Service, 1954), 24 pp.

with an enrollment of twenty-one members. Young-farmer classes had been taught for two years previously, but no adult-farmer classes had been taught. He attended eight out of thirteen in-service meetings which were held during the time that he had been teaching.

### Interpretation and Relationships

After becoming aware of the proposed television programs, the teacher planned to use selected programs with the combined class of junior-senior boys and discussed these plans with the principal and the superintendent. The superintendent favored the suggested use of the programs, but the principal seemed to have some reservations. Approval was given to make arrangements with the "TV Center"<sup>7</sup> to utilize their facilities.

The superintendent watched two television programs with the high-school boys and was favorable toward the study-guides prepared by the teacher. Announcements concerning television programs in other subject-matter areas were placed in the school mail-boxes of the appropriate teachers by him.

Other teachers and students were kept informed about the television activities by articles in the school paper and one article in the county paper. Announcements were made

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<sup>7</sup>A local television appliance firm located approximately two miles from the school and in the same building in which the farm mechanics shop is located.

over the public-address system of the school to inform the boys of the junior-senior class to report to the bus for transportation to the "TV Center". These also made personnel in the school aware that television programs were being used. Other teachers asked the teacher questions about the use of television and how and why the programs were being used. Approximately five teachers expressed an opinion that television "might be a good thing". All of the high-school boys in vocational agriculture were kept informed about the television programs by the teacher.

Parents and other farmers asked the teacher questions about technical subject matter based upon their knowledge that he was using certain television programs which should have provided answers to their questions, for example, questions on social security.

### Content and Methodology

An organizational meeting of the young-farmers was held, and the class members suggested topics in which they were interested and had a need. They first recommended a series of meetings on animal sanitation, but later decided that they wanted to use four television programs. The teacher planned a series of fifteen topics and dates based upon their recommendation.

The teacher read the script and reference materials which he received in preparing to teach a given class. He secured

such other reference materials as might be available in the department or at the county agent's office and at times conferred with persons to secure special information. This procedure was generally the same as that followed in previous years except that the prepared television script and other reference materials had not been sent to him.

In this school the young-farmer class met on Monday nights and the television programs were received on Wednesday's at 1:00 P.M. At the class meeting prior to the television program the class-members were informed about the program that was to be telecast. A study-guide or list of questions, based upon the script, reference materials, and the teacher's study and observation, was distributed to them. They viewed the program on Wednesday at the "TV Center" or independently at home. Usually about 65 percent of the class viewed each program. The study-guide or list of questions was used as a basis for discussion at the next meeting, and the problems of the members were studied. At times a resource person was brought in to provide additional information. Functional forms and other materials were utilized with some of the programs. It was generally felt that the members who had viewed the programs were more advanced than the others. Their responses during the meetings were usually voluntary although at times the teacher asked somewhat leading questions to bring out what they had learned concerning given problems

from the programs. This procedure was different from previous years as study-guides and television programs were not used then.

Follow-up activities were carried out by the teacher by giving individual instruction on problems encountered, such as social security and income tax. In addition, tours were made and members were given on-farm instruction and help in planning farm jobs.

Reference materials were used in the preparation for the class meetings as described previously. In addition, some of the materials were duplicated or additional copies were secured and distributed to the class members.

The instruction was evaluated in previous years by the information which was submitted to the Division of Agricultural Education in the annual report form for young farmers. This year's instruction and class meetings were evaluated by the information secured from the same report, personal contacts, attendance, and on-farm instruction. In addition, the ratings and information reported on Forms H and I and the approved practices reported on Form J were utilized.

### Evaluation

The specific values of the television programs were that they kept the teacher informed, that they provided individual information or help, and that they showed the possibility of a new field of audio-visual education.

Recommendations were made concerning the reference materials. It was suggested that the sources of additional references which might be utilized should be added. The order in which the scripts were to be used on the programs should also be made clear--for example, the telecaster sometimes started in the middle of the script and "went both ways".

The strong-points of the programs were the excellent presentations which were made by some of the persons appearing on them. Some of the criticisms which were made included the following: (1) some of the programs were uninteresting, (2) certain telecasters lacked showmanship, (3) in some situations the class members had trouble understanding the information presented, (4) the program formats were generally lacking in action and were not comparable to the farmers' situation, for example, two men sitting at a desk smoking and discussing poultry, (5) at times the presentations were somewhat removed from the topic under discussion, and (6) generally, too much subject matter was covered on each of several programs.

It was suggested that these criticisms be corrected to improve future programs. In addition, the recommendations were made that the order in which the script was to be used be made known and that less material be covered in one program. The time of the program was satisfactory for the

high-school class, but a series of programs was recommended for night broadcasting to be used with the young-farmer class.

Television programs were requested for next year for use with the high-school, adult, and young-farmer classes. Subject-matter areas which were recommended included, in the order named, soil conservation, farm mechanics, forestry, dairy, swine, and beef.

### Special Problems Encountered

At times the reference materials were not received early enough to permit effective planning. In addition, there was a problem in preparing questions and study-guides when the reference materials were late or were inadequate in materials and information. The change in the program continuity from the order of the script sometimes presented a problem, as reported previously.

Both visual and audio reception were poor at times. Spacing the class members so that all could see presented a difficulty. The outside light also caused reflections on the television screen and interfered with the viewing.

As reported previously, only about 65 percent of the young farmers viewed the programs, and this factor was somewhat of a problem in conducting the class meetings.

### Activities Special to This Case

The teacher felt that he needed additional help on securing supplemental reference materials and suggested that

more of these materials be prepared and sent to the teachers prior to the programs next year. The opinion was expressed that the programs had certain "indirect" values, namely, other teachers became interested in the possibilities of a new field of audio-visual education.

The meetings in which the televised programs were used consisted of three phases: an orientation of the program and the preparation and distribution of a study-guide at the meeting prior to the telecast, viewing the program outside of the regular class meeting, and the meeting after the television program at which the topic and problems were discussed. Special visual aids were generally prepared for use during the "third-phase" meeting. This school was the only one in which the method of viewing described previously was utilized.

The programs were viewed by a part of the young farmers and the high-school boys at the "TV Center." Other young farmers viewed the programs independently at home or in the homes of friends. This was the only school in which the programs were viewed in this manner. This teacher was also the only one who prepared study-guides for the use of the high-school boys and young farmers.

The reception was generally rather poor as to both the audio and visual signal. Seemingly, this fact caused the class members to have difficulty in understanding the information which was presented.



The interview with the teacher in the school was the only one of which a tape recording was not made.

Nine of the programs were used with the junior-senior class, and the teacher had the boys respond to three questions about the programs. The results of these ratings are shown in Table I.

### School D

#### Types of Farming

This school was also located in Area 8 whose types of farming are described previously under school A. More specifically, the school service area was located on the periphery of the area from which personnel drove into a large industrial area for employment. The part-time farming was rather small.

The soils were generally of a lighter, sandy type, and were very suitable for hay and forage crops. Dairying was the major livestock enterprise. The area could be described as a "good" farming area.

#### Personal Information

The teacher was twenty-eight years old and had received the Bachelor of Science degree in agricultural education, at the time that the interview was conducted. He had completed three quarter-hours of technical agriculture and twenty-four quarter-hours of professional education courses.

TABLE I  
OPINIONS OF JUNIOR-SENIOR CLASS MEMBERS IN SCHOOL C  
OF SELECTED TELEVISION PROGRAMS\*

Question and Opinions	Times Reported by Class Members (N = 25)
I. What Are Your Main Gripes?	
Too dry, no humor or life	18
Too fast	17
Too short	10
Too complicated	6
Can't hear	6
Not enough facts	5
Incomplete program	3
Poor reception	3
Information of no use	2
Too long	1
Not interested	1
II. What Are the Points You Favor?	
An interesting way to learn	16
Interesting	11
Will profit me in the future	10
Good information	9
Programs apply to my situation	6
Learn valuable facts	5
III. What Kind of Programs Would You Prefer to View?	
Crops	13
Farm mechanics	11
Conservation	10
Dairy	9
Soils	7
Wildlife	6
Animal husbandry	2
Forestry	2
Fruits	2
Farm Management	0

\*This rating was secured by the teacher prior to and independent of information requested by the investigator for his study.

While he had not completed any audio-visual courses, he was enrolled for credit in a problem course in the use and evaluation of educational television as a member of the Television Study Group. He had taught vocational agriculture for four years--all in the above school. He taught four high-school classes of vocational agriculture with an enrollment of forty-three, one adult-farmer class with an enrollment of twenty-seven, and one young-farmer class with an enrollment of sixteen. He taught three adult and three young-farmer classes prior to this year. He attended thirteen out of fourteen in-service meetings.

#### Interpretation and Relationships

The television schedule was published in the local paper, and all of the boys in the high-school classes of vocational agriculture, as well as the young-farmer and adult-farmer class members, were told about the programs and activities. Persons outside of the school asked several technical questions about television, about the UHF channel, and about converting a television set to receive this channel. Two articles were written by the Information Specialist at Michigan State College, and one of the articles was published in a national magazine, while the other one was published in a state farm magazine. Similar types of articles were also published in the two small-town newspapers which were subscribed to by persons in this area. Other teachers of vocational agriculture asked questions at various times about television and the ways in which it was being used in this school.

The superintendent periodically visited some of the classes in which the television programs were being used. The teacher continually discussed the uses of the television programs with him. The investigator also conferred with the superintendent on most of the visits to this school and discussed educational television with him and left selected materials for him to read. The superintendent attended the television in-service meeting held in his school.

The kindergarten teacher used the television set to view five or six programs of "Ding-Dong School"<sup>8</sup> with her class. The set was also utilized by the sixth-grade teacher with her class for one program. The superintendent and a select group of students, not in vocational agriculture, viewed a special television series on the improvement of one's writing.

### Content and Methodology

A five-man, adult steering committee was used to plan the topics and the class meetings. The topics for the series were based upon observations, suggestions of the teacher, felt needs, and what had been taught in previous years. Two television programs were selected. The recommended topics for the series of meetings were presented to the class on the first night. The members made such additions or deletions as they desired. Another television program in which there

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<sup>8</sup>A television program telecast nationally.

was special interest, "Farm Commercial License," was selected later. The class met weekly starting in January and continued meeting until the number of meetings specified by the state requirements had been met.

Television programs were also used with the young-farmer class. A three-man steering committee was used to plan the series of meetings in a manner similar to that of the adult group. Three programs were selected, and the meetings started in November and continued for nineteen meetings. The meetings were discontinued in the spring when interest decreased and farm work increased.

In preparing for the meetings the teacher read the scripts and reference materials and secured other needed and available references after studying the received materials. The lessons were planned "around the television programs". This procedure was not different from previous years except that the television programs were a different type of instructional aid as compared to previous aids, such as the blackboard, a film, or a resource person.

Prior to viewing a program, a discussion was held and questions were asked by the members, or the teacher "tried to stir their minds or to raise questions in their minds". After the television program was viewed, it was discussed; and additional information was presented by the teacher. He also used the information presented by television, in classes attended by the investigator, in solving some

particular problem of the class. For example, after viewing the "Income Tax Tips" program, the young farmers worked on their record books and started filling out their income tax forms.

The procedure that was used in the classes this year was different from previous years for the television programs were not available then. Usually, in former years a given meeting would start with the information or facts, and questions were not raised for discussion. This procedure was somewhat reversed during the present year.

Each program was almost a separate unit, and the programs "were not carried forward or tied together" except in isolated cases as a means of follow up. However, tours and field trips were made and on-farm instruction was given by the teacher. Different farmers asked questions at various times on certain topics, for example, social security and the bulk-handling of milk.

The reference materials were used in preparation for the class meetings. The scripts were used to answer questions when the answers were not known or were in doubt. Additional reference materials or additional copies of the materials were secured and either distributed to the class members as their personal copy or were distributed for use during the class meetings.

The activities of the classes and the instruction were evaluated by the results of on-farm visits, observations,

and questions that were asked. In addition, agreeing in class on the practices and on their desirability and making decisions were also used as a basis of evaluation. All of the forms which the teacher used as a part of this study were tabulated and summarized before they were submitted.

### Evaluation

The television programs had three specific values:

- (1) they provided more information in a quicker time,
- (2) information was provided which was not otherwise available, and (3) television seemed to be appealing to the young farmers.

Generally, an excellent "job was done" in supplying reference materials. At other times the materials made no reference to bulletins. It was recommended that the materials include the name and the bulletin number of the available and relevant bulletins.

The major criticism was made of the visual aids used, especially the charts. Some of the charts did not seem to be too well thought out and could not be read. Too much information was included on the charts and slides, and the background of the charts and letters had "fancy" designs which made them hard to read or unreadable. In some situations no reference was made to the charts nor were the pertinent points of the charts pointed out as they were being explained. In addition, there was a general lack of showmanship

by many of the persons appearing on the television programs. It was recommended that these criticisms be corrected and that future television programs be "put on" by the School of Agriculture.

The television programs provided technical information and made the subject matter available to many people. The opportunity to have access to many resource persons was considered as another strong-point of the programs.

Television programs were desired for another year for all three types of classes. The subject-matter areas desired for the adult farmers included: (1) swine management and beef management, especially feeding, (2) fertilizers, (3) tillage, (4) marketing, and (5) a comparison of diesel and gasoline engines. Information on establishment in farming was selected for the young farmers. For the high-school boys in vocational agriculture, information on tractors and farm management was needed.

#### Problems Encountered

The reference materials and scripts generally arrived too late. They should be received at least a week in advance to provide an opportunity for effective planning.

#### Activities Specific to This Case

The teacher was of the opinion that additional in-service training meetings were needed to develop ways of using television as a part of an instructional program, to become informed



as to how television programs are produced, and to learn the problems involved in television production. In addition, he desired a weekly or monthly television guide listing all of the agricultural programs which were to be telecast by stations in the area.

The television programs definitely had certain "indirect" values. The in-service meeting on television and the reference materials were helpful. The programs caused the teacher to do a "better job of preparation for teaching" for he knew that many questions were going to arise from these programs that would need answering.

The attendance was estimated to be somewhat the same as in previous years. It also seemed to be about the same regardless of whether or not television was used. The main factor which seemed to affect attendance was whether or not the class members were interested in the particular topic that was to be studied at a given meeting.

The set was bought in this case and was installed in the agricultural room. The Future Farmer chapter paid one hundred dollars, and the school board paid the remaining one hundred thirty-five dollars, which included the antenna. The dealer sold the set and the antenna at a wholesale price and the Future Farmer boys installed them. No future plans were made for paying the necessary maintenance cost.

Two of the programs were used with the junior-senior vocational agriculture class. In addition, two programs of

the state Future Farmer convention were viewed by the entire class. Five of the "Town and Country"<sup>9</sup> programs were viewed independently by one to five boys who had enterprises in their farming programs that were being discussed on these programs.

The school was so situated that it could receive both the "live" programs from one station and the kinescoped recordings of the programs, which were telecast a week later, from another station. Therefore, this was the only school which used a television program with two different groups on the same day. This was also the only teacher who used television programs with both the young-farmer and adult-farmer groups. Because of this unique situation the investigator visited three classes in this school, whereas only one class was visited in each of the other schools.

Additional evaluative forms were developed and administered by the teacher. A detailed summary and analysis of these forms and those supplied by the investigator were made.

Other teachers in the school and the superintendent made somewhat extensive use of selected programs. The investigator is of the opinion that more use of television was made by the teacher of vocational agriculture and other teachers in this school than by any others who participated in this study. More publicity concerning the use of television was probably received by this school than by any other.

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<sup>9</sup> A forty-five minute agricultural television program telecast daily at 12:45 P.M., Monday to Friday, by WKAR-TV.

## School E

### Types of Farming

This school was also located in Area 8. The soil was somewhat better than that reported for School D. Field beans and sugar beets were raised on some of the farms, and dairying was probably the major livestock enterprise followed by beef cattle and hogs. This school's service area was also located on the periphery of the area from which employees in the industrial plants were drawn.

### Personal Information

The teacher was fifty-nine years of age and held the Bachelor of Arts degree and also the Bachelor of Science degree in agricultural education. He had not completed any additional course work. He taught science and social studies for five years and had taught vocational agriculture for twenty years. He had been in this school for the last thirteen years. He taught three high-school classes of vocational agriculture this year with an enrollment of fifty-four and one adult-farmer class with an enrollment of twenty-five. He had taught eighteen adult classes during the last fourteen years. Eight out of thirty-two in-service meetings were attended by him.

### Interpretation and Relationships

The desirability of using the television programs was discussed with the superintendent and advisory committee.

The superintendent was kept informed of the television activities by discussions with the teacher. On two occasions the superintendent made long-distance telephone calls to get the teacher on the mailing list for the reference materials and to have specific reference materials sent out to him for use with one television program.

Announcements of the television programs and the activities of the teacher were reported in the weekly bulletin of the school. These bulletins were read to all of the high-school pupils in vocational agriculture, and they were kept informed by this method.

Three other teachers used the set to view other television programs.

### Content and Methodology

The advisory council met, set-up the series of meetings and the individual topics, and selected the television programs that were to be used. Ten meetings were planned with additional meetings dependent upon the attendance, the interest of the group, and the weather in April. The recommendations of the council were accepted as the basis for the meetings and were not referred to the other class members.

The reference materials were used for developing the questions and becoming informed about the technical subject matter. At times, the planned topics were changed when the reference materials did not arrive in time for use. In previous years the meetings were prepared for by planning a

question and answer program, and the teacher had to do research to "fortify" himself.

A discussion was held prior to the programs to prepare the members, and lists of questions based upon the script were written on the blackboard. The programs were viewed. There were then some leading questions on the blackboard, and the discussions were based upon the scripts and problems that the farmers brought up. Two speakers were brought in during the series. If the members wanted to go off the television topic, the teacher "let them go".

An effort was generally made to try to "tie-up" each meeting with the one that followed if there were any "possible tie-up at all". Lists of questions based upon the subject matter presented in one or more meetings were distributed to the farmers and answered, but they were not turned in. Questions were not prepared for a few of the meetings. Other follow-up activities included farm visits at which times questions which the farmers asked were answered.

The reference materials were used to put topics and questions on the blackboard to be sure that everything in the television program was covered, in addition to the uses reported previously. They were filed for future use.

The teacher discussed the programs with the class near the close of the series to secure their reactions and evaluations. Form H was carried by the teacher to the individual farmers who filled them out. The farming programs and

practices were "looked-over". "The farmers said that they got a lot of good out of the meetings." The practices which were discussed in class were followed up out on the farm. However, the teacher felt that it was quite a problem to know what was responsible for the adoption of the approved practices by the farmers.

### Evaluation

The teacher stated that the television programs had three specific values: (1) they brought problems to the minds of the farmers which needed solving and showed them a need for keeping records, (2) they "opened-up" the farmers' thinking, and (3) the farmers realized that there was a state college and that they could get help from the college personnel. In addition, the programs caused the farmers to recognize that there were many problems and much to be done in agriculture. Much information was received from the television programs. The program which discussed the packaging of farm products and the dramatic type of program in which the "producer's share of the consumer's dollar" was discussed were considered to be the strong-points of the televised programs.

The programs did not generally meet the farmers' expectation. They did not solve their problems and give them the answers. While the programs provided much information, they did not give "the way out". Farmers "who were doing a

good job in a given enterprise" should have been used on some of the programs. Much of the information that was presented had already been read in the paper or magazines. The telecasters should have presented information which was not available in print and should have brought in resource persons.

One major recommendation for improving the programs was made: that farmers who had had successful experiences be included on future programs. The criticisms made in the previous paragraph also needed to be corrected.

Television programs during the next year were requested for adult-farmer and high-school classes on the dairying, swine, and beef enterprises.

#### Problems Encountered

The only problem of any consequence was that the reference materials arrived too late.

#### Activities Special to This Case

The major "indirect" value of the programs was that they made the farmers aware of the state agricultural college.

The television set was purchased by the board and was installed in the agricultural room. Several programs from two different stations were used with two of the high-school vocational agriculture classes on a twice-weekly basis.

This was the only school which utilized an advisory council in planning the series of meetings and prepared questions which were answered by the farmers.

## School F

### Types of Farming

This school was located in Area 5. The amount of part-time farming, the soil types, and the farm enterprises were comparable to those reported for School B.

### Personal Information

The Bachelor of Science degree in agricultural education was held by this teacher, and he was twenty-five years old. He had completed five quarter-hours of technical agriculture and eleven quarter-hours of agricultural education beyond the degree. He had taught vocational agriculture for three years and all of the teaching was in this school. He was a 4-H club agent for six months prior to the time that he started teaching vocational agriculture. This year he taught one biology class, three high-school classes of vocational agriculture with an enrollment of fifty-two, and one young-farmer class with six persons enrolled. Two young-farmer classes were taught prior to this year. Two out of nine in-service meetings were attended by him.

### Interpretation and Relationships

The plans for using the television programs were discussed with the superintendent, and he gave his approval. He was kept informed about the television activities and how and what was being done. The problem of attendance was frequently discussed with him.



Five or six newspaper articles were published to inform the high-school boys in vocational agriculture and the public about the use of television. The articles were used as a means of public relations with the local television dealer who had loaned a television set. In addition, they explained why a television set was in the school, how it was used, and what it was used for.

The way in which the television programs were being used and their purpose were explained to the high-school boys. They were asked to inform their parents and the young farmers about the television programs.

#### Content and Methodology

The class series for the young farmers was determined by the television programs on economics. The teacher selected the television programs and told the young farmers what the topics would be. In previous years he had tried to work out the topics with the class members, but they seemed to feel that the teacher knew what topics and information should be taught. Fifteen meetings were planned.

The teacher "went over" the scripts and other reference materials, which usually were received on a Monday or Tuesday prior to the telecasts on Wednesday, and marked pertinent points in preparing for the meetings. In addition, parts of the materials were selected and marked for discussion after the television programs. These materials saved much time and work in preparing for the classes and required "less digging".

There was usually recreation on class night until about 8:20 P.M. (the teacher stated that he felt that recreation held them together better than anything else). The telecast which was to begin at 8:30 was discussed and points to look for were enumerated. The television program was viewed, and then a fifteen-minute newscast which followed was viewed. After the television programs the teacher took the script and brought out key-points, asked questions, and discussed the script, all of which usually required about forty-five minutes. More recreation was participated in, and then the group departed.

This procedure was different from last year's activities. Farm mechanics was taught then; and since the content was on skills, no recreational activities were planned. There was better attendance last year, and the class members seemed to have more interest, which was probably caused by the teaching of welding. It was felt that the first year's teaching was quite academic and a somewhat formal situation prevailed. Questions were prepared in advance and new bulletins were used in finding the answers to these questions. There was not as much interest as in the next year when the farm mechanics course was taught.

There were no follow-up activities except after the program on the bulk-handling of milk. In that situation two farm visits were made to help class members with plans for the pole-type barns.

In evaluating the instruction, the teacher devoted much thought to trying to determine why there was not greater attendance. Most of the evaluation was of a subjective nature. Evaluation of last year's class included the information on numbers and attendance reported on the annual report form to the Division of Agricultural Education, but no approved practices were listed.

### Evaluation

One of the specific values of the television programs was their ability to provide motivation. The programs also provided an opportunity for the class members to see the television personalities "first-hand" and presented current information in the field of economics.

It was recommended that sufficient copies of the reference materials be provided so that each person could have a copy of selected references, for example, the lease forms. The script would be just as satisfactory if it were prepared in outline form.

The strengths of the programs included: (1) the "authority" that the subject matter had because it was presented on television, (2) the current information on marketing and the bulk-handling of milk, and (3) the opportunity of meeting the telecasters first-hand.

Some criticisms, however, were made about parts of some of the programs. It was felt that more visual aids should be

used and that most of the straight lecture-type programs should be omitted. At times the presentations were "too deep", for example, the programs on parity and tax equalization; and too much information was presented in too short a time. More enthusiasm and a more dramatic approach was needed to the programs, such as the "detective" type of format that was used on the "consumer's share of the producer's dollar" program. The programs should involve more people.

Several recommendations were made concerning future programs. The criticisms described above needed to be corrected, and the programs should be designed to a greater degree toward explaining and providing information for the adoption of approved practices. The programs should also include demonstrations and explanations of how to do specific jobs. Greater improved attendance and reception would result if the programs were telecast at 7:00 or 7:30 P.M. on a VHF channel.

Television programs should be telecast next year for the adult-farmer classes. Suggested topics included dairying (milking practices), crops and soils (fertilizer application), and farm mechanics. A few programs were also desired on economics.

#### Problems Encountered

Generally, the television scripts and reference materials were received too late for the most effective planning.

Attendance' was rather small and much time was expended in trying to improve it. Locating the set so that extraneous and background light was removed created a minor problem. The television picture was generally "snowy", and the reception could only be rated as "fair" to "poor". This quality of reception was probably caused by the fact that only an inside aerial was used.

#### Activities Special to This Case

Additional assistance was requested on how to use television more effectively.

The television programs had several "indirect" values. The reference materials were a desirable aid in preparing for and in teaching the classes, and information was received at the in-service television meeting which helped in the planning and the using of the programs. Both the reference materials and the programs increased the technical agriculture knowledge of the teacher. These programs may also have initiated a desirable step toward the future use of television programs by the schools.

The teacher contacted the local television dealer who loaned a set to the school. He brought it out to the agricultural building, which was located approximately one mile from the main school building, and installed and adjusted the set. The superintendent had agreed to pay for the antenna and its installation, but only a small inside aerial was considered to be necessary when the set was installed.

Three of the "Town and Country" programs were used with the junior class in vocational agriculture. The reference materials were also used by the teacher with the senior class of vocational agriculture when teaching economics subject matter. Four of the scripts were used specifically with this class. One of the senior boys gave a talk in English class which was based upon the information in the script on parity. The report was not submitted on the approved practices which were adopted by the class members. The teacher stated that as far as he knew, no practices were adopted and he had no way of knowing or determining which practices were adopted, especially as a result of the instruction and class meetings. It was felt that there was little need or use for a young-farmer class in this community. Much of the evaluation was of a subjective nature and consisted of trying to determine why the attendance was small and how it could be improved.

#### School G

##### Types of Farming

The service area of this school was also located in Area 5, and the types of farming in the area were very similar to those also reported for school B.

### Personal Information

The teacher in this school was twenty-seven years old and held the Bachelor of Science degree in agricultural education. He had completed one course in audio-visual aids and materials, ten quarter-hours in agricultural engineering, and thirteen quarter-hours in agricultural education. He taught institutional-on-the-farm trainees for one year and had taught vocational agriculture for two years. All of his vocational agriculture teaching was done in the above school. Three high-school classes of vocational agriculture with an enrollment of thirty-two, and one adult-farmer class with an enrollment of seventeen were taught by him this year. He attended five out of eight in-service meetings.

### Interpretation and Relationships

The planned use of the television programs was discussed with the superintendent, and he was kept informed through the discussion of the meeting and of the number of farmers that were in attendance. He appeared to be in favor of having the programs used.

Three or four articles were published in the local paper about the use of television in the class meetings, and two announcements were made over the local radio station.

The television activities were explained to the high-school classes in vocational agriculture, and they were requested to

inform their parents. The senior boys were urged to attend one of the meetings which was considered to be of value to them, and several of them did attend.

The other teachers in the school seemed to know that the programs were being used, and questions were asked by them. However, they gave no indication of any particular feelings either for or against the activities. The board of education was definitely in favor of an adult-farmer program.

### Content and Methodology

At the first class meeting of the series the television schedule was studied by the class members and desirable programs were selected. These programs were the basis of the instruction during the year. Meetings were held until the spring weather was warm enough for farm work and until the farmers generally stopped attending the meetings.

In preparing for the meetings the teacher read the reference materials and tried to get any additional references that were available. He also tried to secure a resource person for the meetings when it was possible to do so.

This preparatory procedure was different from previous years for television programs were not used then. The general procedure used last year was to "figure out" the topics that were desired with the class, and several resource persons



were used. It was more difficult to prepare for the class meetings than for the reference materials and subject matter had to be "dug out" by the teacher.

Generally, the class started about 8:15 P.M., and an explanation was made to the class about the television program. After the program was viewed, the resource person explained and discussed some of the information received from the program and presented additional information which was omitted by the program. Five resource persons were used in this manner on different nights. When a resource person was not present, the teacher discussed the programs and presented additional information. Bulletins, scripts, and other reference materials were used in supplying this information and in "tying the television program together", and some materials were distributed to the farmers to take home. One additional resource person was used at one of the meetings at which a television program was not used.

This procedure was different from last year as no television programs were used. The instruction last year was largely lectures, and the farmers asked some questions near the end of each meeting.

Generally, no follow-up activities of the instruction were carried out. However, a speaker was secured for the next meeting after the television program on cooperatives.

There was no planned evaluation of the class activities and instruction last year. The forms prepared by the

investigator for this study which called for an evaluation of the television programs were used this year. The class members were also requested to list the approved practices which they had adopted, at the end of the rating form.

### Evaluation

The class members generally liked the television programs, and they saved the teacher time in preparing for the instruction. Much of the needed reference materials was also prepared for him. The information which was presented on the television programs was considered to be more "authoritative".

The recommendation was made that the reference materials should be mailed earlier. General questions should also be prepared to present to the class members at each meeting. Suggestions were also needed for introducing the topics and the television programs.

Some of the programs were considered to be too specific and did not fit some of the areas, especially the general farming areas, for example, the program on fruits. The programs which were included in the fourth (miscellaneous) series were of little value. Many of the programs consisted of too much lecturing, and some of the telecasters seemed nervous.

The use of the interview format made the programs more interesting. In addition, the use of "several props" and a

"dramatic approach" created an interest for the viewers, for example, the "detective" technique on the "producer's share of the consumer's dollar" program. Generally, the materials, charts, and other visual aids "showed-up pretty well". There was good reception for all of the programs.

It was suggested that the limitations described previously be removed, if possible. The series of programs should be presented in a continuous, organized, and progressive sequence. Topics which are more closely related should be selected. Less time between the programs of each series would be desirable, and the television program should be concluded by the middle of April.

A series of programs was desired next year for the junior and senior classes in vocational agriculture on getting started in farming. Programs for the adult farmers were requested on the subjects of livestock, crops and soils, marketing, and getting started in farming, especially financing.

#### Problems Encountered

Generally, the reference materials and scripts arrived too late. The teacher felt that he did not know the agricultural-policy subject matter well enough for effective teaching. The instruction and class activities were not followed up very thoroughly, and there was little response to the request for the farming practices adopted. Securing and maintaining attendance was also a problem of some concern.

### Activities Special to This Case

The teacher stated that he needed help on determining the approved practices that might grow out of the television programs.

The prepared reference materials and the source units were considered as "indirect" values of the television programs. Receiving these materials in advance was also a great assistance in preparing for the class instruction.

The television set was brought to the agricultural room by the local television dealer, and it was removed by him after each program. The antenna was installed by the dealer for the first meeting and left there continuously. The reception in this school was excellent.

More resource persons were used in this school, in the opinion of the investigator, than in any other, and the series of meetings were based upon the television programs. This was the only school that made announcements of the meetings on the local radio station.

### School H

#### Types of Farming

The types of farming in this school service area were very much like those of School B also. The school was located in Area 5.

### Personal Information

This teacher was twenty-six years old and graduated with the Bachelor of Science degree in agricultural education. He completed a three quarter-hour course on the problems of beginning teachers but had not taken any audio-visual courses. He had taught vocational agriculture for only one year. This year he taught three high-school classes of vocational agriculture with an enrollment of fifty-five, one adult-farmer class with an enrollment of twenty, and one class of young farmers with an enrollment of ten. He attended one out of three in-service meetings.

### Interpretation and Relationships

The possibility of securing a television set in order that the programs might be used was discussed with the superintendent. The plan for using the programs with the young and adult-farmer classes was explained to him, and he thought that "it might be a good idea." No discussions were held with other teachers as to what they might have thought about the use of television, and no activities were planned or carried out to inform people outside of the school. There did not seem to be any adverse reaction, and the people were probably indifferent about its use. No comment had been heard either for or against the use of television.

### Content and Methodology

The farmers were called together, and the different approaches which could be made to the class meetings were explained. The television programs were explained to them. The programs were probably used because the idea of using television as an instructional aid was new, and the teacher wanted to try out some of the programs. At the first meeting, the farmers selected four programs that they wanted to use and planned the meetings and topics until February. In February the class presented topics in which they were interested and left the planning of the topics and dates, at the most convenient time, to the teacher. The class met bi-weekly, but held one meeting per month during the summer.

The script was read and the other reference materials were studied by the teacher in preparing for the instruction and in informing himself on the subject matter.

A short introduction was made prior to the start of the programs, and the teacher tried to get the farmers to ask questions. The programs were viewed, and the television materials were discussed. At times, charts were prepared and they were discussed, for example, the marketing program. A specialist was brought in to present information and answer questions after the program on social security, and pamphlets and circulars on this topic were distributed to the class members. No follow-up activities were planned.

Pertinent parts of the reference materials had been marked previously and were used as a source of information after the programs, in addition to the uses described previously. The charts explained in the above paragraph were based upon materials or charts in the various references. Information which was put on the blackboard at times was taken from the scripts, for example, an explanation of parity.

### Evaluation

The teacher was undecided as to whether the television programs had any specific values. He wondered if he were using them because they were available or because they met a need.

The programs were not closely related, and it was somewhat boring to watch a person lecture for thirty minutes. More visual aids were needed, and the charts that were used were not clear. More people were needed on some of the programs. Generally, it was felt that the meetings would have been as successful and as much would have been accomplished without the television programs. It was recommended that these criticisms be corrected to improve the programs and that a definite, closely-related series be telecast.

The most important phase of the television activities was the reference materials. However, the programs were valuable for presenting ideas and providing subject matter. The specialists who appeared on the programs could present

"better" information and additional information which the teacher might miss. In addition, more complete information was provided, and it was "covered" more thoroughly than the teacher could present it. The programs improved as the series progressed during the year.

Television programs were requested for next year for adult and young-farmer classes and for the high-school classes in vocational agriculture. The requested subjects, in the order named, were dairying (feeding, roughage, breeding); soils (fertilizers, fertilizer placement, soil testing); and soil conservation (land-use capabilities).

#### Problems Encountered

The reference materials for the television programs were received too late, and the farmers did not arrive early enough for much discussion or orientation prior to the programs. There was a tendency for some of the members to discuss some phase of the program as it was being telecast. There was a question in the teacher's mind as to whether the television programs caused a decrease in attendance, and the class "did not seem to care too much for the television programs."

#### Activities Special to This Case

The television dealer in a nearby town brought a set to the school on the nights that the programs were used and removed it after the meetings. The quality of the reception was excellent.



The young-farmer class met with the adult-farmer group for the meeting on social security. The adult-farmer class and the teacher from another school also were present for this meeting.

### School I

#### Types of Farming

This school was located in Area 8, and the types of farming in this area are reported under School A. Probably the service area of this school was the "best" farming area of all of the ten school areas. The soil was level, well drained, and highly fertile. A very high percentage of the farmers were engaged in full-time, commercial farming. The major crops were field beans, sugar beets, and wheat.

#### Personal Information

At the time of the interview the teacher had received the Bachelor of Science degree in agricultural education and was twenty-nine years old. He had completed a three quarter-hour audio-visual course, nine quarter-hours of technical agriculture, and three quarter-hours of agricultural education beyond the degree. He had taught vocational agriculture for four years, the last two years in this school. This year he taught one general shop class with an enrollment of twenty-seven, three classes of high-school vocational agriculture with fifty-two pupils enrolled, and one adult-farmer class.

Previously, he had taught one adult-farmer and one young-farmer class. He attended three out of seven in-service meetings.

### Interpretation and Relationships

The possibility and desirability of using the television programs were discussed with the superintendent. He thought that this "would be a good idea if it did not interfere too much with the school program". The teacher also explained that this was "something new in the field of education, and I wanted to try it out."

The adult-farmer class was told about the programs and was urged to view them. At one of their meetings they were questioned as to how many had viewed a certain program, and five persons stated that they had viewed it. The high-school boys were also urged to inform their fathers and to ask them to view the programs.

The other teachers were rather curious about the television activities and asked questions about the set and the use of the television programs. No comments were made to the teacher by people in the community about the use of television nor were any reactions heard or observed.

### Content and Methodology

The information about the television programs and the schedule were received. The schedule was written on the blackboard, and the boys asked questions about the program

titles and the probable content of the various programs. They selected three programs in which they were interested and which they thought would have value. The teacher thought that three programs was about the number that would be desirable and reasonable as the boys had to be taken out of other classes to view the programs.

The reference materials were read and studied in preparing for viewing the programs, and an outline of pertinent points was made. Lists of questions and pertinent points to look for were developed from the boys and the script. The programs were viewed and a brief fifteen-minute discussion was held, which was all of the time left in the period after the conclusion of the programs. The television programs and the materials were discussed with the individual classes on the days following the telecast. An effort was made to "tie-in" the television programs with the regular teaching plans.

This procedure was different from previous years for the television schedule and dates were definite. Topics and teaching plans could be planned specifically for and around the television programs. When films had been used, they were not received at a time that their use would coincide with the teaching materials and planned topics.

There were no follow-up activities other than the discussions of the programs and the information presented on them.

No particular activities or devices were used to evaluate the results of the instruction and the class meetings, other than attendance which has been used as an indication of the success of the meetings.

### Evaluation

The concomitant reference materials were of great assistance in planning and presenting the instruction and in viewing and using the television programs. The fact that the programs would be telecast on specific dates which were known in advance was of great importance in planning the instruction. It was also desirable to have the information presented by "experts."

Generally, the charts were too small and the presentation was too academic. The telecasters were usually dressed in suits, and there was a lack of a "farm atmosphere." The viewers were not "taken out on the farm" by the use of pictures or other techniques. The reception was poor and the use of a table model set made it hard for the boys to view the programs.

However, the programs had some strong-points. The use of visual aids and illustrative devices made the information more clear and understandable. The presentations were generally "right to the point" and provided specific answers and definite subject matter.

More farm operations needed to be presented on the programs to improve them. A more desirable time for telecasting the programs would be 8:00 P.M. or 11:00 A.M.

Programs were requested next year for the high-school classes and the adult farmers. In order of priority, the subject matter areas were cash crops (beans, sugar beets, wheat), dairying, and soil conservation (erosion control).

#### Problems Encountered

The reception was somewhat poor, especially the audio phase, as only an inside aerial was used. The location of the set and the extraneous and background light made it difficult for the pupils to view the programs. Some of the boys had to sit at such a viewing angle that they could not see the picture very well. The poor quality of the reception and the inability to see affected the interest and the understanding of the information.

The time of the telecast was undesirable as the pupils had to be released from other classes, and this action created a minor problem. Some of the boys were also absent either when the programs were telecast or when the discussions of the programs were held. Therefore, they did not develop the understanding of the subject matter that the others did.

#### Activities Special to This Case

The teacher desired additional help on how to use television programs correctly as an instructional aid. He also

wanted some factual information which could be used as a basis for deciding whether or not to purchase a set for the school. The most important "indirect" value of the television activities was the reference materials which were prepared and mailed to the teachers.

This was the only school which used the television programs exclusively with the high-school boys who were enrolled in vocational agriculture. It was also the only school which had all of the pupils in vocational agriculture view the programs and which did the viewing simultaneously.

Because of the method of viewing the programs, the discussion of the programs and the information presented was conducted in two class meetings on days after the programs were viewed.

The local television dealer loaned a set for the first program, and the teacher brought his own set to the school for the last two programs. This was the only school where this was done.

The investigator did not visit a class in this school or make a tape recording of a class meeting.

#### School J

##### Types of Farming

This school was also one of the six schools which were located in Area 5. The farms were somewhat smaller than those



of the more commercial farming areas. The types of farming in the school service area were comparable to those which are previously reported for the other schools in Area 5.

#### Personal Information

The teacher was thirty-four years old and had received the Master of Arts degree in education. He had completed a three quarter-hour course in technical agriculture and twenty-five quarter-hours in education beyond the Master's degree. One audio-visual course had also been completed by him. He had taught vocational agriculture for eleven years, the last three in this school. He taught two high-school classes of vocational agriculture with an enrollment of twenty-seven, one adult-farmer (married couples) class with an enrollment of twenty-one, and one young-farmer class with an enrollment of fourteen. He taught eleven adult-farmer classes and seven young-farmer classes previous to this year. Eight out of eleven in-service meetings were attended by him since coming to this school.

#### Interpretation and Relationships

No special activities were undertaken to inform others about the use that was being made of the television programs. The teacher stated, "I consider television as another aid in teaching just as films are. I do not inform my superintendent each time that I use a film." The superintendent



generally knew what was "going on about television" and attended the in-service television meeting held in this school.

### Content and Methodology

The planning committee set up the series of meetings at the first instructional meeting. The teacher was absent from this meeting this year. The class selected the specific topics, and the series of meetings were built around these topics. Both the class and teacher suggested other topics to fill out the series. The class selected four or five television topics in which they were interested. This number was later decreased to three, and these programs were used.

In planning the meetings the teacher used the discussions held at the previous meetings and farm visits to determine the problems. Some thought was given to what the problems might be, and other sources of information were selected. The scripts were read and adapted to the meetings (somewhat as a teacher might do with a film). This procedure was different from the procedure used at first when it was thought that television might "do the whole job", and little lesson planning was done. However, this procedure did not work, and the teacher went back to his regular teaching method and used the television programs as resource materials.

In teaching the class the teacher defined the problem area and specific problems. Reference materials were used and discussed in solving the problems, and approved practices were developed. An effort was made to try to secure some commitment as to the adoption of the practices. The television programs were used as resource information for solving the problems.

The same follow-up activities were carried out as would have been done had no television programs been used. Tours were conducted after the "bulk-handling of milk" program, and on-farm instruction was given.

The scripts were read and studied thoroughly, and the source units were used initially in planning the entire series of meetings.

The evaluation of the instruction and the class meetings was based upon the approved practices adopted as reported on a check-list which was filled out at the end of the series.

### Evaluation

The television programs were another source of reference, if the subject fitted, and presented timely topics, especially when reference materials were not yet available. Information was presented which was not otherwise available, and it was psychologically more "authoritative". The demonstrations and illustrations made the information and subject matter more clear and understandable.

It was recommended that the reference materials be mailed earlier and that charts be prepared for use with the opaque projector and mailed with the reference materials.

Some of the programs were monotonous and dull, especially when not suitable, and inadequate visual aids were used at times. Incorrect visual aids were sometimes used, and there was generally a lack of the proper use of visual aids. Charts were included which had little value, and they were not kept on-camera long enough to enable the viewers to read and comprehend them. There was a difference in complexity of the various programs, and they were largely a waste of time if too far above or below the knowledge-level of the group.

The major strong-points of the programs were the use of visual aids and films and movies to provide action and to present a visual explanation of the topic under discussion.

It was recommended that the above criticisms be corrected to improve the programs. A continuation of more of the "good" programs was desired. The level of presentation of the programs should be maintained at about the same degree of complexity, and charts and materials should be prepared and presented which would not be available otherwise.

A request was made for a continuation of the television programs for adult and young-farmer classes next year. Desired subject-matter areas were production courses (corn, dairy) and farm mechanics (farm-machinery repair).

### Problems Encountered

Scripts and reference materials arrived too late for effective planning. Seemingly, the meetings were not as well attended when the television programs were used.

### Activities Special to This Case

The television programs had several "indirect" values. The in-service television meeting was of value in that different and, perhaps, better ways of using television were learned. The source units and reference materials aided in the preparation and teaching of the lessons. The programs increased the technical knowledge of the teacher, and new methods of teaching and presenting information were learned.

This was the only teacher who taught an adult class of married couples. The class met in the home of the teacher for the meetings in which the television programs were used and viewed them on his set. The other meetings were held in the homes of the other members on a rotating basis.

The scripts were also used fifteen to twenty times with the young-farmer and high-school classes as reference materials even though the television programs were not used.

The teacher thought at first, based upon discussions and activities, that the television programs would do the "entire job of teaching". He became more realistic and realistic and realized that the programs were not worthwhile without proper planning and utilization. When television

was first used, the class viewed the program and then discussed it, but this procedure "did not work". He generally held that television was another instructional aid, and, therefore, activities to keep administrators and other informed were unnecessary.

## CHAPTER VI

### PRESENTATION AND ANALYSIS OF DATA

The analysis of the data is presented in this chapter and is divided into three sections: (1) data related to the use of television programs and reference materials, (2) data related to the evaluation of television programs and reference materials, and (3) data related to the criticisms of the programs and to the recommendations for future reference materials and programs.

From the beginning of the Project, it was felt that the programs would be more suitable and desirable for adult and young-farmer classes than for high-school pupils. Therefore, the major emphasis in the study was placed upon the use of the programs with the former groups. As stated previously, forms were sent to the teachers upon which they were to report certain information as to the use and criticisms of the programs and recommendations for improvement.<sup>1</sup> Another rating form<sup>2</sup> was administered by the teachers to the class members, including the high-school pupils, near the end of the series of meetings. A comparison between the ratings, criticisms, and recommendations of the high-school pupils

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<sup>1</sup>Referred to hereafter as Form E.

<sup>2</sup>Referred to hereafter as Form H.

and the adult and young-farmer class members is presented in this chapter, although it is not one of the major purposes of the study.

The teachers made a composite rating of all of the programs used on another form which was sent to them.<sup>3</sup> They also reported the approved practices<sup>4</sup> which were adopted by the adult and young-farmer class members, but because of the purposes of the study, no report was made on the adopted practices of the high-school groups. Additional data were secured by observing a class meeting in nine of the ten schools and by making a tape recording. An interview with each of the ten teachers in the study provided still additional information and data.

The data which were secured by observing the classes and by interviewing the teachers were utilized for preparing the narrative reports by schools which have been included in Chapter V. In addition, the data from each school were analyzed on master sheets to determine: (1) the practices that were used, (2) the similarities and differences between the activities of the schools and the problems encountered, and (3) the limitations and recommendations that were reported as to the television programs and reference materials. This information was grouped into appropriate tables which are reported in this chapter.

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<sup>3</sup>Referred to hereafter as Form I.

<sup>4</sup>Referred to hereafter as Form J.

The data which were secured from Forms E, H, I, and J were also recorded on master sheets. The ratings of the television programs and methods for presenting future programs, the reports on the adoption of farming practices, and the criticisms and recommendations were also grouped into appropriate tables which are presented in this chapter.

Where applicable, the presentation pattern consists of first reporting summarized data from which a comparison between ratings by high-school boys, adult and young farmers, and teachers is made. These are followed by more detailed and specific data on each group. In other situations, data are generally reported in the order of high-school boys, adult and young farmers, and teachers--completely or partially--where comparisons are not applicable or possible. The remainder of the data are included within the three sections, named in the first paragraph of this chapter, at appropriate places in the context.

#### Data Related to the Use of Television Programs and Reference Materials

Table II shows the composite data as related to the number of teachers, the number and type of class members, the names of the class series, and the number of copies of the forms and instruments by type upon which the data were submitted. Ten teachers used selected television programs



TABLE

NUMBER OF MEETINGS, CLASS MEMBERS, TELEVISION PROGRAMS

School	Types of Classes Using TV	No. of Class Meetings Held	Total Enrolled*	Average Attendance	No. of TV Programs Used	
A	Adult	15	52	16	3	
B	Adult	9	34	10	9	
C	Young-Farmer	15	21	15	4	
	High School	9	25	25	9	
D	Adult	11	30	16	3	
	Young-Farmer	19	16	9	3	
	High School	2	16	16	2	
E	Adult	12	25	10	8	
F	Young-Farmer	14	6	3	14	
G	Adult	12	17	8	11	
H	Adult	10	20	8	4	
I	High School	3	52	45	3	
J	Married Adult	16	22	8	3	
Total	10	13	147	336	189	76
Mean	--	--	11.31	25.85	14.54***	7.6**
Range	--	--	2-15	6-52	3-45	3-14

\*Includes persons present one or more times.

\*\*Mean number of programs used per school, nor per class.

\*\*\*This figure is the mean of the average attendance reported in the above column.

## II

## USED, AND FORMS SUBMITTED BY TYPES OF CLASSES AND BY SCHOOLS

Highest No. Viewing a TV Program	No. of Copies of Form E	No. of Re- spondents Submitting Form H	Teacher Submitted Form I	Teacher Submitted Form J	Name of Class Series
8	0	7	Yes	Yes	Management Practices
34	6	0	Yes	No	Marketing
19	1	12	Yes	Yes	Marketing
25	7	25	---	---	Farm Management
18	3	10	Yes	Yes	Farm Management
13	2	11	---	Yes	Establishment in Farming
16	2	12	---	---	Farm Management
14	1	0	Yes	Yes	Farm Management
6	0	3	Yes	No	Economics
15	0	5	Yes	No	TV Series
20	0	13	Yes	Yes	Farm Management
52	0	20	Yes	---	-----
12	0	9	Yes	Yes	Farm Management
252	22	127	10	7	-----
19.38	--	9.77	---	---	-----
6-52	--	0-25	---	---	-----



with 13 classes: seven adult classes, three young-farmer classes, and three high-school classes with a total enrollment of 336 persons.

Form E's were submitted by four teachers on 22 programs used, Form I's were turned in by all teachers, and Form J's were sent in by six teachers. A total of 76 television programs were used with a mean of 7.6 programs per school. The smallest number of programs used by a school was three, and the largest number used was 14 programs. The largest number of persons viewing a program in one school was 52, and the smallest number of persons was six.

Other pertinent information can be secured from Table II although the figures presented below are not specifically shown therein. The total enrollment of the adult and young farmers was 243, and the total number of high-school pupils was 93. The average attendance of all of the adult and young farmers was 103, while all of the high-school boys had an average attendance of 86. The adult and young farmers submitted 70 Form H's, and the high-school group submitted 57 copies of the Form, which was 70.0 percent and 66.3 percent respectively of the average attendance of these two groups. The respondents who returned this Form reported the number of television programs that they had viewed, although a few did not submit this information. The mean number of programs viewed was 5.68 for the high-school boys and 2.75 for the



adult and young farmers. The mean of the reporting respondents of all class members was 3.99.

It can be seen from Table III that a total of 31 programs were telecast, but only 21 were viewed and used by one or more classes. The total number of times that all programs were viewed by all viewing personnel in all schools was 951. The average number of viewers per program of the programs used was 45.3, and the average number of viewers per program per school was 12.51. The range of viewers per program used was three to 113. Although the programs started on October 6 and continued to May 11, only one school used one program prior to November 3, and the last program was used on March 23.

#### Use of Television Programs and Reference Materials

Activities which were categorized in the administrative area were reported more times for interpreting and establishing relationships as to the use of the television programs than the activities of any other area. The area which was next reported the greatest number of times, 26.5 percent, was that of verbally informing people. Nine teachers stated during the interviews that they kept the administrators informed, as shown in Table IV. However, it was evident from the visits to the schools, made by the Research Specialist, the Materials Specialist, and the investigator approximately two months after the programs started, that the administrators



TABLE III

TOTAL NUMBER OF TELEVISION PROGRAMS USED AND NUMBER OF PERSONS VIEWING BY SCHOOLS\*

Item	Total No. of Programs Telecast	Total No. of Different Programs Used	Number of Programs Used by Schools										Total No. of Classes Viewing	Viewing Index
			A	B	C	D	E	F	G	H	I	J		
	31	21	3	9	13	8	8	14	11	4	3	3	76	951**
Mean***													3.6	45.3
Mean number of viewers per program per school														12.51
Range of viewers per program														3-113

\*Based upon summarized data from Table XLIII, Appendix R.

\*\*Determined by multiplying programs viewed times attendance. Average attendance (see Table II) was used in cases where attendance was unknown.

\*\*\*Based upon programs used, N = 21.





TABLE IV

\*  
ACTIVITIES RELATED TO INTERPRETATION AND ESTABLISHMENT  
OF RELATIONS AS TO USE OF TELEVISION PROGRAMS

Activities	Times Reported by Teachers	Percent of Total of Times Reported
<b>I. Administrative:</b>		
Informed superintendent or other administrators	9	
Superintendent attended television in-service meeting	4	
Superintendent gave special assistance	4	
Superintendent viewed a program	<u>2</u>	
Sub-total	19	38.8
<b>II. Action of Other Persons:</b>		
Other teachers and students asked questions	4	
Other teachers used television set	<u>3</u>	
Sub-total	7	14.3
<b>III. Verbalization:</b>		
Informed high-school classes in vocational agriculture	7	
Discussed activities with persons outside the school	3	
Explained use of television programs to other teachers of vocational agriculture	1	
Distributed television schedule to class members	1	
Told adult farmers and urged high-school boys to inform father	<u>1</u>	
Sub-total	13	26.5
<b>IV. Use of Printed Media and Radio:</b>		
Published articles in local paper	4	
Published television schedule in local paper	2	
Magazines carried articles on television activities	1	
Reported television activities in school bulletin	1	
Had announcement made on radio	<u>1</u>	
Sub-total	9	18.4
<b>V. Special:</b>		
No activities carried out; considered television another instructional aid	<u>1</u>	
Sub-total	1	2.0
Total of Times Reported	49	
Total Number of Activities Reported	17	

\*These were secured as free-response answers to the general question asked during the interviews.

were rather poorly informed as of that date. The one teacher who reported that he did not make any particular effort to inform his superintendent stated, "No special activities have been carried out. I consider television to be another instructional aid just like a film. I do not inform the superintendent every time that I show a film." Four of the superintendents attended the in-service television meeting, and four also assisted the teacher in their school in some special way; for example, by securing the television set, teaching a class under special circumstances, or securing special reference materials.

The use of articles and television schedules in newspapers were reported six times while the use of a magazine, school bulletin, and radio were only reported one time each. Informing other classes and persons outside the school were reported 13 times of which explaining to other teachers of vocational agriculture, distributing the television schedule, and urging high-school boys to inform their fathers were each described once.

Other persons in the school were interested in television. In three schools other teachers used the set to view selected programs, and in four schools other teachers and students asked the teacher of vocational agriculture about his use of the special programs.



As grouped in Table V, 25 different practices were used by teachers in organization, preparation, instruction, follow-up activities, and evaluation, and these have been described in detail by schools in the previous chapter. Three different methods of planning the series of meetings were reported: planning with the entire class, planning with a steering committee or advisory council, and planning by the teacher only. All of the teachers used the scripts and reference materials in planning for the meetings, but only two prepared study-guides or lists of questions.

All of the teachers conducted an orientation or discussion prior to the programs and conducted a discussion and used the reference materials after the programs. However, the pre-program activities varied in degree from a detailed discussion and listing of problems to a brief statement as to the title of the program and the information that would be presented. The post-program activities varied between schools, and one teacher generally shifted to a new or different topic after the subject matter presented by the programs was discussed. Four teachers reported that they used the programs and the information presented thereon as a resource for solving the problems of the class members. Approximately 50 percent of the activities reported were those which were used in teaching the classes.

TABLE V

**ACTIVITIES\* OF TEACHERS IN ORGANIZING CLASSES AND PREPARING FOR, CONDUCTING, FOLLOWING UP, AND EVALUATING INSTRUCTION**

Activities	Times Reported by Teachers	Percent of Total of Times Reported
<b>I. Organizing Course:</b>		
Planned meetings and television programs with entire class	6	
Meetings planned by steering committee or advisory council	2	
Programs used as the course	3	
Course of study and programs selected by teacher	<u>2</u>	
Sub-total	13	10.4
<b>II. Preparing for the Instruction:</b>		
Used scripts and reference materials in preparing for class meetings	10	
Prepared special visual aids	5	
Prepared study-guides or lists of questions	<u>2</u>	
Sub-total	17	13.6
<b>III. Teaching Classes:</b>		
Conducted a discussion after the programs	10	
Viewed television programs as a class activity	9	
Conducted an orientation or discussion before programs	10	
Used reference materials after programs	10	
Used programs with adult-farmer class	7	
Duplicated or distributed reference materials to classes	5	
Used resource persons	5	
Used programs as resource for solving problems of class members	4	
Programs used with young-farmer classes	3	
Teaching procedure same as in previous years	3	
Shifted to additional topics during meetings	<u>1</u>	
Sub-total	67	53.6

TABLE V (Cont.)

Activities	Times Reported by Teachers	Percent of Total of Times Reported
IV. Following Up Instruction:		
Used follow-up activities--tours, field trips, on-farm instruction	6	
Had class answer questions on informal tests	<u>1</u>	
Sub-total	7	5.6
V. Evaluating Instruction:		
Submitted list of approved practices adopted	6	
Based evaluation upon observations, visits, and opinions	6	
Based evaluation upon objective evidence --forms, check-list, adoption of approved practices	4	
Prepared and distributed an evaluation form at end of series of meetings	3	
Distributed an approved practice list to be checked by class members	<u>2</u>	
Sub-total	21	16.8
Total of Times Reported	125	
Total Number of Activities Reported	25	

\*These were secured as free-response answers to the general question asked during the interviews.

Only six teachers reported that they used any follow-up activities. One of these prepared a list of questions based upon the information presented by one or more programs and distributed them to the class members for answering, although the questions and answers were not submitted to the teacher. Six teachers generally based the evaluation of the instruction and class meetings upon their observations, farm visits, and opinions; whereas four teachers used more objective information, such as forms, check-lists, and adoption of approved practices. An evaluation form was prepared and distributed to the class members at the end of the series of class meetings by three teachers, and two teachers prepared forms and distributed them to the farmers upon which they reported the approved practices that had been adopted or planned for adoption.

Four teachers reported several reasons for using the television programs. The major reason given, as shown in Table VI, for using them with high-school classes was that they met the needs or fitted into the planned lessons. That the planned television schedule was being followed was listed as the main reason for using the programs with the adult and young-farmer class members. Other reasons listed were that class members wanted to use selected programs and that the teacher selected the programs to provide pertinent information which was needed by the class. As this information



TABLE VI  
 REASONS REPORTED BY TEACHERS\* FOR USING TELEVISION PROGRAMS  
 WITH HIGH-SCHOOL AND ADULT AND YOUNG-FARMER CLASSES

Reason	Times Reported				Total	Per- cent
	High-School Classes		Adult and Young- Farmer Classes			
	N = 9		N = 13			
	No.	%	No.	%		
Inspection of script, met needs, fitted into lesson plans	7	77.8	0	0	7	31.8
Following planned television schedule	0	0	6	46.2	6	27.3
Farmer's wanted to use it	0	0	2	15.4	2	9.1
Adult advisors voted to use it	0	0	2	15.4	2	9.1
To convince class members to change practices	1	11.1	1	7.7	2	9.1
No real reason	1	11.1	0	0	1	4.5
Members wanted to know how to file income tax	0	0	2	15.4	2	9.1
Total of Times Reported	9	--	13	--	22	--
Total Number of Reasons Reported	3	--	5	--	7	--

\*Refers to four teachers who submitted ratings on individual programs used on Form E.

was reported by less than one-half of the participating teachers, it should not necessarily be considered representative of the entire group.

### Problems Encountered

Problems encountered by teachers in using the television programs and reference materials are listed in Tables VII and VIII. Those listed in Table VII were reported by only four teachers and were based upon individual programs. The total number of times that problems were reported with the high-school classes and the adult and young-farmer classes was approximately the same: 11 and 13 times respectively. However, the major problems reported as related to the latter groups was that of preparation, namely, obtaining sufficient reference materials in advance and receiving the scripts too late. All of the problems as related to the former group (high-school) were only reported one time each, and a majority of them were listed by one teacher. Again, because of the small number of teachers reporting, these problems should not necessarily be considered as representative of all teachers in the study.

During the interviews, the teachers were asked to report the problems encountered throughout the series of meetings. All teachers reported, as shown in Table VIII, that the reference materials and scripts arrived too late which is 27.1 percent of the times that all problems were reported.



TABLE VII

PROBLEMS ENCOUNTERED BY TEACHERS\* IN PREPARING FOR, CONDUCTING,  
AND FOLLOWING UP INSTRUCTION WITH HIGH-SCHOOL AND ADULT AND  
YOUNG-FARMER CLASSES WHEN USING TELEVISION PROGRAMS

Problem	Times Reported				Total	Per- cent
	High-School Classes		Adult and Young- Farmer Classes			
	N = 9		N = 13			
	No.	%	No.	%		
Obtaining reference materials; scripts were late	0	0	4	30.8	4	18.2
No preparation made	1	11.1	2	15.4	3	13.6
Finding a source from which to secure prior information	1	11.1	2	15.4	3	13.6
Required considerable study of details	0	0	2	15.4	2	9.1
Members were somewhat "cold" to the discussion	1	11.1	1	7.7	2	9.1
General confusion caused by college people taking pictures	1	11.1	0	0	1	4.5
Finding place to visit and view follow-up operation	1	11.1	0	0	1	4.5
Getting young farmers to view program	0	0	1	7.7	1	4.5
Required a three-day period each week	1	11.1	0	0	1	4.5
Must prepare study-guides	1	11.1	0	0	1	4.5
Must transport boys to shop to view program	1	11.1	0	0	1	4.5
Had to theorize considerably	1	11.1	0	0	1	4.5
Hard to get boys to see that any debt could be safe	1	11.1	0	0	1	4.5
Finding someone to refer to for follow up	1	11.1	0	0	1	4.5
Had to go into great details on cycle and trends	0	0	1	7.7	1	4.5
Total of Times Reported	11	--	13	--	24	--
Total Number of Problems Reported	11	--	7	--	15	--

\*Refers to four teachers who submitted ratings on individual programs used on Form E.



TABLE VIII

**PROBLEMS\* ENCOUNTERED BY TEACHERS IN USING TELEVISION  
PROGRAMS AND REFERENCE MATERIALS**

Problem	Times Reported By Teachers	Percent of Total of Times Reported
<b>I. Reference Materials:</b>		
Arrived too late	10	
Certain needed bulletins were not available	1	
Some of the reference materials were not sufficient	<u>1</u>	
Sub-total	12	32.4
<b>II. Physical Difficulties:</b>		
Quality of reception or mechanical difficulty	4	
Extraneous light and placing class where all could see	3	
Time of telecast or UHF channel was undesirable or did not permit viewing	<u>2</u>	
Sub-total	9	24.3
<b>III. Preparing for and Teaching Classes:</b>		
Some of the class did not view programs	3	
Determining what information programs would cover and what teacher should expect to cover	1	
Preparing study-guides or lists of questions when reference materials were late	1	
Differences in order of scripts and presentation on television	1	
Did not know agricultural policies subject matter well enough	1	
Following up instruction and class activities	1	
Little response to request for approved practices	1	
Members did not arrive early enough	<u>1</u>	
Sub-total	10	27.0
<b>IV. Attendance:</b>		
Was small or gradually decreased	3	
Programs may have decreased attendance	2	
Some class members absent	<u>1</u>	
Sub-total	6	16.2
<b>Total of Times Reported</b>	<b>37</b>	
<b>Total Number of Problems Reported</b>	<b>17</b>	

\*These were secured as free-response answers to the general question asked during the interviews.

Four reported difficulty with the quality of reception and mechanical trouble. Time of the telecasts and the fact that the programs were telecast on the UHF channel in one area did not permit viewing and were considered undesirable by two teachers. Extraneous light and placing the class where all could see the set were special problems to the three teachers who used the programs, telecast during daytime hours, with high-school classes. These physical difficulties account for 24.3 percent of the total number of times that problems were reported.

Some of the class members did not view the programs and three teachers, in situations where the viewing of the programs and the discussions took place on different days, considered this fact to be a problem in conducting the discussion of the programs. Attendance was either small or gradually decreased in three schools, and two other teachers were of the opinion that the use of the programs may have caused a decrease in attendance on the nights that they were used.

### Special Activities

The activities which were special to one or a few schools are shown in Table IX. Some of these have been subsumed in other tables in a somewhat different manner and discussed previously and, therefore, are not discussed at this point. The activities which were categorized as general represented 43.6 percent of the total number of times that

TABLE IX

**SPECIAL ACTIVITIES\* RELATED TO USE OF TELEVISION PROGRAMS  
REPORTED BY A MINORITY OF TEACHERS**

Activities	Times Reported By Teachers	Percent of Total of Times Reported
<b>I. Groups Viewing Programs:</b>		
Used programs of Television Project with high-school classes	3	
Used Special, additional television programs with high-school classes	3	
Television programs viewed independently	2	
Used programs with both adult and young- farmer classes	1	
Combined young-farmer class with adult farmers to view one program	1	
Used with all high-school classes, viewed simultaneously, and used only with high- school classes	1	
Used with adult (married couples) class	<u>1</u>	
Sub-total	12	30.8
<b>II. Reference Materials:</b>		
Filed all reference materials	2	
Reference materials of value without television programs	<u>1</u>	
Sub-total	3	7.7
<b>III. Use of Programs:</b>		
Programs viewed and discussed on different days	3	
Used one television series exclusively	<u>1</u>	
Sub-total	4	10.3
<b>IV. Attendance:</b>		
Attendance decreased when television was used	2	
Attendance with and without television about the same	<u>1</u>	
Sub-total	3	7.7
<b>V. General:</b>		
Need additional help on using television programs	4	
Submitted copies of Form E	4	
Had high-school boys fill out Form H	3	
Recommended a television workshop	2	
Use selected programs telecast on two or more stations	2	
Requested a schedule of agricultural pro- grams telecast by all local stations	1	
Met in teacher's and class member's home	<u>1</u>	
Sub-total	17	43.6
Total of Times Reported	39	
Total Number of Activities Reported	20	

\*These were secured as free-response answers to the general question  
asked in the questionnaire.





activities were reported, and those related to the groups viewing the programs made up 30.8 percent. Special, additional television programs which were not a part of the Television Project were viewed by the high-school classes in three schools. The following activities were reported once:

(1) combined the young-farmer class with the adult-farmer class for one special meeting, (2) used the programs with high-school classes only and had all of the high-school classes view the programs simultaneously, and (3) used the program with an adult class which consisted of married couples.

Four teachers stated that they needed additional help on how to use television programs more effectively, and two teachers recommended that a television workshop be offered for the teachers. One teacher was rather adamant in his desire for a weekly or monthly schedule of agricultural programs telecast by all local stations. Two teachers used television programs which were telecast on two or more stations, and the group of one school held their meetings in either the teacher's or the class members' homes.

#### Location and Method of Securing Television Sets

Tables X and XI show how the television sets were secured and where they were located. Five sets were loaned by the local television dealers, and in six schools the sets were placed in the agricultural room.

TABLE X  
METHOD OF SECURING TELEVISION SETS REPORTED BY TEACHERS\*

Method	Number of Teachers Reporting
Loaned by local television dealer	5
Used teacher's set	2
Bought by board of education and FFA chapter	1
Bought by board of education	1
Total	9

\*One school did not have a set or view the programs on an organized group basis.

TABLE XI  
LOCATION OF TELEVISION SETS USED BY CLASS MEMBERS AND TEACHERS\*

Location	Number of Teachers Reporting
Agricultural room	6
Study hall	1
Teacher's home or homes of class members	1
Agricultural shop (located in another part of town)	1
Total	9

\*One school did not have a set or view the programs on an organized group basis.



Data Related to the Evaluation of Television  
Programs and Reference Materials

The overall ratings of the television programs by the class members can be observed in Tables XII to XIV. Form H, upon which the ratings were made, provided for one of five ratings on each item shown in these tables. Because of the nature of the items one of four different sets of descriptive terms were listed under each item and included the following: (1) "very much" to "not at all", (2) "very easily" to "with great difficulty" or "not at all", (3) "excellent" to "very poor", and (4) "very many" to "none". A value of four points was arbitrarily assigned to the highest rating by the investigator, while a descending consecutive point value was assigned to the other ratings with the lowest rating having zero value. Since the lowest rating was, generally, negative in meaning, it was felt that a zero value was more representative of the meaning of the term than a value of one point. These data would necessarily be limited by the interpretations which the respondents made as to the meaning of the various descriptive terms.

It can be seen from Table XII that the mean value of the programs was 2.82 and 2.46 respectively as rated by the adult and young farmers and by the high-school boys. As reported previously, the high-school boys viewed more programs than the adult and young farmers, and some of the

TABLE XII

## OVERALL RATINGS OF TELEVISION PROGRAMS BY HIGH-SCHOOL AND BY ADULT AND YOUNG-FARMER CLASS MEMBERS

Item	<i>Students</i> High School Boys		Adult and Young Farmers		Mean Value	
	Total No.	Total Mean Rating Value#	Total No.	Total Mean Rating Value#	by all Respondents##	
Degree to which the programs were interesting	56	150	2.68	70	217	3.10
Extent to which subject matter discussed could be understood	57	123	2.16	70	202	2.89
Degree to which the television programs helped the individual	57	134	2.35	69	180	2.61
Degree to which charts, models, illustrations and examples made ideas more understandable	57	163	2.86	70	205	2.93
Extent to which television programs raised questions for thought	57	112	1.97	70	172	2.46
Degree to which visual aids could be read, seen, and understood	57	130	2.28	70	178	2.54
Persons who appeared on TV programs	57	158	2.77	70	201	2.87
Degree to which programs fitted into what was discussed and done during the other part of meeting	56	137	2.45	70	227	3.24
Extent to which information presented on television helped to solve problems and questions discussed during meetings	57	146	2.56	68	192	2.82
Degree to which the studio set or scenery used as a background was liked	55	136	2.47	68	186	2.73
Mean			2.46***		2.82***	2.66

\*Based upon a value of 4 points for the highest of five ratings and 0 points for the lowest rating.

\*\*Maximum score is 4.00.

\*\*\*The difference between these two figures is significant at the one-percent level of confidence.



programs viewed by the two groups were different. However, since the respondents of both groups made an overall rating of the programs viewed, it was felt that the basis upon which the ratings were made was similar enough to utilize statistical treatment. When the "t" score was computed, the mean rating of the adult and young farmers of 2.82 was significantly higher than the 2.46 rating of the high-school boys at the one-percent level of significance. The reader is cautioned to examine these data in light of the above limitations and the assumption that there was enough similarity to test the data statistically for significance.

The mean value of all respondents was 2.66. The "degree to which charts, models, illustrations, and examples made ideas more understandable" had the highest mean value of 2.86 as rated by the high-school boys, whereas the "degree to which the programs were interesting" received the highest mean rating of 3.10 from the adult and young farmers. The latter item also received the highest mean rating, 2.91, from all respondents. The "extent to which television programs raised questions for thought" received the lowest mean rating from the high-school pupils, from the adult and young farmers, and from the combined ratings of all respondents with a mean value of 1.97, 2.46, and 2.24, respectively. It can be seen that from one to four respondents failed to rate five of the items.



Table XIII shows the number and percentage of the high-school boys and their ratings of each item. Only three of the items had a rating by any of the respondents in the lowest category, and the highest category generally had the next smallest number of respondents. The largest number rated the items in the two categories below the top category, and approximately 60 percent to 87 percent of the respondents were represented in these two groups. The totals and the mean values of this group of respondents are also shown in Table XII.

Only one respondent in the adult and young-farmer group rated one item in the lowest category. The group generally had more ratings in the highest category than the high-school boys, as shown in Table XIV. Approximately 66 percent to 84 percent of the adult and young farmers rated the items in the next two categories. The mean values of the rating and the total value are also listed in Table XII.

The teachers also rated the programs on the nine items shown in Table XV. The items are somewhat similar to those on which the class members rated the programs but were worded in light of the teacher as a respondent, and, therefore, a comparison of these ratings with those of the class members is not possible. The mean value of the ratings of the ten participating teachers was 2.66. The "degree to which presentations were logical and coherent" had the

TABLE

## OVERALL RATINGS OF TELEVISION

Item	Number of High-			
	(4)		Point (3)	
	No.	%	No.	%
Degree to which the programs were interesting	6	10.7	27	48.2
Extent to which subject matter discussed could be understood	2	3.5	13	22.8
Degree to which television programs helped the individual	6	10.5	14	24.6
Degree to which charts, models, illustrations and examples made ideas understandable	15	26.3	21	36.8
Extent to which television programs raised questions for thought	3	5.3	13	22.8
Degree to which visual aids could be read, seen, and understood	2	3.5	20	35.1
Persons who appeared on TV programs	7	12.3	32	56.1
Degree to which programs fitted into what was discussed and done during the other part of the meeting	8	14.3	14	25.0
Extent to which information presented on television helped to solve problems and questions discussed during meetings	11	19.3	16	28.1
Degree to which the studio set or scenery used as a background was liked	10	18.2	20	36.4
Mean				

\*Maximum score is 4.00.



TABLE

OVERALL RATINGS OF TELEVISION PROGRAMS

Item	Number of Adult and			
	(4)		(Point (3))	
	No.	%	No.	%
Degree to which the programs were interesting	22	31.4	34	48.6
Extent to which subject matter discussed could be understood	20	28.6	24	34.3
Degree to which television programs helped the individual	10	14.5	25	36.2
Degree to which charts, models, illustrations and examples made ideas more understandable	17	24.3	31	44.3
Extent to which television programs raised questions for thought	7	10.0	30	42.9
Degree to which visual aids could be read, seen, and understood	10	14.3	25	35.7
Persons who appeared on TV programs	9	12.9	45	64.3
Degree to which programs fitted into what was discussed and done during the other part of the meeting	33	47.1	22	31.4
Extent to which information presented on television helped to solve problems and questions discussed during meetings	13	19.1	30	44.1
Degree to which the studio set or scenery used as a background was liked	9	13.2	35	51.5
Mean				

\*Maximum score is 4.00.





## OVERALL RATINGS OF TELEVISION PROGRAMS BY TEACHERS

Item	No. of Teachers Rating (Point Value of Rating)					Total No. Rating	Total Value	Mean Value*
	(4)	(3)	(2)	(1)	(0)			
Degree to which programs were interesting	1	7	2	0	0	10	29	2.90
Extent to which programs met class needs	1	3	5	1	0	10	24	2.40
Extent to which visual aids could be read, seen, and understood	0	2	6	2	0	10	20	2.00
Persons who appeared on TV programs	1	6	3	0	0	10	28	2.80
Degree to which presen- tations were logical and coherent	2	7	1	0	0	10	31	3.10
Extent to which re- actions of class members were favorable	1	6	2	1	0	10	27	2.70
Degree to which infor- mation presented on television helped to solve problems dis- cussed with class	1	3	6	0	0	10	25	2.50
Degree to which programs fitted into what was discussed and done during the other part of the meetings	2	3	5	0	0	10	27	2.70
Degree to which class members understood the information presented by the TV programs	0	8	2	0	0	10	28	2.80
Mean								2.66

\*Maximum score is 4.00.





highest mean value of 3.10, and the "extent to which visual aids could be read, seen, and understood" had the lowest mean value of 2.00.

All of the respondents were requested to give an overall numerical rating, based upon all of the programs which they had viewed. The ratings as listed on the instrument ranged from one to ten. These results are shown in Table XVI. The mean value of the ratings by the adult and young farmers and the teachers were approximately the same, 7.35 and 7.33 respectively. The high-school boys rated the programs significantly lower with a mean value of 6.57, and the mean value of the rating by all respondents was 6.97. When the "t" score was computed, the difference between the ratings of the adult and young farmers and the high-school boys was significant at the one-percent level of confidence. Again, the reader is cautioned to interpret these data in light of the same limitations and the assumption which were reported for the statistical analysis of the data in Table XII.

One high-school pupil gave the programs a value of only three, and two of the adult and young farmers rated the programs with a value of ten. Most of the respondents rated the programs as having a value of eight or seven. Slightly more than 50 percent of the high-school boys and the adult and young farmers rated the programs in these two categories, and all of the teachers gave the programs these two value

TABLE XVI

OVERALL NUMERICAL RATINGS OF TELEVISION PROGRAMS BY HIGH-SCHOOL  
AND ADULT AND YOUNG-FARMER CLASS MEMBERS AND BY TEACHERS

Type	Number of Persons Rating (Point Value of Ratings)										Total No. Rating	Total Value	Mean Value#						
	(10)		(9)		(8)		(7)		(6)					(5)		(4)		(3)	
	No.	%	No.	%	No.	%	No.	%	No.	%				No.	%	No.	%	No.	%
High-School Class Members	0	0	2	3.6	16	28.6	13	23.2	11	19.6	10	17.9	3	5.4	1	1.8	56	368	6.57***
Adult and Young- Farmer Class Members	2	3.6	9	16.4	19	34.5	11	20.0	6	10.9	6	10.9	2	3.6	0	0	55	404	7.35***
Teachers**	0	0	0	0	3	30.0	6	60.0	0	0	0	0	0	0	0	0	9	66	7.33
Total	2	1.7	11	9.2	38	31.7	30	25.8	17.	14.2	16	13.3	5	4.2	1	.8	120	838	6.97

\*Maximum score is 10.00.

\*\*One teacher did not rate the programs.

\*\*\*The difference between these two figures is significant at the one-percent level of confidence.



ratings. Fifteen of the adult and young farmers did not fill in this item. A few wrote in "undecided" , and the others left the item blank. Some of the teachers reported that the class members thought that the later programs were greatly improved over the first few programs and that some of the programs were very good and that others were rather poor. Perhaps, those persons not rating this item may have thought that they could not give an overall numerical rating because of this situation.

The results of the ratings of the "quality of reception" and the statement that "television programs should be used as a part of some meetings next year" are shown in Table XVII. It has been pointed out in a discussion by schools in Chapter V that the reception on the sets on which the programs were viewed by two high-school groups was rather poor. There is evidence of this fact as born out by a mean rating of 1.84 by the high-school boys. The adult and young farmers' ratings had a mean value of 3.07, and the ratings of both groups had a mean value of 2.53. Approximately 51 percent of both of the groups felt that television programs "definitely should be used" next year, and approximately 35 percent and 37 percent respectively of the high-school group and the adult and young farmers felt that programs "probably should be used" next year. Only approximately 9 percent were "undecided", and only one person in each group felt that the programs "probably should not be used."

TABLE XVII

OPINIONS OF HIGH-SCHOOL AND ADULT AND YOUNG-FARMER CLASS MEMBERS ON  
SELECTED ITEMS AS RELATED TO USE OF TELEVISION PROGRAMS

Item	Type of Class Member	Rating						Total No. Reporting	Total Value	Mean Value#	
		Excellent (4 points)		Good (3 points)		Fair (2 points)					Poor (1 point)
		No.	%	No.	%	No.	%	No.	%	No.	%
Quality of reception	High School	0	0	4	7.3	40	72.7	9	16.4	2	3.6
	Adult and Young Farmer	27	38.6	25	35.7	16	22.9	0	0	2	2.9
Total		27	21.6	29	23.2	56	44.8	9	7.2	4	3.2
Television programs should be used as a part of some meetings next year	High School	29	51.8	21	37.5	5	8.9	1	1.8	0	0
	Adult and Young- Farmer	33	51.6	23	35.9	7	10.9	1	1.6	0	0
Total		62	51.7	44	36.7	12	10.0	2	1.7	0	0

\*Maximum score is 4.00.

The opinions of the teachers on these two items and additional items which were not given value ratings can be seen in Table XVIII. Six of the ten teachers felt that television programs "definitely should be used" next year, while three teachers were of the opinion that programs "probably should be used." The mean rating on the quality of reception was 3.20 as compared to 1.84 for the high-school group and 3.07 for the adult and young-farmer group. Eight teachers considered the knowledge-level of the programs "about right". The teachers were divided as to "the effects of prepared materials and TV programs upon the time required for class preparation as compared to past years". Two, four, and four teachers respectively checked the terms "more time needed", "about the same time needed", and "less time needed". The teachers were also divided in their opinions as to the "degree to which sufficient visual aid, illustrations, and examples were used" with four teachers rating them "adequate".

The opinions of the individual programs as expressed by the high-school pupils and by the adult and young-farmer class members were generally different. Nine opinions reported by the former group and five opinions expressed by the latter groups were different out of 18 opinions reported. Of four opinions which were listed by both groups, the statement that the program "was not of interest to class members" was stated six times. That the programs were "good, well

TABLE XVIII  
TEACHERS' OPINIONS OF SELECTED ITEMS AS RELATED TO THE USE  
OF TELEVISION PROGRAMS

Item	Opinions and Number of Teachers Reporting				
	Above Level of Class	About Right	Below Level of Class		
Degree to which TV programs fitted the knowledge-level of class members	1	8	1		
-----					
	Definitely Should	Probably Should	Under- cided	Probably Should Not	Definitely Should Not
Television programs should be used as a part of some meetings next year	6	3	1	0	0
-----					
		More Time Needed	About the Same Time Needed	Less Time Needed	
The effect of prepared materials and TV programs upon the time required for class preparation as compared to past years		2	4	4	
-----					
	Too Many	Very Adequate	Adequate	Limited	Too Few
Degree to which sufficient visual aids, illustrations, and examples were used	0	2	4	3	1
-----					
	Excellent	Good	Fair	Poor	Very Poor
Quality of reception	3	6	1	0	0
-----					
Mean rating = 3.20*					

\*Maximum score is 4.00.

illustrated, information of good use, understandable" was reported five times, as can be observed in Table XIX.

Opinions of individual programs as reported by selected teachers are shown in Table XX. These teachers reported that they had the "same opinion as class members" on nine of the programs. Varied opinions were reported, and generally, the opinions reported on the programs used with the high-school pupils were different from those listed for the adult and young-farmer class members.

Generally, teachers considered the reference materials that were sent to them to be adequate for introducing and leading into the topic, adaptable to their area, and adequate for follow-up. When the same point value was assigned to these ratings, as reported previously, the mean values were 3.20, 3.00, and 2.80 respectively for above items, and the mean value of these ratings was 3.00, as shown in Table XXI.

#### Values of Television Programs

Specific values of the television programs to the teachers and class members are seen in Table XXII. Those values which were pertinent for class members represent 46.7 percent of the total number of times that values were reported as compared to 23.3 percent for the teachers. Values which were related to the special characteristics of the television medium made up 26.6 percent. Twenty different values of the



TABLE XIX

OPINIONS OF HIGH-SCHOOL AND ADULT AND YOUNG-FARMER CLASS MEMBERS  
OF SELECTED TELEVISION PROGRAMS AS REPORTED BY TEACHERS \*

Opinion	Times Reported				Total	Per- cent
	High School Classes N = 9		Adult and Young- Farmer Classes N = 13			
	No.	%	No.	%		
Was not of interest to class members	2	22.2	4	30.8	6	27.3
Good, well illustrated, information of good use, understandable	4	44.4	1	7.7	5	22.7
Much impressed, well accepted, interesting	2	22.2	2	15.4	4	18.2
Too detailed, too fast	1	11.1	1	7.7	2	9.1
Charts did not "show up" well	0	0	2	15.4	2	9.1
Too many facts	1	11.1	0	0	1	4.5
Language too complicated	1	11.1	0	0	1	4.5
Poor visual aids	1	11.1	0	0	1	4.5
Did not stay on topic	1	11.1	0	0	1	4.5
Persons appearing on program pathetic	1	11.1	0	0	1	4.5
Helped students in planning their farming program	1	11.1	0	0	1	4.5
Questions answered were logical	1	11.1	0	0	1	4.5
Was somewhat confusing	1	11.1	0	0	1	4.5
Could read the same infor- mation in a farm magazine	0	0	1	7.7	1	4.5
Presentation only fair	1	11.1	0	0	1	4.5
Did not meet needs	0	0	1	7.7	1	4.5
Should have used farmers on programs	0	0	1	7.7	1	4.5
Raised many questions	0	0	1	7.7	1	4.5
Total of times reported	18	---	14	---	32	---
Total number of opinions reported	13	---	9	---	18	---

\*Refers to four teachers who submitted rating sheets on individual programs used on Form E.

TABLE XX

**OPINIONS OF TEACHERS\* AS TO TELEVISION PROGRAMS USED  
WITH HIGH-SCHOOL AND ADULT AND YOUNG-FARMER CLASSES**

Opinion	Times Reported				Total	Per- cent
	High-School Classes		Adult and Young- Farmer Classes			
	N = 9		N = 13			
	No.	%	No.	%		
Same opinion as class members	7	77.8	2	15.4	9	40.9
Programs were clear and understandable	0	0	4	30.8	4	18.2
Presentation was un- interesting	1	11.1	2	15.4	3	13.6
Created an interest	0	0	2	15.4	2	9.1
Poor visual aids	1	11.1	0	0	1	4.5
More facts were necessary	1	11.1	0	0	1	4.5
Too detailed and tried to cover too much	1	11.1	0	0	1	4.5
Only discussed the most common problems	0	0	1	7.7	1	4.5
Suggestions were "fair"	0	0	1	7.7	1	4.5
Interview did not work out well	0	0	1	7.7	1	4.5
Total of Times Reported	11	---	13	---	24	---
Total Number of Opinions Reported	5	---	7	---	10	---

\*Refers to four teachers who submitted rating sheets on individual programs used on Form E.

TABLE XXI  
RATINGS BY TEACHERS OF ADEQUACY AND ADAPTABILITY  
OF REFERENCE MATERIALS

Item	No. of Teachers Rating (Point Value of Ratings)					Total Value	Mean Value*
	Very Adequate (4)	Ade- quate (3)	Lim- ited (2)	Lack- ing (1)	Of No Value (0)		
Degree of adequacy for introducing and leading into unit to be discussed	2	8	0	0	0	32	3.20
Degree of adapt- ability to the area	3	4	3	0	0	30	3.00
Degree of adequacy for follow up	2	4	4	0	0	28	2.80
Mean							3.00

\*Maximum score is 4.00.

## SPECIFIC VALUES\* OF TELEVISION PROGRAMS AS REPORTED BY TEACHERS

Value	Times Reported by Teachers	Percent of Total of Times Reported
<b>I. As Related to Teachers:</b>		
Reference materials helpful	4	
Kept the teachers informed	1	
Saved teachers time in preparation of instruction	1	
Programs were telecast on planned topics and dates	<u>1</u>	
Sub-total	7	23.3
<b>II. As Related to Class Members:</b>		
Provided much information	5	
Provided information not otherwise available	2	
Provided more information in a quicker time	1	
Provided motivation	1	
Program generally liked by class	1	
"Opened up farmers' thinking"	1	
Brought problems to mind and caused recognition of fact that there were many problems	1	
Programs were another source of reference	1	
Presented timely topics	<u>1</u>	
Sub-total	14	46.7
<b>III. As Related to Special Characteristic of Medium:</b>		
Made subject matter more "authoritative"	3	
Television appealing to young farmers	1	
Class had opportunity to see television personalities "first-hand"	1	
Had access to many resource persons	1	
Made subject matter available to many people	1	
Demonstrations and illustrations aided understanding	<u>1</u>	
Sub-total	8	26.6
<b>IV. As Related to General Activities:</b>		
Brought about more coordination between teachers, subject matter, class members, and information	<u>1</u>	
Sub-total	1	3.3
<b>Total of Times Reported</b>	30	
<b>Total Number of Values Reported</b>	20	

\*These were secured as free-response answers to the general question asked during the interviews.

programs or reference materials were submitted. Generally, the teacher reported that the programs: (1) provided them and the class members with desirable information, (2) made this information available to many people, (3) brought out problems, and (4) gave more "authority" to the information. Four teachers considered the reference materials to be helpful and adjudged them to be a part of the television programs. That the programs "provided much information" and "provided much information not otherwise available" were considered of value to the class members by five and two teachers respectively. Three teachers reported that the programs made the subject matter and information more "authoritative" for the class members.

Teachers were also asked to list the ways in which individual television programs were of the greatest use to them. In nine cases they again stated that "providing information and answering questions" was of most importance. "Helping class members understand subject matter" was reported by the teachers for four programs used as shown in Table XXIII.

The strengths of the programs were listed by teachers on the individual programs used, and they were also asked during the interviews as to what they considered the overall strong-points to be. As shown in Table XXIV, "pertinent information" was reported eight times, and "well presented and organized" was listed six times.

TABLE XXIII

WAYS IN WHICH TELEVISION PROGRAMS USED WITH HIGH-SCHOOL AND  
ADULT AND YOUNG-FARMER CLASSES WERE OF GREATEST USE AS  
REPORTED BY TEACHERS\*

Way in Which Programs Were of Greatest Use	Times Reported				Total	Per- cent
	High-School Classes		Adult and Young- Farmer Classes			
	N = 9		N = 13			
	No.	%	No.	%		
Providing information and answering questions	5	55.6	4	30.8	9	40.9
Helping class members understand subject matter	4	44.4	0	0	4	18.2
Creating interest in the subject	1	11.1	2	15.4	3	13.6
Planning program of super- vised farming for boys with partnership	0	0	1	7.7	1	4.5
Figuring the actual income tax form	0	0	1	7.7	1	4.5
Aiding in discussion	0	0	1	7.7	1	4.5
Total of Times Reported	10	---	9	---	19	---
Total Number of Ways Reported	3	---	5	---	6	---

\*Refers to four teachers who submitted ratings on individual  
programs used on Form E.

TABLE XXIV

STRENGTHS OF TELEVISION PROGRAMS USED WITH HIGH-SCHOOL AND  
ADULT AND YOUNG-FARMER CLASSES AS REPORTED BY TEACHERS\*

Strength	Times Reported				Total	Per- cent
	High-School Classes		Adult and Young- Farmer Classes			
	N = 9		N = 13			
	No.	%	No.	%		
Pertinent information	7	77.8	1	7.7	8	36.4
Well presented and organized	0	0	6	46.2	6	27.3
Held interest of class	2	22.2	2	15.4	4	18.2
Well illustrated	1	11.1	1	7.7	2	9.1
Topics well covered	1	11.1	1	7.7	2	9.1
Relieved monotony of class- room activities	1	11.1	0	0	1	4.5
Use of charts and visual aids	0	0	1	7.7	1	4.5
Had action and examples	0	0	1	7.7	1	4.5
Total of Times Reported	12	---	13	---	25	---
Total Number of Strengths Reported	5	---	7	---	8	---

\*Refers to four teachers who submitted ratings on individual programs used on Form E.

Generally, based upon the interview information, teachers were of the opinion that the overall strong-points of the programs were the visual presentation of information and the use of visual aids. The use of visual aids was reported the highest number of times, as shown in Table XXV.

It can be observed from Table XXVI that nine "indirect" values of the television programs and reference materials were reported by the teachers. Five reported the reference materials and scripts as one of these values, and four teachers listed the in-service television meeting.

#### Adoption of Approved Practices

The topics which were taught with and without the use of television programs and the practices and the number of times that these practices were reported by the adult and young farmers appear in Tables XXVII to XXIX. Although some of the figures presented below are not specifically shown therein, the practices related to the topics taught with the use of television programs were reported 737 times as put into use or planned for use after the classes started. The mean of these practices was 12.08 based upon the 61 practices which were reported, and the mean was 67 based upon the 11 topics which were reported, as shown in Table XXVII.

The practices related to the topics taught without the use of television programs were reported 646 times as put into use or planned for use after the class started. The





TABLE XXV

## STRONG-POINTS\* OF TELEVISION PROGRAMS AS REPORTED BY TEACHERS

Strong-Point	Times Reported by Teachers
Use of visual aids	3
Visual presentation of information	2
Use of interview format	2
Use of several "props" and dramatic approach	1
Good reception	1
More complete and better information	1
Programs improved as series progressed	1
Use of films and movies	1
Excellent presentation by some of the telecasters	1
Presentation of ideas	1
Total of Times Reported	14
Total Number of Strong-Points Reported	10

\*These were secured as free-response answers to the general question asked during the interviews.

TABLE XXVI

**"INDIRECT" VALUES\* OF TELEVISION PROJECT AS REPORTED BY TEACHERS**

Value of Activity	Times Reported by Teachers
Reference materials and scripts	5
In-service television meeting	4
Increased technical knowledge of teachers.	2
Suggested possibility of new field of audio- visual education	2
Provided opportunity for discussing use of television with investigator	1
Other teachers became interested in television	1
Caused teachers to do "a better job of teaching"	1
Made farmers aware of "college of agriculture"	1
Learned new methods of teaching and presenting information	1
Total of Times Reported	18
Total Number of Values Reported	9

\*These were secured as free-response answers to the general question asked during the interviews.

TABLE

NUMBER OF TIMES FARMERS IN SELECTED SCHOOLS\* REPORTED PRACTICES

Item	Number of Times Practice	
	A	C
<b>I. Topics Taught With Use of Television Programs:</b>		
Practice already used when class started	45	40
Practice is partially or completely in use since class started	26	3
Have decided to use the practice	109	76
Number of different practices reported	8	11
Number of different topics reported	3	4
- - - - -		
<b>II. Topics Taught Without Use of Television Programs:</b>		
Practice already used when class started	0	0
Practice is partially or completely in use since class started	0	0
Have decided to use the practice	0	0
Number of different practices reported	0	0
Number of different topics reported	0	0
- - - - -		
<b>III. Total</b>		
Practice already used when class started	45	40
Practice is partially or completely in use since class started	26	3
Have decided to use the practice	109	76
Number of different practices reported	8	11
Number of different topics reported	3	4

\*Refers to six schools in which teachers submitted Form J.  
 \*\*Some schools reported the same topics and practices. Therefore, the totals of the figures shown under each school do not agree with these totals.

## RELATED TO TOPICS TAUGHT WITH AND WITHOUT TELEVISION PROGRAMS

<u>Reported by Farmers by Schools</u>				Total	Mean A***	Mean B****
D	E	H	J			
110	23	7	61	286	4.69	26.00
189	6	0	17	241	3.95	21.91
274	14	0	23	496	8.13	45.09
23	8	1	14	61**	---	---
6	4	1	3	11**	---	---
-	-	-	-	-	-	-
134	14	15	31	194	3.88	9.70
185	17	7	9	218	4.36	10.90
366	22	18	22	428	8.56	21.40
29	5	8	11	50**	---	---
12	3	3	4	20**	---	---
-	-	-	-	-	-	-
244	37	22	92	480	4.32	15.48
374	23	7	26	459	4.14	14.81
640	36	18	45	924	8.32	29.81
52	13	9	25	111**	---	---
18	7	4	7	31**	---	---

\*\*\*Based upon number of practices reported.

\*\*\*\*Based upon number of topics reported.

mean of these practices was 12.92 based upon 50 practices which were reported, and the mean was 32.30 based upon the 20 topics which were reported.

The practices related to topics taught both with and without the use of television programs were reported 459 times as put into use and 924 times as planned for use after the classes started, making a total of 1383 times both types of practices were reported. The mean of the total of these practices was 12.46 based upon 111 practices which were reported, and the mean was 44.62 based upon the 31 topics which were reported. The number of times that practices which were reported as put into use or planned for use after the class started was approximately three times as great as the number of times that practices were reported as already in use prior to the start of the class series.

The reader is cautioned against drawing erroneous conclusions from these data. The topics and practices with which the television programs were used were generally different from those with which the television programs were not used. Both groups of topics were also interspersed with each other, for example, a topic was taught using a television program, and at the next meeting a different topic was taught without the use of a television program. Also only six teachers submitted data on the adoption of approved practices

by the farmers, and two of these did not submit any information as to the adoption of practices related to topics taught without the use of television programs.

The topics taught with the use of television programs and the number of times that the practices were reported are grouped by topics and can be observed in Table XXVIII. A total of 11 topics and 61 practices were reported. The largest number of practices per topic was 12, and the smallest number per topic was one.

The same data are reported in Table XXIX on the topics taught without the use of television programs. A total of 50 practices and 20 topics were listed, and the largest number of practices per topic was six and the smallest number per topic was also one.

#### Data Related to Criticisms of Television Programs and Reference Materials and Recommendations for Future Programs and Materials

##### Criticisms Made by Teachers

The criticisms that were reported on the individual programs are shown in Table XXX. There was little consistency in the statements as the highest number of times that any statement was listed was twice. The only item that was reported on both the high-school pupils and the adult and young-farmer class members was "could not read charts". Generally,

TABLE XXVIII  
TOPICS TAUGHT WITH USE OF TELEVISION PROGRAMS AND RELATED  
FARMING PRACTICES ADOPTED BY FARMERS

Topic and Practices	Practice Already Used When Class Started	Times Reported	
		Practice is Partially or Completely in Use Since Class Started	Have Decided to Use the Practice
<b>I. Marketing Livestock:</b>			
Producing for price peaks	7	0	0
Using market reports	5	13	13
Grading animals	0	10	13
Using local markets instead of stock buyers	5	10	13
Using livestock cycles	<u>2</u>	<u>8</u>	<u>13</u>
Sub-total	19	41	52
<b>II. Farmers and the Social Security:</b>			
Get Social Security Number	11	0	22
Figure Social Security	1	21	21
Figure Social Security for employees	1	5	11
File Social Security	2	2	30
Plan retirement	0	2	30
Figuring cost	7	0	7
Figuring income	3	0	12
Determining eligibility	<u>5</u>	<u>0</u>	<u>9</u>
Sub-total	30	30	142
<b>III. Bulk-Handling of Milk:</b>			
Oppose bulk tank for herds below 20 cows	6	0	0
Favor bulk system for herds over 20 cows	2	0	0
Make long-time plans for in- stalling bulk tank	2	0	1
Install bulk tank this year	6	2	10
Use cold-water rinse first	6	0	20
Use detergent soap when cleaning	4	0	7
Produce Grade A milk	10	12	4
Change to bulk-handling	0	0	2
Sell off the cows	2	4	0
Improve driveways	15	20	30
Build new milk house	<u>0</u>	<u>1</u>	<u>0</u>
Sub-total	53	39	74



TABLE XXVIII (Cont.)

Topic and Practices	Times Reported		
	Practice Already Used When Class Started	Practice is Partially or Completely in Use Since Class Started	Have Decided to Use the Practice
<b>IV. Income Tax Tips:</b>			
Filing a return for the first time	2	0	0
Obtaining outside help to file	14	0	18
File a tax return	3	13	13
Keep records	3	10	13
Make inventory	0	13	13
Figure depreciation	6	10	22
Computing tax	5	0	10
Figuring deductions	<u>3</u>	<u>0</u>	<u>14</u>
Sub-total	36	46	103
<b>V. Going Into Debt Safely:</b>			
How much should I borrow	2	10	10
Where can I borrow	2	10	10
Figuring interest	2	10	10
What should I borrow for	0	10	0
How can I keep a good credit rating	0	10	13
Make a net worth statement	3	3	4
Keep borrowed money from exceeding net worth	5	1	2
Consolidate credit with fewer agencies	7	0	0
Keep creditors informed on financial status	7	0	0
Plan repayment schedule to suit farming program	6	0	2
Borrow freely for products that will increase production	6	3	0
Pay cash for luxury items	<u>4</u>	<u>0</u>	<u>3</u>
Sub-total	44	57	54
<b>VI. Farm Commercial License:</b>			
Use trucks for farm purposes only	15	2	10
Keep farm wagons off road	20	5	0
Pull only one wagon behind picker	20	0	0
Support tractor license	<u>0</u>	<u>5</u>	<u>30</u>
Sub-total	55	12	40

TABLE XXVIII (Cont.)

Topic and Practices	Times Reported		
	Practice Already Used When Class Started	Practice is Partially or Completely in Use Since Class Started	Have Decided to Use The Practice
<b>VII. This Thing Called Parity:</b>			
Improve understanding of parity	1	7	1
Make ideas on farm policies known to Congressmen and others	1	2	6
Interpret policy news more wisely	2	1	3
Attend farm meetings where farm policy is discussed	<u>9</u>	<u>0</u>	<u>1</u>
Sub-total	13	10	11
<b>VIII. Who Sets Milk Prices:</b>			
Use of state milk-trend reports	5	0	7
Planned production	<u>8</u>	<u>0</u>	<u>4</u>
Sub-total	13	0	11
<b>IX. Cost and Returns From Farming:</b>			
Use better breeding	3	1	1
Use better feeding	2	1	2
Use better seed	4	2	2
Use better soil-management	<u>5</u>	<u>2</u>	<u>2</u>
Sub-total	14	6	7
<b>X. Producer's Share of the Consumer's Dollar:</b>			
Marketing a better product	5	0	0
Using more cooperatives	<u>4</u>	<u>0</u>	<u>0</u>
Sub-total	9	0	0
<b>XI. Acquiring a Farm:</b>			
Learning how to expand a farm business	<u>0</u>	<u>0</u>	<u>2</u>
Sub-total	0	0	2
<b>Total Number of Times Practices Reported</b>	286	241	496
<b>Mean (Based Upon Number of Different Practices Reported, N = 61)</b>	4.69	3.95	8.13
<b>Mean (Based Upon Number of Different Topics Reported, N = 11)</b>	26.00	21.91	45.09



TABLE XXIX

TOPICS TAUGHT WITHOUT USE OF TELEVISION PROGRAMS AND RELATED  
FARMING PRACTICES ADOPTED BY FARMERS

Topic and Practices	Times Reported		
	Practice Already Used When Class Started	Practice is Partially or Completely in Use Since Class Started	Have Decided to Use the Practice
<b>I. Dairy Feeding:</b>			
Feeding supplements	7	0	0
Producing high quality roughage	<u>3</u>	<u>0</u>	<u>0</u>
Sub-total	10	0	0
<b>II. Fertilizer and Fertilizer Placement:</b>			
Soil testing	1	1	8
Side dress corn	1	0	10
Top dress wheat with N.	7	13	20
Use high analysis fertilizer	12	21	25
Use more organic matter	<u>10</u>	<u>10</u>	<u>10</u>
Sub-total	31	45	73
<b>III. Pasture and Pasture Management:</b>			
Top dress legumes with 0-20-20	2	3	0
Cut at 1/10 bloom	0	0	5
Use hand-seeding	<u>0</u>	<u>0</u>	<u>2</u>
Sub-total	2	3	7
<b>IV. What's New in Machinery:</b>			
What size tools should we buy	5	10	13
Use good used machinery	2	3	5
Buy machinery together	2	5	7
Rent or use custom machinery	<u>3</u>	<u>5</u>	<u>10</u>
Sub-total	12	23	35
<b>V. Cost and Returns From Farming:</b>			
Borrow money for improved income	1	3	5
Gross income per man of \$7,000-11,000	<u>2</u>	<u>5</u>	<u>13</u>
Sub-total	3	8	18
<b>VI. Planning Our Farming Program:</b>			
Increase our projects	0	10	10
Rent land away from home	5	10	10
Work on percent of income	<u>5</u>	<u>8</u>	<u>8</u>
Sub-total	10	28	28



TABLE XXIX (Cont.)

Topic and Practices	Times Reported		
	Practice Already Used When Class Started	Practice is Partially or Completely in Use Since Class Started	Have Decided to Use The Practice
<b>VII. Using Farm-Partnership:</b>			
Make out a written agreement	<u>1</u>	<u>5</u>	<u>6</u>
Sub-total	1	5	6
<b>VIII. Using Farm Account Books:</b>			
Keep farm account records	<u>2</u>	<u>5</u>	<u>13</u>
Make inventory	<u>1</u>	<u>3</u>	<u>5</u>
Sub-total	3	8	18
<b>IX. Individual Farm Shop Projects:</b>			
Repair machinery	0	10	0
Make basic welds	10	3	13
Make tool box	<u>0</u>	<u>2</u>	<u>2</u>
Sub-total	10	15	15
<b>X. Relationships Behind Dealer-Farmer:</b>			
Buy service before product	15	0	30
Buy worn parts in off-season	<u>5</u>	<u>0</u>	<u>25</u>
Sub-total	20	0	55
<b>XI. Marketing and Grading Livestock:</b>			
Use market reports	20	5	30
Grade their own livestock	5	15	25
Produce market demands	<u>10</u>	<u>15</u>	<u>30</u>
Sub-total	35	35	85
<b>XII. Tillage Methods:</b>			
Use once-over method	2	5	10
Use wheel track planting	<u>1</u>	<u>2</u>	<u>3</u>
Sub-total	3	7	13
<b>XIII. Analysis of Farm Business:</b>			
Check production and yields	15	10	25
Keep accurate records	5	10	15
Test milk cows	<u>2</u>	<u>3</u>	<u>5</u>
Sub-total	22	23	45
<b>XIV. Should We Irrigate Our Farms:</b>			
Use only high income crops	0	1	1
Get engineered plans and help	<u>0</u>	<u>2</u>	<u>2</u>
Sub-total	0	3	3
<b>XV. Improving Livestock Health:</b>			
Dehorn calves earlier	3	4	0
Improve control of lice, flies, grubs	<u>5</u>	<u>1</u>	<u>1</u>
Sub-total	8	5	1

TABLE XXIX (Cont.)

Topic and Practices	Times Reported		
	Practice Already Used When Class Started	Practice is Partially or Completely In Use Since Class Started	Have Decided to Use the Practice
<b>XVI. Dairy Barns and Poultry</b>			
House Ventilation:			
Install ventilating fan	0	0	3
Make better use of natural ventilation	3	0	2
Improve ventilation in home, barn, poultry house	0	2	4
Make long-time plans for improving ventilation	<u>0</u>	<u>0</u>	<u>7</u>
Sub-total	3	2	16
<b>XVII. Crop Handling and Drying:</b>			
Allow crops to mature as much as possible in the field	4	0	0
Select varieties that will ripen before frost	4	0	0
Install hay drying equipment	0	0	2
Hire commercial drying of wet grain	0	0	1
Clean and disinfect bins before storing	2	0	1
Use fumigants to keep down insects, if necessary	<u>3</u>	<u>0</u>	<u>1</u>
Sub-total	13	0	5
<b>XVIII. General Practices:</b>			
Buy fertilizer during winter and take delivery early	<u>5</u>	<u>1</u>	<u>0</u>
Sub-total	5	1	0
<b>XIX. Managing and Caring for Farm Machinery:</b>			
Repair and keep machinery	<u>3</u>	<u>1</u>	<u>0</u>
Sub-total	3	1	0
<b>XX. Size of Farm Business in Relation to Income:</b>			
Enlarge farm business without adding more acres	<u>0</u>	<u>6</u>	<u>0</u>
Sub-total	0	6	0
Total Number of Times Reported	194	218	428
Mean (Based Upon Number of Different Practices Reported, N = 50)	3.88	4.36	8.56
Mean (Based Upon Number of Different Topics Reported, N = 20)	9.70	10.90	21.40

TABLE XXX

**CRITICISMS OF TELEVISION PROGRAMS USED WITH HIGH-SCHOOL AND  
ADULT AND YOUNG-FARMER CLASSES AS REPORTED BY TEACHERS\***

Criticism	Times Reported				Total	Per- cent
	High-School Classes		Adult and Young- Farmer Classes			
	N = 9		N = 13			
	No.	%	No.	%		
Could not read charts	1	11.1	1	7.7	2	9.1
Not much action	0	0	2	15.4	2	9.1
Presented too fast	1	11.1	0	0	1	4.5
Telecasters do not create any enthusiasm	1	11.1	0	0	1	4.5
Uninteresting	1	11.1	0	0	1	4.5
Omitted some pertinent points	0	0	1	7.7	1	4.5
Covered too much subject matter	0	0	1	7.7	1	4.5
Interviews did not co- ordinate with problems	0	0	1	7.7	1	4.5
Did not suggest what could be done about problem	1	11.1	0	0	1	4.5
Discouraged farmers	0	0	1	7.7	1	4.5
Total of Times Reported	5	---	7	---	12	---
Total Number of Criticisms Reported	5	---	6	---	10	---

\*Refers to four teachers who submitted rating sheets on individual programs used on Form E.



the criticisms were based upon the method of presentation, the appeal of the programs, and the type of information that was presented.

Some of the same types of criticisms were made by the teachers during the interviews. These are grouped by categories in Table XXXI: (1) charts, (2) visual aids, (3) programming techniques and formats, and (4) effects of the programs. Those which were categorized under programming techniques and formats consisted of 45.2 percent of the total number of times that criticisms were listed, while those related to charts and effects of the programs represented 26.2 percent and 21.4 percent respectively. Four teachers reported that the charts were "too small and/or could not be read" and that there was a "lack of coordination between camera and charts." These same types of statements were made to the investigator at various times by the class members and teachers when he observed classes or when they discussed the programs informally with him. Three teachers expressed an opinion that the visual aids were inadequate or improperly used.

The other most common criticism of the programs was "too much lecturing and lack of action" which was reported by five teachers. It was felt that the "telecasters lacked showmanship or seemed nervous" by four teachers, and two teachers thought that too much information was presented on one program. One teacher reported that the programs were too

TABLE XXXI

## CRITICISMS\* OF TELEVISION PROGRAMS REPORTED BY TEACHERS

Criticism	Times Reported by Teachers	Percent of Total of Times Reported
<b>I. Charts:</b>		
Too small and/or could not be read	4	
Lack of coordination between camera and charts	4	
Were not explained	1	
Those used were of little value	1	
Too much information on one chart	<u>1</u>	
Sub-total	11	26.2
<b>II. Visual Aids:</b>		
Inadequate or incorrect; improper use	3	
Sub-total	3	7.1
<b>III. Programming Techniques and Formats:</b>		
Too much lecturing and lack of action	5	
Telecasters lacked showmanship or seemed nervous	4	
Too much information on one program	2	
Presentation off the topic at times	1	
Did not involve or use enough people	1	
Did not use farmers	1	
Much of the presented information had already been read	1	
Programs were too specific, did not fit some farming areas	1	
Programs in fourth (miscellaneous) series of little value	1	
Too academic, lacked "farm atmosphere"	1	
Complexity levels varied	<u>1</u>	
Sub-total	19	45.2
<b>IV. Effects of the Programs:</b>		
Did not hold interest	4	
Class members had difficulty in understanding	3	
Did not meet expectations	1	
Did not solve problems and give answers	<u>1</u>	
Sub-total	9	21.4
Total of Times Reported	42	
Total Number of Criticisms Reported	21	

\*These were secured as free-response answers to the general question asked during the interviews.



specific and did not fit his farming area. However, he continued to use the programs. Four teachers stated that the programs did not hold interest, while three reported that the "class members had difficulty in understanding". Two of the latter group of teachers used programs with high-school classes, and the reception on the sets was somewhat poor, especially the audio signal. This factor may have caused these teachers to express this opinion. It was reported by one teacher that the programs "did not solve problems and give answers". Seemingly, based upon the class visitation and the later interview, this teacher expected the programs to answer specific problems of the farmers in his class.

#### Recommendations Made by Teachers and Class Members

Recommendations were made for improving the programs by either teachers or class members on Forms E, H, and I and during the interviews and are reported in Tables XXXII to XXXV. Some respondents reported a certain opinion negatively as a criticism, while others expressed the same comment positively as a recommendation. The data were grouped and organized in these situations in such ways as were considered most meaningful and as provided the greatest clarification. At times a few of these data may seem somewhat repetitious to the reader.

The statements presented in Table XXXII are generally different for the high-school pupils and for the adult and

TABLE XXXII

RECOMMENDATIONS MADE BY TEACHERS\* FOR IMPROVING  
TELEVISION PROGRAMS USED WITH HIGH-SCHOOL  
AND ADULT AND YOUNG-FARMER CLASSES

Recommendation	Times Reported				Total	Per- cent
	High-School Classes		Adult and Young- Farmer Classes			
	N = 9		N = 13			
	No.	%	No.	%		
Telecaster show more enthusiasm	3	33.3	0	0	3	13.6
Improve visual aids	2	22.2	0	0	2	9.1
Follow the script and stay on the subject	2	22.2	0	0	2	9.1
Present and work out actual case histories	1	11.1	0	0	1	4.5
Divide programs into two telecasts	1	11.1	0	0	1	4.5
Bring in a few people and use discussion method	0	0	1	7.7	1	4.5
List special materials and code books as reference	0	0	1	7.7	1	4.5
Total of Times Reported	9	---	2	---	11	---
Total Number of Recommenda- tions Reported	5	---	2	---	7	---

\*Refers to four teachers who submitted ratings on individual programs used on Form E.



young-farmer classes. Recommendations were made nine times on programs used with the high-school group, and only two were made on programs used with the latter group.

It can be observed from Table XXXIII that many more recommendations were made by the high-school pupils than by the adult and young-farmer class members and that these suggestions were reported more times. The former group listed 26 recommendations, a total of 87 times, while the latter group reported 18 recommendations a total of 44 times. Both groups reported the recommendations as related to the programming techniques and formats a much higher percentage of times than for the other categorizations, namely, 64.4 percent and 75 percent respectively, and the overall percentage for both groups was 67.9.

Several recommendations were made by the former group which indicated that they were not familiar or aware of the physical limitations. For example, one pupil recommended that color television be used.

The hypothesis was held from the beginning of the Television Project that the subject matter and information which were to be presented would be more suitable to the knowledge-level of the adult and young-farmer class members. The data partially supported this thesis. Six of this group requested "good topics and topics of more interest", while eight recommended that programs be presented at a level that "the class

TABLE XXXIII

RECOMMENDATIONS\* MADE BY HIGH-SCHOOL AND ADULT AND YOUNG-FARMER CLASS  
MEMBERS TO IMPROVE FUTURE TELEVISION PROGRAMS

Recommendation	Times Reported			Total Report- ing	Per- cent of Times Reported
	High-School Class Members	Per- cent	Adult and Per- cent Young- Farmer Class Members		
I. External or Physical Changes:					
Have a longer program	7	12.3	0	7	5.5
Telecast programs at different times of day or evening	5	8.8	2	7	5.5
Improve reception on set	5	8.8	0	5	3.9
Have more programs	4	7.0	1	5	3.9
Place set differently	1	1.8	0	1	.8
Use color television	1	1.8	0	1	.8
Get together with Farm Bureau and use WJIM-TV	0	0	1	1	.8
Change name of program	0	0	1	1	.8
Send quiz questions	0	0	1	1	.8
Sub-total	23		6	29	22.1
II. Organization of Series:					
Get good topics, of more interest, programs in the more common problems	6	10.5	5	11	8.7
Have more vocational agriculture	1	1.8	0	1	.8
Don't use TV programs	1	1.8	0	1	.8
Sub-total	8		5	13	9.9
III. Programming Techniques and Formats:					
Talk Plainer	9	15.8	2	11	8.7
Present program at level that class can understand; explain topic more completely	8	14.0	1	9	7.1
Present information more slowly	7	12.3	0	7	5.5
					236





TABLE XXXIII (Cont.)

Recommendation	Times Reporting			Total Report- ing	Per- cent of Times Requested
	High-School Class Members	Per- cent	Adult and Young- Farmer Class Members		
Have a shorter discussion	2	3.5	0	2	1.6
Have a little comedy	1	1.8	0	1	.8
Support statements made	1	1.8	0	1	.8
Use scenery to fit discussions	1	1.8	0	1	.8
Present helpful hints	1	1.8	0	1	.8
Have more variety	1	1.8	0	1	.8
Present actual cases	1	1.8	0	1	.8
Stick more closely to the topic	1	1.8	0	1	.8
Make charts readable	3	5.3	1	4	3.1
Use charts and illustrations more often	3	5.3	0	3	2.3
Use more motion or still pictures	11	19.3	7	18	14.2
Use a panel discussion or interview	4	7.0	10	14	11.0
Use more or better visual aids	0	0	5	5	3.9
Have some farmers on the programs	1	1.8	2	3	2.3
Show actual "out-on-farm" scenes	1	1.8	0	1	.8
Have participants ask more questions	0	0	1	1	.8
Cover problems of small and beginning farmers	0	0	1	1	.8
Cover relations between farmer and consumer	0	0	1	1	.8
Cover a more narrow subject matter area	0	0	1	1	.8
Use more demonstrations	0	0	1	1	.8
Sub-total	56		33	89	67.9
Total of Times Reported	87	---	44	131	---
Total Number of Recommendations Reported	26	---	18	35	---

\*These were written in by class members on Form H in response to "comments" and to the question concerning suggestions and changes to improve future television programs.

can understand and that topics be explained more completely". "Present information more slowly" was desired by seven of this group.

There was a reception problem in two of the three schools in which television programs were used with this group, as reported previously. Again, the data somewhat support this statement. Five pupils suggested that the reception on the set be improved, and nine listed "talk plainer" as a needed improvement. There was a possibility that some of the lack of understanding by the high-school classes might have been caused by the poor quality of reception, but this could not be determined from the available data. However, some of the pupils like the television programs for seven wanted longer programs and four wanted more programs.

Only three of the recommendations described in the two previous paragraphs were listed by the adult and young-farmer class members: five desired "topics of more interest and programs in the more common problems", two suggested "talk plainer", and one requested that topics be explained more completely. Seven persons of both groups wanted the programs telecast at a different time of day or in the evening. Four persons stated that the charts should "be made more readable". Many persons wanted a different type of program format for 14 expressed a desire that a panel discussion or interview be used, and 18 wanted more motion or still pictures used on the programs. Several persons, in varying ways, made a

recommendation that farmers and/or more people be used on the programs and that those appearing on the programs be involved more in the presentations.

All of the teachers recommended, during the interviews, that the criticisms which had been made at different times be corrected on future programs. The recommendations as related to the programming techniques and formats were also reported a greater number of times by the teachers, 32.4 percent of the total number of times reported, as was the situation with high-school and adult and young-farmer class members. A total of 22 recommendations were made by the teachers. As shown by Table XXXIV, three teachers suggested a "change to a night telecast", and two wanted the series concentrated over a shorter period of time, while one teacher stated that the programs should be concluded by the middle of April. It was suggested by one teacher that the School of Agriculture should sponsor the programs next year. A total of 11 different recommendations related to programming techniques and formats were made one time each by the teachers.

Table XXXV shows the recommendations that the teachers reported on Form I and these were subsumed in three categories: (1) external or physical changes, (2) organization of the series, and (3) programming techniques and formats. Again, the recommendations related to the programming techniques and formats made up 65.6 percent of the total number of the

TABLE XXXIV  
RECOMMENDATIONS\* OF TEACHERS FOR IMPROVING TELEVISION  
SERIES AND PROGRAMS

Recommendations	Times Reported by Teachers	Percent of Total of Times Reported
I. Correct Criticisms	<u>10</u>	29.4
Sub-total	10	
II. External or Physical Changes:		
Change to a night telecast	3	
Concentrate series over a shorter period of time	2	
Change name of series	1	
Telecast programs on VHF channel	1	
Have School of Agriculture sponsor programs	1	
Conclude series by middle of April	1	
Change time to 7:00 or 7:30 P.M.	<u>1</u>	
Sub-total	10	29.4
III. Organization of Series:		
Make topics more timely and seasonal	1	
Present programs in a continuous, organized, and progressive sequence	1	
Select more closely related topics	<u>1</u>	
Sub-total	3	8.8
IV. Programming Techniques and Formats:		
Put camera on charts instead of person talking	1	
Include less material on each program	1	
Develop programs in same order as scripts	1	
Explain and provide information on approved practices	1	
Maintain same degree of complexity	1	
Continue "good" programs	1	
Present more farm operations	1	
Present materials and charts not otherwise available	1	
Get successful farmers on programs	1	
Present information not already in print	<u>1</u>	
Sub-total	11	32.4
Total of Times Reported	<u>34</u>	
Total Number of Recommendations Reported	22	

\*These were secured as free-response answers to the general question asked during the interview.

TABLE XXXV  
RECOMMENDATIONS\* MADE BY TEACHERS TO IMPROVE  
FUTURE TELEVISION PROGRAMS

Recommendations	Times Reported by Teachers	Percent of Total of Times Reported
<b>I. External or Physical Change:</b>		
Telecast programs in evening	3	
Send reference materials earlier	3	
Make kinescopes available	1	
Telecast later in the evening (8:45 P.M.)	<u>1</u>	
Sub-total	8	25.0
<b>II. Organization of Series:</b>		
Have a series more closely related	1	
Present a wider variety of subjects	1	
Some programs do not apply: present those which do	<u>1</u>	
Sub-total	3	9.4
<b>III. Programming Techniques and Formats:</b>		
Make programs more interesting	3	
Be a little more "frank"	1	
Provide more specific information	1	
Present programs at level that class can understand	1	
Use more dramatics	1	
"Get some life into the telecasters"	1	
Follow script as received by teachers	1	
-----		
Make charts larger or bring camera closer	2	
Don't crowd charts; use more time in discussing them	1	
-----		
Use more demonstrations	2	
Use more movies; less lecturing	2	
Use farmers on programs	1	
Work in usable skills	1	
Make actual farm operation pictures	1	
Identify farm problems	1	
Use problem-solving approach	<u>1</u>	
Sub-total	21	65.6
Total of Times Reported	32	
Total Number of Recommendations Reported	23	

\*These were written in by teachers on Form I in response to "comments" and to the question concerning suggestions and changes to improve future television programs.

times reported. Twenty-three recommendations were made and four of these were identical to those shown in Table XXXIV. A few additional recommendations conveyed approximately the same suggestions although they were stated differently. Three teachers also wanted the programs telecast in the evenings, and three again requested that the reference materials be sent out earlier. One teacher each suggested "change time to 7:00 or 7:30 P.M." and "telecast later in the evening (8:45 P.M.)". One teacher each suggested: (1) "have a series more closely related," and (2) "present programs which apply." In the interview one teacher stated that many of the programs did not apply to the needs of his farmers, but he was using these programs, nevertheless. Three of the instructors desired that the programs be made more interesting, and three others wanted the charts made so that they could be read, by making them larger, by bringing the camera closer, or by putting less information on them. Two teachers recommended more demonstrations, and two additional teachers were in favor of more movies and less lecturing. Seventeen different suggestions were listed one time each by the teachers.

Recommendations made by teachers during the interviews and on Form I for improving the reference materials are presented in Table XXXVI and XXXVII. Nine different recommendations were presented during the interviews, and 12 were

TABLE XXXVI  
RECOMMENDATIONS\* MADE BY TEACHERS TO IMPROVE  
REFERENCE MATERIALS

Recommendation	Times Reported by Teachers
Send reference materials earlier	7
Provide additional copies of reference materials	3
Prepare script consistent with order of presentation of programs	1
List names and sources of bulletins and references	1
Prepare script in outline form	1
Provide sufficient reference materials	1
Provide list of questions and mail with each set of reference materials	1
Include suggestions for introducing the topics	1
Prepare charts for use with opaque projector	1
Total of Times Reported	17
Total Number of Recommendations Reported	9

\*These were secured as free-response answers to the general question asked during the interviews.



TABLE XXXVII

**RECOMMENDATIONS\* MADE BY TEACHERS TO IMPROVE SOURCE  
UNITS, SCRIPTS, AND OTHER REFERENCE MATERIALS**

Recommendation	Times Reported by Teachers
Send out reference materials two weeks before telecasts	4
Prepare questions for study and discussion and send with each script	2
Prepare script in more of an outline form	1
Use more bulletins and publications	1
List sources of materials	1
Send enough copies of references for each class member	1
Provide suggestions for filing	1
Provide cross-references	1
List additional references for further study	1
Arrange references in order of discussion	1
Send charts to agricultural department	1
Have needed extension materials available at county agent's office	1
Total of Times Reported	16
Total Number of Recommendations Reported	12

\*These were written in by teachers on Form I in response to the question concerning suggestions for improving these reference materials.

reported on the rating forms submitted by the teachers. There was some duplication in the two lists either expressing the same recommendation or stating the same general idea, although expressed differently. Seven suggested that the materials be sent out earlier, while four recommended that they be sent out two weeks prior to the telecasts. Three of the instructors requested that additional copies of the references be provided for distribution to the class members, and two wanted questions for study and discussion sent along with each script. Several recommendations related to additional references, listing of other sources, and making references available from certain sources were each made by one teacher. Four suggestions were made one time each by the teachers which might be considered as a responsibility of the using teacher, and these are subsumed in the following: (1) provide a list of discussion questions and mail with each set of reference materials, (2) include suggestions for introducing the topics, (3) prepare charts for use with the opaque projector, and (4) provide suggestions for filing.

#### Methods of Presenting Future Television Programs

The ratings of selected methods of presenting a part of future programs for use in classes of vocational agriculture by high-school and adult and young farmer class members can be observed in Tables XXXVIII to XLI. The same

**TABLE**

**OVERALL RATINGS OF SELECTED METHODS**

Method	High-School Boys			Adult and Young-Farmers		
	Total No. Reporting	Total Value*	Mean Value**	Total No. Reporting	Total Value*	Mean Value*
Interview	57	143	2.51	65	191	2.94
Group discussion	57	149	2.61	60	170	2.83
Explanation by one person	55	114	2.07	65	150	2.31
Explanation by two or three persons	51	135	2.65	65	188	2.89
Lecture	55	64	1.16	53	100	1.89
Illustration by still pictures	55	131	2.38	67	183	2.73
Illustration by motion pictures	57	201	3.53	51	156	3.06
Demonstration	57	192	3.37	57	191	3.35

\*Based upon a value of 4 points for the highest of five ratings and 0 points for the lowest rating.

\*\*Maximum score is 4.00.

\*\*\*Determined by adding the mean value of the three groups and dividing by three.

## XXXVIII

## OF PRESENTING FUTURE TELEVISION PROGRAMS

Teachers			All Respondents			Average of Mean Ratings of all Groups***
Total No. Reporting	Total Value*	Mean Value**	Total No. Reporting	Total Value*	Mean Value**	
10	28	2.80	132	362	2.74	2.75
8	22	2.75	125	341	2.73	2.73
8	11	1.38	128	275	2.15	1.92
9	19	2.11	125	342	2.73	2.55
8	7	.88	116	171	1.47	1.31
10	28	2.80	132	342	2.59	2.64
9	26	2.89	117	383	3.27	3.16
9	33	3.67	123	416	3.38	3.46

method was used in computing the values as reported previously: one of five ratings ranging from "excellent" to "very poor" were checked by the respondents, and a point value ranging from four to zero was arbitrarily assigned to each rating. The "illustration by motion pictures" method was given the highest mean rating of 3.53 by the high-school boys, while both the adult and young farmers and the teachers rated the "demonstration" method highest with a mean value of 3.35 and 3.67 respectively. The mean value, based upon all respondents, was also highest for this method with a score of 3.38 as was the average of the mean ratings of the three groups of 3.46. The "lecture" method received the lowest rating of 1.16, 1.89, and .88 respectively from the high-school boys, adult and young farmers, and teachers as well as the score of 1.47 based upon the ratings of all respondents. The "explanation by one person" method received the next lowest rating by all three groups of respondents.

The number and percentage of high-school class members who rated the various methods in each of the categories are shown in Table XXXIX. The "illustration by motion pictures" method was rated "excellent" by 63.2 percent of the respondents, and "demonstration" was rated "excellent" by 56.1 percent.

The same type of data as reported by the adult and young farmers can be seen in Table XL. The "demonstration"

TABLE XXXIX

RATINGS BY HIGH-SCHOOL PUPILS OF SELECTED METHODS OF PRESENTING FUTURE TELEVISION PROGRAMS

Number of High-School Class Members Rating N = 57													Total No. Rating	Total Value	Mean Value*	
Method	Excellent (4 pts)		Good (3 pts)		Fair (2 pts)		Poor (1 pt)		Very Poor (0 pt)		Total No.	Total Value				Mean Value*
	No.	%	No.	%	No.	%	No.	%	No.	%						
Interview	9	15.8	18	31.6	24	42.1	5	8.8	1	1.8	57	143	2.51			
Group discussion	10	17.5	24	42.1	14	24.6	9	15.8	0	0	57	149	2.61			
Explanation by one person	4	7.3	15	27.3	22	40.0	9	16.4	5	9.1	55	114	2.07			
Explanation by two or three persons	10	19.6	18	35.3	18	35.3	5	9.8	0	0	51	135	2.65			
Lecture	1	1.8	5	9.1	9	16.4	27	49.1	13	23.6	55	64	1.16			
Illustration by still pictures	5	9.1	25	45.4	14	25.5	8	14.5	3	5.5	55	131	2.38			
Illustration by motion pictures	36	63.2	16	28.1	4	7.0	1	1.8	0	0	57	201	3.53			
Demonstration	32	56.1	19	33.3	3	5.3	1	1.8	2	3.5	57	192	3.37			

\*Maximum score is 4.00.

TABLE XL

RATINGS BY ADULT AND YOUNG-FARMER CLASS MEMBERS OF SELECTED METHODS  
OF PRESENTING FUTURE TELEVISION PROGRAMS

Method	Number of Adult and Young-Farmer Class Members Rating Total										Total Mean Value Value*
	Excellent (4 pts) No.	%	Good (3 pts) No.	%	Fair (2 pts) No.	%	Poor (1 pt) No.	%	Very Poor (0 pt) No.	%	
Interview	12	18.5	37	56.9	16	24.6	0	0	0	0	191 2.94
Group discussion	14	23.3	26	43.3	16	26.7	4	6.7	0	0	170 2.83
Explanation by one person	7	10.8	22	33.8	23	35.4	10	15.4	3	4.6	150 2.31
Explanations by two or three persons	17	26.2	29	44.6	14	21.5	5	7.7	0	0	188 2.89
Lecture	6	11.3	11	20.7	14	26.4	15	28.3	7	13.2	100 1.89
Illustration by still pictures	9	13.4	38	56.7	15	22.4	3	4.5	2	3.0	183 2.73
Illustration by motion pictures	19	37.3	20	39.2	9	17.6	2	3.9	1	2.0	156 3.06
Demonstration	28	49.1	23	40.4	5	8.8	0	0	1	1.8	191 3.35

\*Maximum score is 4.00.

method was rated "excellent" by 49.1 percent of this group, and 37.3 percent rated "illustration by motion pictures" as "excellent".

The data as reported by the teachers appear in Table XLI. Six teachers rated the "demonstration" method as "excellent", whereas two teachers only rated the "interview" and "group discussion" method as "excellent". Six teachers rated the "illustration by still pictures" method as "good", and five rated the "lecture" method as "poor".

As reported previously, all teachers requested television programs for next year. Generally, they only requested programs for the groups that they would teach and listed, in order of priority, from three to six subject-matter areas. Each time an area was requested it was posted under the proper type of class without regard for the priority in which it was requested. These data are shown in Table XLII. Farm mechanics was requested 14 times, or 18.7 percent of the total number of times requested followed in order by dairying, soil and water management, and crops and soils which were requested 13, 11, and ten times respectively. Only one request was made for tillage and for farm management.

The major findings of this study, based upon the data reported in this chapter and Chapter V, and the conclusions and recommendations of the investigation are reported in Chapter VII. Further research appeared to be needed in the



**TABLE XLI**  
**RATINGS BY TEACHERS OF SELECTED METHODS OF PRESENTING**  
**FUTURE TELEVISION PROGRAMS**

Method	Number of Teachers Rating					Total No. Rating	Total Value	Mean Value*
	Excel- lent (4 pts)	Good (3 pts)	Fair (2 pts)	Poor (1 pt)	Very Poor (0 pt)			
Interview	2	4	4	0	0	10	28	2.80
Group discussion	2	2	4	0	0	8	22	2.75
Explanation by one person	0	0	3	5	1	8	11	1.38
Explanation by two or three persons	1	4	3	1	0	9	19	2.11
Lecture	0	0	1	5	2	8	7	.88
Illustrations by still pictures	1	6	3	0	0	10	28	2.80
Illustrations by motion pictures	3	3	2	1	0	9	26	2.89
Demonstration	6	3	0	0	0	9	33	3.67

\*Maximum score is 4.00.

TABLE XLII

**SUBJECT-MATTER AREAS\* ON WHICH TELEVISION PROGRAMS  
WERE REQUESTED FOR 1955-56 BY TEACHERS**

Subject-Matter Area	Times Requested by Teachers			Total	Per- cent of Total
	Adult Class	Young- Farmer Class	High- School Classes		
Farm mechanics	5	4	5	14	18.7
Dairying	6	3	4	13	17.3
Soil and water management	4	3	4	11	14.7
Crops and soils	6	2	2	10	13.3
Livestock; swine or beef	5	1	3	9	12.0
Marketing	3	0	1	4	5.3
Forestry	1	1	1	3	4.0
Establishment in farming	1	1	1	3	4.0
Vegetables	1	0	1	2	2.7
Landscaping	1	0	1	2	2.7
Cash crops	1	0	1	2	2.7
Tillage	1	0	0	1	1.3
Farm management	0	0	1	1	1.3
Total of Times Requested	35	15	25	75	--
Total Number of Subject- Matter Areas Requested	12	7	12	13	--

\*These were secured as free-response answers to the general question asked during the interviews.

use of educational television in vocational agriculture and these suggestions also appear in that chapter.

## CHAPTER VII

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The method that was used in planning and conducting the study is briefly reviewed in this chapter. The summary of the more important findings is presented next. This section is followed by the conclusions which were drawn from the investigation. The recommendations as related to future television programs and the use of educational television in agricultural education are then reported. Finally, suggestions are offered for additional research and studies which are deemed desirable and necessary.

#### Summary of the Method

The purposes of this study were: (1) to present a chronological development of the Television Project, reporting the problems and the decisions that were made, (2) to determine the ways in which teachers of vocational agriculture used the television programs and reference materials, (3) to evaluate these programs and materials when used as instructional aids in classes of vocational agriculture, and (4) to determine the criticisms of the programs and materials and the recommendations for future programs and materials.

Special courses were taken by the investigator and a three-week television workshop was attended by him in

preparation for conducting this study. A case-study method was selected as the research technique which was most desirable for accomplishing the purposes of the study. A nine-man Augmented Guidance Committee consisting of persons working directly with the Project was selected to offer advice and approve the research design and the forms and instruments.

A detailed review of the literature was made. It was found that very little experimental research had been conducted on the educational uses of television, and no studies reported the use of the medium in agricultural education. Studies involving the research on instructional films were also reviewed. It may be assumed that there are no essential differences between educational television and educational sound films so far as the learner is concerned except two: (1) the greater immediacy and liveness of television, and (2) the greater degree of control which the teacher has. When allowance is made for these differences, the research on sound films can be added to that on educational television. The summary of the research on this latter medium is subsumed in the following statements:

1. The medium will command attention, and people will learn not only facts but also attitudes, some motor skills, sometimes critical thinking, and problem solving.

2. If properly used, it may be expected to impart facts and demonstration procedures at least as effectively as an average classroom teacher.
3. The effective use of the medium will require the utilization of desirable teaching principles and the use of the medium as a part of an "educational package". It is only one of many instructional aids which teachers may use.
4. Presently, it seems that educators have not utilized the special characteristics of the medium completely, and improved techniques need to be learned for blending the auditory and visual phases of television more effectively.
5. It is not expected nor does it seem probable that educational television will ever completely replace the teacher.
6. The medium has excellent public relations value if properly used.
7. Educational television appears to be an effective medium for the mass training of personnel and for continuing the education of all people by either formal or informal learning.
8. It should be recognized that its effectiveness depends upon what is placed before the camera and upon how the teachers and viewing personnel utilize it.

Several activities which were not a direct part of this study were participated in and included the following:

(1) attending meetings of the Television Committee, (2) participating as a member of a panel making a report at the North-Central Regional Research Conference in Agricultural Education, (3) enrolling as a member of the Television Study Group, (4) visiting schools with the Research Specialist and the Materials Specialist, (5) attending three in-service meetings on educational television, (6) viewing eighteen television programs, and (7) keeping minutes of meetings, a diary, and special notes on the Television Project.

The information which was secured by the above method; especially the minutes of meetings, a diary, and the special notes; was utilized to write the chapter on the development of the Television Project.

Ten teachers were selected, based upon previously established criteria, to participate in this investigation. These teachers were the only ones who met the one criterion which was absolutely necessary for participating in the study, namely, that the teacher was using the television programs with one or more classes of vocational agriculture. A case-study was made of these ten teachers and the class members in selected classes who supplied the data which were the basis of this study. Thirty-three teachers initially indicated on a brief survey form that they would probably use some of the television programs in some way. Visitations to

some of these teachers and other information secured by methods reported in the previous paragraph narrowed the number down to twenty teachers who were then visited by the investigator. Finally, only ten teachers remained who completed their plans of using the programs, and, as reported above, they were selected as the participating teachers in this study.

Four forms were constructed and approved by the Augmented Guidance Committee and were mailed to these teachers. Form E<sup>1</sup> was used by four teachers to rate the individual television programs that were used. Form H<sup>2</sup> was filled out by the high-school, adult, and young-farmers class members based upon their overall evaluation of the programs. The teachers provided composite ratings of all of the programs on Form I<sup>3</sup>. The farming practices which were adopted by the adult and young-farmer class members were secured by the teachers and submitted on Form J<sup>4</sup>. In addition, the investigator observed a class in nine<sup>5</sup> of the ten schools, made a tape recording of each class, and wrote up an observation report on Form G<sup>6</sup>.

All of the teachers were interviewed and were asked questions in the following areas: (1) personal information,

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<sup>1</sup>Appendix G.    <sup>2</sup>Appendix L.    <sup>3</sup>Appendix M.    <sup>4</sup>Appendix N.

<sup>5</sup>No class was visited in School I.    <sup>6</sup>Appendix J.



(2) special problems encountered, (3) interpretation or relationships, (4) content and methodology, (5) evaluation, and (6) other miscellaneous data or activities special to this school. The information that was reported was recorded on the interview schedule<sup>7</sup> and was re-read to the teachers to determine its accuracy. A tape recording was made of each interview except one.<sup>8</sup>

The data which were largely secured by observing the classes and interviewing the teachers were described in a narrative report on each school. These data were also grouped and summarized to point out the differences and similarities in the activities and practices used in the various schools. In addition, the data which were secured by the forms and instruments were also summarized and analyzed. Ratings of the programs and reported limitations and recommendations for presenting future programs were compared. The adoption of farming practices related to topics with which television programs were and were not used were also compared.

### Findings

The major findings of this investigation are categorized under the last three purposes of the study.

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<sup>7</sup>Appendix P.

<sup>8</sup>The interview with the teacher in School C was not recorded.

### Use of the Television Programs

1. Certain teachers not participating in this study could not receive the programs because of physical limitations: (1) schools were located beyond the range of the broadcast signal, (2) programs were telecast on the UHF channel in one area, and (3) the hour or the day of the telecasts conflicted with other activities.
2. The ten teachers used the programs with seven adult classes, three young-farmer classes, and three high-school classes. A total of 76 programs were used in these classes with a range of three to 14 programs per class. Twenty-one of the 31 programs were used with a range of three to 113 persons per program. A total of 336 persons was enrolled in the 13 classes with a range of six to 52 per class, and the range of the highest number of class members viewing a program per school was also six to 52.
3. Four teachers submitted ratings on 22 individual programs that were used. Returns of an overall rating of the programs viewed and used were received from 57 high-school boys and 70 adult and young farmers. All teachers returned the rating form sent to them, and six teachers reported the farming practices adopted by the young and/or adult farmers.

4. The classes in nine schools viewed the programs as a class on an organized basis. In the other school the programs were viewed independently by class members at a time other than during the class meeting.
  - a. Five sets were loaned by the local television dealers, the teachers' sets were used by the the classes in two schools, the board of education bought the set for one school, and the board of education and the Future Farmer chapter jointly bought the set for one school.
  - b. Six of the sets were located in the agricultural room, and in the other three schools the sets were located in the study-hall, the teacher's home, and the agricultural shop.
5. Only one program was used before November 3 and the last program was used on March 23.
6. Seventeen activities related to the interpretation and establishment of relations with the administrators and other persons both within and without the school as to the use of the television programs were reported. Some of the teachers listed more activities than others.
7. Twenty-five practices were used by the teachers in organizing classes and in preparing for, conducting, following-up, and evaluating instruction.

- a. Eight of the teachers planned the course of study including the television programs with either the entire class or an advisory group, whereas two of the teachers did the planning themselves. These two teachers and one other teacher used the television programs as the course of study.
- b. All of the teachers used the reference materials in preparing for class meetings, conducted an orientation and discussion of varying lengths and complexity prior to the programs, and used the reference materials and conducted a discussion after the programs.
- c. Five teachers duplicated or distributed reference materials to the class members. Five teachers also used resource persons in some of the meetings.
- d. Four teachers used the programs as a resource for solving the problems of the class members. The other six teachers generally utilized the class meetings for viewing the television programs and for discussing the information presented thereon.
- e. Six teachers reported that they planned and carried out follow-up activities, and six teachers evaluated the instruction and class

meetings objectively using forms, a check-list, and/or adoption of approved practices. Four teachers did not utilize follow-up activities and based their evaluations upon observations and opinions.

8. The major reasons listed by the four teachers who reported on this item for using the television programs were that the programs met the class needs or fitted in the planned lessons or that the planned television schedule was being followed.
9. Seventeen problems were encountered by the ten teachers in using the television programs and reference materials. All teachers stated that the reference materials arrived too late. Three teachers had a poor quality of reception on the set used. Two teachers stated that the use of the television programs may have decreased attendance.
10. Twenty special activities were reported as related to the use of the television programs by one teacher only or a small minority of the teachers. Four teachers requested additional help on using the television programs. Two teachers recommended a television workshop for interested teachers of vocational agriculture. Nine of the activities were reported by only one teacher each.

### Evaluation of the Programs

1. The mean value<sup>9</sup> of the ratings of the items which could be scored was 2.46 for the high-school pupils, 2.82 for the adult and young farmer groups, and 2.66 for all of the class members. Within the limitations reported in Chapter VI, the difference between the mean value of the ratings of the adult and young farmers and of the high-school boys was significant at the one-percent level.
2. The mean value<sup>10</sup>, based upon the overall numerical ratings of the programs, was 6.57 for the high-school pupils, 7.35 for the adult and young-farmers, and 7.33 for the teachers. There was also a significant difference at the one-percent level between the mean value of the overall ratings of the adult and young farmers and of the high-school boys, within the same limitations reported above.
3. Eighty-nine and three-tenths percent of the high-school pupils, 87.5 percent of the adult and young-farmer groups, and 100 percent of the teachers felt that television programs "definitely should be used" or "probably should be used" as a part of some of the meetings next year.

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<sup>9</sup>Maximum score was 4.00.

<sup>10</sup>Maximum score was 10.00.

4. The mean value of the ratings on the quality of reception was 1.84 for the high-school pupils, 3.07 for the adult and young farmers, and 3.20 for the teachers.
5. The mean value of the teachers' ratings on the reference materials was 3.00.
6. The major values of the television programs, as reported by the teachers, were that they:
  - (1) provided both the teachers and class members with desirable and pertinent information,
  - (2) made this information available to many people,
  - (3) brought out problems, and
  - (4) gave more "authority" to the information.
7. Nine different "indirect" values of the Television Project were reported, with 5 teachers listing "reference materials and scripts".
8. Farming practices were reported by farmers 480 times as "already in use when class started," 459 times as "partially or completely in use since class started," and 924 times as "have decided to use the practice." The total of the latter two groups of practices was approximately three times greater than the practices which were "already in use when class started".

Criticisms and Recommendations for Future Programs and  
Reference Materials

1. The major criticisms of the programs were:  
(1) charts could not be read or were improperly used, (2) there was too much lecturing and lack of action, (3) the programs did not hold the interest, and (4) the telecasters lacked showmanship. The criticisms stated by teachers and categorized under programming techniques and formats represented 45.2 percent of the total number of times that criticisms were reported.
2. High-school pupils made more recommendations and reported the recommendations made more times than the adult or young farmers. Approximately 12 to 16 percent of the high-school pupils recommended: (1) "get good topics, of more interest," (2) "talk plainer," (3) "present programs at level that class can understand," and (4) "present information more slowly." "Use more motion or still pictures" was recommended by 19 percent. Both the high-school pupils and the adult and young farmers made recommendations as related to the programming techniques and formats a much higher percentage of times than for the other categorizations, namely, 64.4 percent and 75 percent respectively.



3. All teachers recommended that the criticisms which they made be corrected when presenting future programs. Three wanted the programs broadcast at night. The recommendations made by the teachers as related to the programming techniques and formats during the interviews and on the rating form represented 32.4 percent and 65.5 percent respectively of the total number of times that recommendations were made.
4. Seven high-school and adult and young-farmer class members recommended that the programs be telecast at a different time during the day or in the evening. Three teachers suggested that the time be changed to a night telecast. One teacher each wanted the hour of: (1) 7:00 or 7:30 P.M., and (2) 8:45 P.M. The teacher who was using the programs with the high-school boys only recommended 11:00 A.M.
5. Nine recommendations were made to improve the reference materials, with seven teachers requesting that the materials be sent out earlier. However, all teachers reported that the reference materials arrive too late, as reported previously.
6. The "illustration by motion pictures" method was given the highest mean rating of 3.53 by the high-

school boys, while both the adult and young farmers and the teachers rated the "demonstration" method highest with a mean value of 3.35 and 3.67 respectively. The "lecture" method received the lowest rating of 1.16, 1.89, and .88 respectively from the high-school boys, the adult and young farmers, and the teachers. The "explanation by one person" method received the next lowest rating from all three groups of respondents.

7. Television programs were requested by all teachers for next year, and programs on 13 different subject-matter areas were desired. The areas receiving the greatest number of requests, in the order named, were: (1) farm mechanics, (2) dairying, (3) soil and water management, (4) crops and soils, and (5) livestock (beef or swine).

### Conclusions

The conclusions presented below represent the investigator's interpretations of the data which were secured not only by the forms and instruments, the class observations, and the interviews; but also the data which were secured more informally by attending meetings and by discussing the Television Project with the teachers. His experiences in agricultural education and his interpretations of the concepts which

generally seem to be held by educators in agricultural education have probably influenced some of the conclusions which were drawn. The reader is cautioned to examine them in light of these limitations. The conclusions are reported as related to the four purposes of the study with subsidiary conclusions subsumed under the major conclusions:

1. The presentation of the development of the Television Project and of the problems and decisions that were made was a satisfactory and accurate report of the activities of the personnel participating in the Project.
2. From the observations made by the investigator and his interpretations of the statements made by the teachers, there was a general indication that a majority of the teachers used the programs as the core of the meeting. Seemingly, the problems and questions were based upon the reference materials and the television programs more than upon the problems of the farmers, and the discussions were centered upon information presented by the programs and materials. In some situations, based upon the observer's interpretation of the activities, the farmers' problems were not determined, decisions were not made, and approved practices were not determined or discussed.

- a. Certain teachers and class members seemed to have needs which were different from those of other teachers and class members, whereas some of the needs appeared to be similar. Therefore, these persons seemed to have varying needs as related to the television programs and the types of programs and information which were presented.
- b. There were some indications that the teachers had varying opinions on what they wanted the television programs to do and on what they expected from the programs. They also varied in their thinking as to how much and what should be done by the teacher and how much and what should be accomplished by the programs and reference materials. It appeared that some of the teachers desired that the television programs:
  - (1) provide an introduction or interest approach,
  - (2) present problems, (3) give solutions to the problems, and (4) point-up the approved practices that should be followed.
- c. The daytime telecast was undesirable for some of the teachers and class members participating in the study, and it appeared that all of the teachers definitely preferred an evening telecast for use with the adult and young farmers

and that some teachers preferred a night other than Wednesday. If only one telecast time were possible, it seemed that all teachers, except one, preferred the night telecast to the day-time telecast. It appeared from the available data that some teachers would also have made more use of the programs had they been telecast on a VHF channel in one area and at a different time in some of the areas. It also seemed reasonable to conclude, based upon the limited information, that other teachers not participating in this study would have used the programs had the above condition been in existence.

- d. Although the teachers generally reported during the interviews that they kept their administrators informed, it appeared to be somewhat evident from the visitations made two months after the start of the telecasts that activities to inform the administrators were not well developed as of that date.
- e. It appeared that a majority of the teachers had difficulty in determining the approved farming practices which might be based upon or drawn from the information presented on the programs.

- f. If the assumption was correct that the problem-solving method is presently the most desirable way of teaching vocational agriculture, it appeared that, in some situations, the teachers did not use the television programs and reference materials in the most desirable and effective manner when utilized as instructional aids with the problem-solving method, as understood by the investigator. There were some indications that the teachers needed additional help in determining the farmers' real problems, in organizing the course of instruction, in using the television programs and reference materials, in determining approved practices, in planning follow-up activities, and in evaluating instruction.
3. The quality of the television programs and reference materials generally appeared to be satisfactory as measured by the rating instruments and the adoption of the approved farming practices. A majority of the teachers, as well as the investigator, considered the later programs to have improved greatly over the first few programs that were telecast. However, it appeared that some of the programs which were telecast in the subject-matter areas

selected for this year did not meet the needs of some of the teachers and their class members, as the teachers interpreted these needs.

- a. The assumption was made initially that the television program would be more desirable and effective if utilized with adult and young-farmer classes rather than with high-school boys. As the study developed, this assumption was partially tested. While the evidence was not conclusive, there were some indications that the programs and information, as presented, were above the knowledge-level of the high-school boys. Therefore, it seemed reasonable to conclude that future programs which were to be prepared for either adult farmers or high-school pupils could not be used most effectively with the other group.
- b. As used this year, there were indications that the telecasts were started too early in the year and were continued too late in the spring.
- c. It would seem reasonable to conclude that the television programs had other "indirect" values in addition to those reported in the findings: (1) teachers had the opportunity

to become familiar with and to use new instructional aids and teaching methods,

(2) parents and other persons had an opportunity to become more familiar with the educational program in vocational agriculture,

(3) the administrators had the opportunity to become better informed about agriculture and new developments through discussions with the staff personnel and the investigator,

and (4) the teachers in the study who participated in the meetings of the Television Study Group had the opportunity to learn more about the effective use of the medium.

4. Based upon the comments and recommendations of the teachers and class members, it appeared that the television programs and reference materials had some limitations, especially as related to the programming techniques and formats. It seemed to be reasonable to conclude that these recommendations should be considered when future programs and reference materials were to be prepared.
  - a. There were definite indications that the teachers were better satisfied with the reference materials than they were with some of the television programs. It appeared that



reference materials need to be received at least one week in advance of the telecast of the programs and, in the case of some teachers, two weeks in advance for the most effective planning of instruction.

- b. From the comments of the teachers it seemed reasonable to conclude that a majority of them were not aware of the production problems and the limitations of time, personnel, and physical equipment which were present in preparing and presenting the television programs. Some of the teachers seemingly made certain criticisms of and recommendations for the programs, based upon their use of programs which they did not want or which did not meet the needs of the farmers in a particular farming area.

Other conclusions as related to recommendations for preparing and presenting future television programs and reference materials appear in the first group of statements in the following section.

### Recommendations

The recommendations presented herein are based not only upon the findings and conclusions of this study but also upon certain educational concepts which the investigator holds and

upon his work and educational experiences. They are divided into two groups: (1) those which are related to the preparation of future television programs and reference materials, and (2) those which are related to the use of the programs and materials.

### Preparing and Presenting Future Television Programs and Reference Materials

1. The television programs should be telecast on a more concentrated basis covering a shorter time period. Either the time of the year in which the programs are telecast or the time in which the adult and young-farmers classes are taught should be changed to coincide with the other.
2. The programs should be telecast on VHF channels in all areas, preferably starting at or after 8:30 P.M. for use with the adult and young-farmer classes; and consideration should be given to a day other than Wednesday--as far as physical facilities will permit.
3. Different programs presented at a less complex level should be prepared and telecast during the school hours for use with the high-school classes.
4. It is recommended that the criticisms and recommendations reported in this study be used as the basis for making changes in the television programs

and reference materials which are prepared in the future. The recommendations which seem most important to the investigator for preparing and presenting the programs are listed below:

- a. Make the charts larger and include less information. Point out the information on the charts as it is being discussed.
  - b. Use film clips of pictures made "on location" on the farm or other appropriate places.
  - c. Use successful farmers on the programs and draw upon their experiences.
  - d. Use such methods as demonstrations, illustration by still and motion pictures, interviews, and group discussions and omit methods which have little action, such as lectures and explanations by one person.
  - e. Use a problem-solving approach rather than an "academic" type of presentation in which only technical information is presented.
  - f. Design formats in which the viewers are involved more and have an opportunity "to participate" while viewing the programs.
5. Television programs should be offered next year for the teachers and class members participating in this study in the subject matter areas of farm

mechanics, soil and water management, dairying, crops and soils, and livestock (beef and swine). The programs of each series should be more closely related than was true during the past year.

6. It is suggested that the persons responsible for the production of future programs work closely with a committee of teachers to determine their needs and specific problems within the above subject-matter areas. The specific problems of the class members and their knowledge-level should be ascertained, and the programs should be planned accordingly. The teaching methodology used by the teachers should be understood, and the information and program formats should be best designed to complement these methods of instruction.
7. It is recommended that the reference materials and scripts be sent to the teachers from one to two weeks prior to the telecasts of the programs. It would seem to be desirable that the Materials Specialist, at least initially, prepare suggested:
  - (1) activities for the teachers or class members,
  - (2) problems and questions which might arise,
  - (3) approved practices which might be an outgrowth of the instruction, and
  - (4) evaluative activities.This material could include suggestions for the use



of the television programs as an instructional aid with the topics and could be prepared for a single topic or for several topics, depending upon the nature of the topics and programs.

#### Using Future Television Programs

1. It is recommended that a television workshop be established for teachers who are using the television programs or for other interested teachers.
2. An in-service training program on television should be offered during the next year in which teachers are given assistance in the utilization of the programs and reference materials in instructional programs of vocational agriculture.
3. It is recommended that consultant services be continued to assist the teachers in the use of the television programs.
4. It is suggested that the experiences which were gained this year along with the literature and research on educational television and instructional films be utilized by the staff in Agricultural Education in preparing a bulletin on the effective use of educational television for distribution to the teachers.

### Suggestions for Further Research

The following additional research seems to be needed based upon this investigation:

1. To divide this study into three parts and study in much greater detail: (1) the effective production and programming techniques and formats, (2) the results of the use of the programs with class members, and (3) how to utilize the television medium more effectively as an instructional aid. A more refined research design needs to be planned in order to quantify the data and to make possible greater statistical treatment, and a larger number of teachers and/or class members need to be utilized as respondents.
2. To determine whether a greater change in behavior and understandings and in the adoption of recommended farming practices is brought about in classes of vocational agriculture using television programs than in classes not using the programs.
3. To make a longitudinal study of the effects of television programs on the adoption of recommended farming practices and to determine which of the planned practices are actually implemented.
4. To determine what effect the availability of the television programs has upon the course of study





that is offered as compared to what might be taught without the use of the programs.

5. To determine in detail the farmers' reactions and recommendations concerning the programs.
6. To determine which practices reported in this study, along with others, are most effective in utilizing the television programs and reference materials.
7. To ascertain what effect the programs have upon improving the teaching methodology and causing more and better visual aids to be used by the teachers.
8. To discover to what extent the television programs might cause the use of a more "academic" methodology in teaching as compared to the use of other instructional aids, such as bulletins, films, and filmstrips.
9. To determine to what extent the special characteristics of the television medium are actually utilized in the presentation of various programs.
10. To find out what effect the use of the programs actually has upon the viewing of other farming programs.
11. To determine to what extent television programs actually meet the needs of farmers and offer

information which helps them solve their real problems.

12. To determine what research on educational television in agricultural education is being conducted or planned.

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## **APPENDIXES**



## APPENDIX A

COPY OF TELEVISION SCHEDULE<sup>1</sup>

Dept. of Ag. Econ.  
Cooperative Extension Service

TV Series

Talking Sense

A brief outline of the programs to be presented over WKAR-TV on Wednesdays at 8:30 P.M. during the 1954-55 season under the title "Talking Sense."

- Oct. 6      Democracy is Everybody's Business  
               why we discuss farm problems; what we can do about  
               farm problems as individuals
- Oct. 13     Where Are Michigan's Farm Products Sold?  
               outlets for various products  
               choosing a market outlet
- Oct. 20     Should I Go Into Farming  
               What Ways Can I Get Started
- Oct. 27     The United Nations and You
- Nov. 3      This Thing Called "Parity"  
               what is parity  
               the ingredients that go into the parity formula  
               parity and you
- Nov. 10     Marketing Livestock  
               in general  
               in Michigan  
               seasonal fluctuations  
               improvements -  
                   timing marketing  
                   to whom to sell

---

<sup>1</sup> The programs from October 6 to November 10 were copied from the original television schedule, and the program from November 17 to the conclusion of the series were secured from the revised television schedule which started with that date and made a few changes in the topics of the original schedule.

- Nov. 17     Ways of Getting Started  
               working off the farm  
               working for share  
               starting with parental aid  
               renting a farm
- Nov. 24     The Job of a General Farm Organization
- Dec. 1       State or Local Equalization of Taxes
- Dec. 8       Who Sets Milk Prices
- Dec. 15      Income Tax Tips  
               what's new  
               tax saving ideas
- Dec. 22      Effect of Trade on Michigan Farmers  
               effects of trade on you  
               free trade vs. tariffs
- Dec. 29      Holiday
- Jan. 5       Farmers and the Social Security Program
- Jan. 12      Bulk Handling of Milk  
               is it economical  
               advantages and disadvantages
- Jan. 19      Costs and Returns from Farming  
               amount of money needed  
               sources of income  
               how much expense  
               profits to expect
- Jan. 26      Cooperative Marketing  
               is the co-op the answer  
               the role of the co-op in marketing  
               advantages and disadvantages
- Feb. 2       Farm Commercial License
- Feb. 9       Farmers' Week Special
- Feb. 16      Acquiring a Farm  
               kind of farm to look for  
               size of farm to look for  
               where to look  
               determining the value if buying

- Feb. 23     Producer's Share of the Consumer's Dollar  
 services included  
 costs in marketing  
 share for specific commodities
- March 2     Water Rights
- March 9     Are Direct Payments the Answer  
 as a method of price support  
 who pays  
 public acceptability  
 long term effects
- March 16    Going Into Debt Safely  
 how much to borrow  
 what to borrow for and when  
 where to borrow  
 starting to farm under different debt situations
- March 23    Marketing Poultry
- March 30    Subsidized Consumption  
 as a method of price support  
 long term effects  
 school lunch program  
 low income consumers
- April 6     The New Look in the Extension Program
- April 13    Obtaining Advice and Keeping Up To Date  
 sources of information  
 sources of counsel  
 how to use it
- April 20    The Promotion of Michigan Farm Products
- April 27    Insurance  
 liability insurance  
 crop insurance
- May 4       The New Look in the Agricultural Stabilization and  
 Conservation Program
- May 11      Making the Farm Pay  
 volume of business  
 production rates  
 controlling expenses  
 sound planning

## APPENDIX B

## DIRECTORY OF THE AUGMENTED GUIDANCE COMMITTEE

1. Dr. Raymond Clark, Instructional Materials Specialist,  
Department of Vocational Education, Michigan State College.
2. Dr. Paul Sweany, Research Specialist, Department of Vocational Education, Michigan State College.
3. Dr. Daniel Sturt, Extension Specialist in Agricultural Policies, Department of Agricultural Economics, Michigan State College.
4. Mr. John Doneth, Farm Management Specialist, Department of Agricultural Economics, Michigan State College.
5. Mr. Charles Langdon, Consultant, Division of Agricultural Education, Michigan Department of Public Instruction.
6. Mr. Elmer Lightfoot, Consultant, Division of Agricultural Education, Michigan Department of Public Instruction.
7. Mr. James Tintera, Producer - Coordinator in Television for the School of Education, Michigan State College.
8. Mr. Henry Kennedy, teacher of vocational agriculture, Williamston High School, Williamston, Michigan.
9. Mr. Clayton Preisel, teacher of vocational agriculture, Carson City High School, Carson City, Michigan.



## APPENDIX C

DIRECTORY OF SCHOOLS FROM WHICH PARTICIPATING SCHOOLS  
WERE SELECTED

1. Charlotte	12. Bellevue	23. Bay City
2. Carson City	13. Owosso	24. Homer
3. Grand Ledge	14. Goodrich	25. Deckerville
4. Morrice	15. Petoskey	26. Byron
5. Morley	16. Allegan	27. Pigeon
6. Coopersville	17. Big Rapids	28. Saranac
7. West Branch	18. Reed City	29. Olivet
8. Merrill	19. Mayville	30. Breckenridge
9. Centerville	20. Caro	31. Williamston
10. Ithaca	21. Onstead	32. Fulton Township
11. Ovid	22. Reese	33. Perry

## APPENDIX D

COPY OF FORM USED FOR SELECTING PARTICIPATING TEACHERS<sup>1</sup>

## Section I

## I. Programs Used:

	Name of Program	Date	No. Members	Station
1.				
2.				
3.				
4.				
5.				
6.				

## Section II

## II. What Programs are you planning to Use:

## A. Adult Farmers:

	Name of Program	Date to be Used	Hour Class Begins
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

<sup>1</sup> This form is a revised version of the form that was used by the Materials and Research Specialists and the investigator during the first visit to schools selected from the list in Appendix C.

B. Young Farmers:		Hour
Name of Program	Date to be Used	Class Begins
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____

C. High School Boys:		Hour
Name of Program	Date to be Used	Class Begins
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____

### Section III

Please check each item below in which you would be willing to participate:

#### I. Students' Activities:

- \_\_\_ 1. Have your class members fill out a short rating and evaluation sheet on the TV programs at the end of the series.
- \_\_\_ 2. Have your class members fill out a brief form to determine their understanding and their progress toward the adoption of approved practices recommended during the series.

## II. Teachers' Activities:

- \_\_\_3. Keep certain information and supply data concerning how you used the TV programs, class reaction, etc.
- \_\_\_4. Provide time for an interview to supply the information accumulated as described in (3) above and to discuss the problems that you encountered and how you resolved them.
- \_\_\_5. Check a brief form concerning your rating of the TV programs, sufficiency of the prepared materials, and your opinion concerning the value of the series.

## III. Activities by Investigator:

- \_\_\_6. Permit Mr. King to attend and observe one class meeting if he can schedule it.
- \_\_\_7. Permit a tape recording of one class meeting if he is present and if a tape recorder can be secured.

## IV. Miscellaneous

- 8. Tentative date and time of visitation of a class \_\_\_\_\_.
- 9. Date of the last class meeting of the year \_\_\_\_\_.
- 10. Date that is most desirable for administering the rating sheets and the test \_\_\_\_\_.
- 11. Tentative interview date \_\_\_\_\_.
- 12. Is any use being made of home viewing by the students? \_\_\_\_\_  
If so, what? \_\_\_\_\_  
\_\_\_\_\_
- 13. What are your reactions and recommendations concerning television activities for next year? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 14. Comments by teacher:

## APPENDIX E

COPY OF TYPICAL LETTER SENT TO SUPERINTENDENTS PRIOR TO  
VISIT UPON WHICH PARTICIPATING TEACHERS WERE SELECTED

MICHIGAN STATE COLLEGE  
EAST LANSING

School of Education  
Department of Vocational Education

January 1, 1955

Mr. \_\_\_\_\_, Superintendent  
\_\_\_\_\_ High School  
\_\_\_\_\_, Michigan

Dear Sir:

I am working with Dr. \_\_\_\_\_ and Dr. \_\_\_\_\_ of the Department of Vocational Education on the Television Project in which special television programs are being telecast for use with vocational agriculture class members. A part of the research on this project has been assigned to me and I am particularly interested in the ways in which a selected group of teachers of vocational agriculture use the television programs and an evaluation of these programs.

Mr. \_\_\_\_\_ has indicated that he was willing to work with us on this Project. According to my information he has a free period at 8:40 A.M. I would like to visit you and him on Friday, January 7, 1955, at the above hour to discuss in detail the use that has been made of the television programs or the planned use of these programs. If this time is not convenient, please advise me at your earliest convenience.

Sincerely,

Charles E. King

CEK/n

## APPENDIX F

## COPY OF DIRECTIONS ACCOMPANYING FORMS E AND F

Dear Teacher,

Please accomplish the following activities:

1. Fill out Form E and mail to Mr. King immediately after each meeting in which a television program is used.
2. Fill out Form F currently as the information is secured or as the activities, ideas, and recommendations are known.
3. Ask your class members to briefly keep some type of record concerning practices that are adopted since this class started this year or the progress made toward the adoption of the practices.

## APPENDIX G

COPY OF FORM UPON WHICH PARTICIPATING TEACHERS REPORTED USE  
AND EVALUATION OF EACH TELEVISION PROGRAM VIEWED

Form E

Directions: Fill out this form after each class meeting in  
which a television program was used and mail to:

Charles E. King  
206 Morrill Hall  
Michigan State College  
East Lansing, Michigan

DATA SHEET FOR RECORDING INFORMATION ON THE USE  
OF EACH TELEVISION PROGRAM

School _____	Date _____
Location _____	Title of Series Taught _____
Instructor _____	Title of Lesson Taught _____
No. Present _____	Title of TV Program _____

1. Where did the class meet?
2. How did you decide to use this TV program?
3. What special problems did you encounter in the preparation, presentation, and follow-up of this meeting?
4. What was the opinion of the class of this TV program? Consider their interests, understanding, their needs, and their opinions of the visual aids.

5. What was your opinion of the same factors listed in (4) above?
6.
  - a. List the strengths of the TV program:
  - b. List the weaknesses
7. What suggestions do you have for improving this telecast?
8. In what ways was this TV program of greatest use to you?
9. List specific questions, problems, comments, opinions, activities, information, miscellaneous data concerning this class meeting which are not stated elsewhere.



## APPENDIX H

COPY OF FORM UPON WHICH PARTICIPATING TEACHERS RECORDED  
GENERAL INFORMATION ON THE USE OF TELEVISION PROGRAMS

Form F

Directions: Fill out this form currently as the information is secured or as the activities, ideas, problems, and recommendations are known. Setting up a folder into which written notations are placed as they occur might be helpful. Make any additions to this form that you desire.

GENERAL DATA SHEET FOR RECORDING INFORMATION ON THE USE OF  
THE TV SERIES

School \_\_\_\_\_ Date \_\_\_\_\_

Location \_\_\_\_\_ Class Enrollment \_\_\_\_\_

Instructor \_\_\_\_\_ Average Attendance \_\_\_\_\_

1. How did you secure the TV set?
2. What administrative problem did you encounter?
3. How did you determine the following:
  - a. Series to be taught?
  - b. Specific topic to be taught?
  - c. Whether to use the TV programs and the number of programs that were used?
4. What general format did you use in the class meetings?

5. What general plan of preparation did you use for the class meetings?
6. In what ways was this preparation different from previous years?
7. How satisfactory were the source units and reference materials and what recommendations do you have for their improvement?
8. What problems did you encounter and how did you resolve them?
9. What specific activities did you engage in as follow-up of the class meetings?
10. What do you consider the strong points of the series to be?
11. What do you consider the weak points of the series to be?
12. What recommendations do you have for improving the series?

13. What is your general evaluation of the series?

14. List "indirect" values of this Project as related to your department, for example reference materials, consultant services, etc.

15. List specific activities, information, opinions, problems, questions, and miscellaneous data which you encountered during the series.

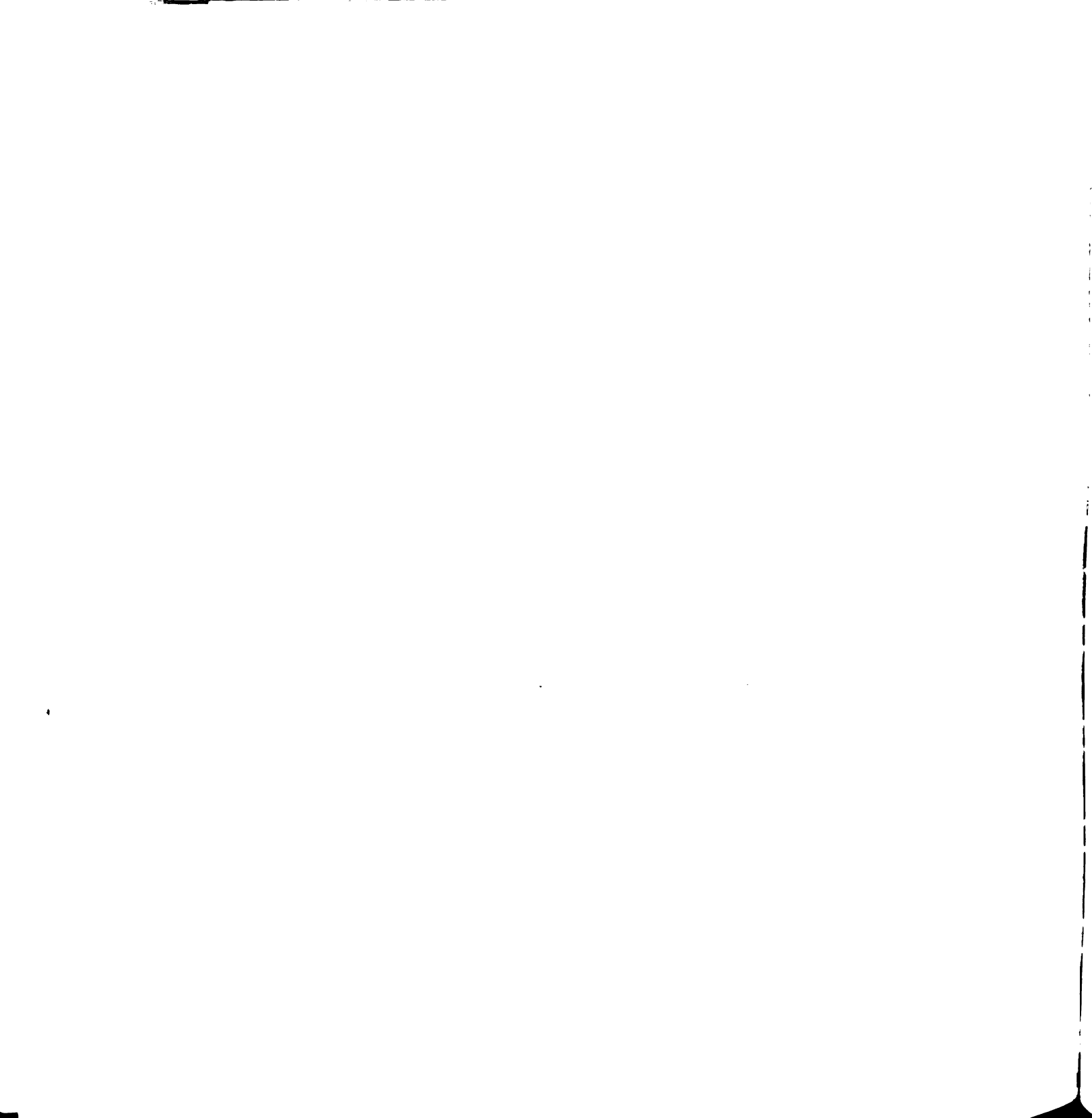
16. Titles of Lessons Taught:

Title of TV Programs Used:  
(Place the TV Programs used  
on the line opposite the  
lesson title with which the  
TV program was used.)

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_  
5. \_\_\_\_\_  
6. \_\_\_\_\_

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_  
5. \_\_\_\_\_  
6. \_\_\_\_\_

17. Additional comments:



## APPENDIX I

## DIRECTORY OF TEACHERS AND SCHOOLS PARTICIPATING IN THIS STUDY

<u>High School</u>	<u>Teacher</u>	<u>Location</u>
Byron	Robert E. Braden	Byron, Michigan
Caro	James C. Sutherland	Caro, Michigan
Carson City	Clayton Preisel	Carson City, Michigan
Fulton Township	J. J. Cook	Middleton, Michigan
Grand Ledge	James A. Crawford	Grand Ledge, Michigan
Handy	Maxwell W. Brown, Jr.	Bay City, Michigan
Morrice	Maurice Land	Morrice, Michigan
Perry	Robert C. Snyder	Perry, Michigan
Reese	Earl J. French	Reese, Michigan
Williamston	W. Henry Kennedy	Williamston, Michigan

## APPENDIX J

COPY OF FORM FILLED OUT BY INVESTIGATOR ON CLASSES OBSERVED

Form G

## Observation Report

School \_\_\_\_\_ Instructor \_\_\_\_\_  
Location \_\_\_\_\_ Date \_\_\_\_\_  
Type of class \_\_\_\_\_ Observer \_\_\_\_\_  
TV Program \_\_\_\_\_ No. Present \_\_\_\_\_

1. How was the lesson topic introduced?
2. How was the lesson related to previous meetings?
3. What orientation did the class receive about the TV program?
4. What activities took place during the telecast?
5. What general remarks were made by the teachers at the conclusion of the TV program?
6. To what extent did the TV program seem to fit into the general class discussion?
7. How did the teacher incorporate the material presented by the TV program into the remainder of the class meeting?

8. What did the teacher do to tie the TV program and class activities to the local farm situation?
9. What activities did the teacher develop with class members for future meetings and for follow-up out on the farm?
10. What was the general reaction to the TV program:
  - a. By class members?
  - b. By the teacher?
11. What were the major strong points of the meeting?
12. What were the major weak points of the meeting?
13. What specific changes seem desirable to improve the class meeting, based upon comments by class members, teachers, and upon the opinion of the observer?
14. Other comments:

## APPENDIX K

COPY OF FORM UPON WHICH ANALYSES OF TAPE RECORDINGS OF  
CLASSES OBSERVED WERE TRANSCRIBED

## Exhibit L

## Analysis of Tape Recordings

(Note: Quote or refer to specific statements or situations in the tape recording to illustrate opinions, comments, statements, and recommendations of the observer.)

1. How was the lesson topic introduced?
2. How was the lesson related to previous meetings?
3. What orientation did the class receive about the TV program?
4. What activities took place during the telecast?
5. What general remarks were made by the teachers at the conclusion of the TV program?
6. How did the teacher incorporate the material presented by the TV program into the remainder of the class meeting?
7. What did the teacher do to tie the TV program and class activities to the local farm situation?





8. To what extent did the TV program seem to fit into the general class discussion?
9. What activities did the teacher develop with class members for future meetings and for follow-up out on the farm?
10. What was the general reaction to the TV program?
  - a. By class members?
  - b. By the teacher?
11. What were the major strong points of the meeting?
12. What were the major weak points of the meeting?
13. What specific changes seem desirable to improve the class meeting, based upon comments by class members, teachers, and upon the opinion of the observer?
14. List specific items and activities noted in the tape recordings which were omitted on the Observation Report.



## APPENDIX L

COPY OF RATING SHEET ON TELEVISION PROGRAMS FILLED  
OUT BY CLASS MEMBERS

Form H

Rating Sheet of "Talking Sense" Television Programs  
(Class Members)

Number of TV programs viewed \_\_\_\_\_.

Directions: Give your overall ratings of the television programs as a part of the class activities by placing a check mark (✓) to the right of the word or phrase in each question which best describes your opinion. Add any comments which further explain your opinion.

1. How interesting were the programs?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments:
- ✓ 2. How well were you able to understand and follow what was discussed?  
Very easily ( ), Easily ( ), Fairly well ( ), With difficulty ( ),  
With great difficulty ( ).  
Comments:
- ✓ 3. To what degree did the television programs help you?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments:
4. How well did the charts, models, illustrations, and examples make the ideas more understandable?  
Very easily ( ), Easily ( ), Fairly well ( ), Poorly ( ),  
Not at all ( ).  
Comments:
5. Did the television programs raise questions for thought?  
Very many ( ), Many ( ), Several ( ), A few ( ), None ( ).  
Comments:
6. How well could you read, see, and understand the visual aids? Consider the size, the drawings and lettering, and the closeness of the camera.  
Very easily ( ), Easily ( ), Fairly well ( ), With difficulty ( ),  
Not at all ( ).  
Comments:

7. How would you rate the persons, as a group, who have appeared on the TV programs?

Excellent ( ), Good ( ), Fair ( ), Poor ( ), Very poor ( ).

Comments:

8. How well did the television programs fit into what you were discussing and into what you did during the other part of the meetings?

Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).

Comments:

9. How much did the information help solve problems and questions which you discussed during the meetings?

Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).

Comments:

10. How good was the reception of the set that you were watching?

Excellent ( ), Very good ( ), Good ( ), Poor ( ), Very poor ( ).

Comments:

✓ 11. How well did you like the studio set or scenery which was used as a background for the TV programs?

Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).

Comments:

12. How would you rate the following methods of presenting future TV programs?

	Excel- lent	Good	Fair	Poor	Very Poor
Interview					
Group discussion					
Explanation by one person					
Explanation by two or three persons					
Lecture					
Illustration by still pictures					
Illustration by a motion picture					
Demonstration					

Comments:

13. Give your overall rating of the TV programs, as a group, that you have viewed with 10 being the highest rating.

10\_\_\_9\_\_\_8\_\_\_7\_\_\_6\_\_\_5\_\_\_4\_\_\_3\_\_\_2\_\_\_1\_\_\_0\_\_\_

14. What is your reaction to the question concerning whether TV programs should or should not be used as a part of some of the meetings next year? Check the one statement below which best expresses your opinion:

- ( ) TV programs definitely should be used.  
( ) TV programs probably should be used.  
( ) I am undecided.  
( ) TV programs probably should not be used.  
( ) TV programs definitely should not be used.

Comments:

15. What suggestions or changes do you recommend to improve future TV programs and class meetings?

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_  
e. \_\_\_\_\_  
f. \_\_\_\_\_

## APPENDIX M

COPY OF RATING SHEET ON TELEVISION PROGRAMS AND REFERENCE  
MATERIALS FILLED OUT BY TEACHERS

Form I

Rating Sheet of "Talking Sense" TV Programs and  
Other Reference Materials  
(Teachers)

School \_\_\_\_\_

	Type of Class Taught	No. of TV Programs Used
Adult		
Young Farmer		
High School		

Directions: Give your overall ratings of the television programs as a part of the class activities by placing a check mark (✓) to the right of the word or phrase in each question which best describes your opinion. Add any comments which further explain your opinion.

- How interesting were the TV programs?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments:
- To what extent did they seem to meet the needs of your class?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments: .
- To what degree were sufficient visual aids, illustrations, and examples used?  
Too many ( ), Very adequate ( ), Adequate ( ), Limited ( ), Too few ( ).  
Comments:
- To what extent could you see, read, and understand the visual aids? Consider the size, type lettering, and camera angle.  
Very easily ( ), Easily ( ), Fairly well ( ), With difficulty ( )  
Not at all ( ).  
Comments:

5. How would you rate the persons, as a group, who have appeared on the TV programs?  
Excellent ( ), Good ( ), Fair ( ), Poor ( ), Very poor ( ).  
Comments:
6. To what degree were the presentations logical and coherent?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments:
7. How good was the reception on your set?  
Excellent ( ), Good ( ), Fair ( ), Poor ( ), Very poor ( ).  
Comments:
8. To what extent were the reactions of your class members favorable?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments:
9. How well did the information presented on television help to solve problems and questions discussed with your class?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments:
10. How well did the telecast programs fit into what you were discussing and did during the other part of the meetings?  
Very well ( ), Good ( ), Fairly well ( ), Poorly ( ), Not at all ( ).  
Comments:
11. How well did the TV programs fit the level of your class members?  
Above the level of the class members ( ), About right ( ), Below the level of the class ( ).  
Comments:
12. How well did the class members understand the information presented by the TV programs?  
Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).  
Comments:





13. How would you rate the following methods of presenting future TV programs?

	Excellent	Good	Fair	Poor	Very poor
<u>Interview</u>					
<u>Group discussion</u>					
<u>Explanation by one person</u>					
<u>Explanation by two or three persons</u>					
<u>Lecture</u>					
<u>Illustration by still pictures</u>					
<u>Illustration by a motion picture</u>					
<u>Demonstration</u>					

Comments:

14. Give your overall rating of the TV programs, as a group, that you have viewed with 10 being the highest rating.

10\_\_9\_\_8\_\_7\_\_6\_\_5\_\_4\_\_3\_\_2\_\_1\_\_0\_\_.

Comments:

15. What is your reaction to the question concerning whether TV programs should or should not be used as a part of some of the meetings next year? Check the one statement below which best expresses your opinion:

- ( ) TV programs definitely should be used.  
 ( ) TV programs probably should be used.  
 ( ) I am undecided.  
 ( ) TV programs probably should not be used.  
 ( ) TV programs definitely should not be used.

Comments:

16. What suggestions or changes do you recommend to improve future TV programs?

- a. \_\_\_\_\_  
 b. \_\_\_\_\_  
 c. \_\_\_\_\_  
 d. \_\_\_\_\_  
 e. \_\_\_\_\_  
 f. \_\_\_\_\_



### Subject Matter Materials

17. To what extent were the subject matter materials (scripts, source units, reference materials, etc.) sent to you:
- a. Adequate for introducing and leading into the unit to be discussed?  
 Very adequate ( ), Adequate ( ), Limited ( ), Lacking ( ), Of no value ( ).
- b. Adaptable to your area?  
 Very much ( ), Much ( ), Some ( ), Little ( ), Not at all ( ).
- c. Adequate for follow-up?  
 Very adequate ( ), Adequate ( ), Limited ( ), Lacking ( ), Of no value ( ).  
 Comments:
18. What effect did the prepared materials and TV programs have upon the time required for class preparation as compared to past years?  
 More time needed ( ), About the same time ( ), Less time needed ( ).  
 Comments:
19. What suggestions do you recommend for improving the source units, scripts, or other prepared materials?
- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_
20. What additional materials or assistance do you need?
- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

## APPENDIX N

COPY OF FORM UPON WHICH PARTICIPATING TEACHERS REPORTED  
FARM PRACTICES ADOPTED<sup>1</sup>Form J  
Sheet 1a

## Report of Farming Practices

School \_\_\_\_\_ Instructor \_\_\_\_\_

Type of class \_\_\_\_\_ Date \_\_\_\_\_

Title of Series Taught \_\_\_\_\_ No. in class \_\_\_\_\_

\_\_\_\_\_ Average attendance \_\_\_\_\_

## Section I

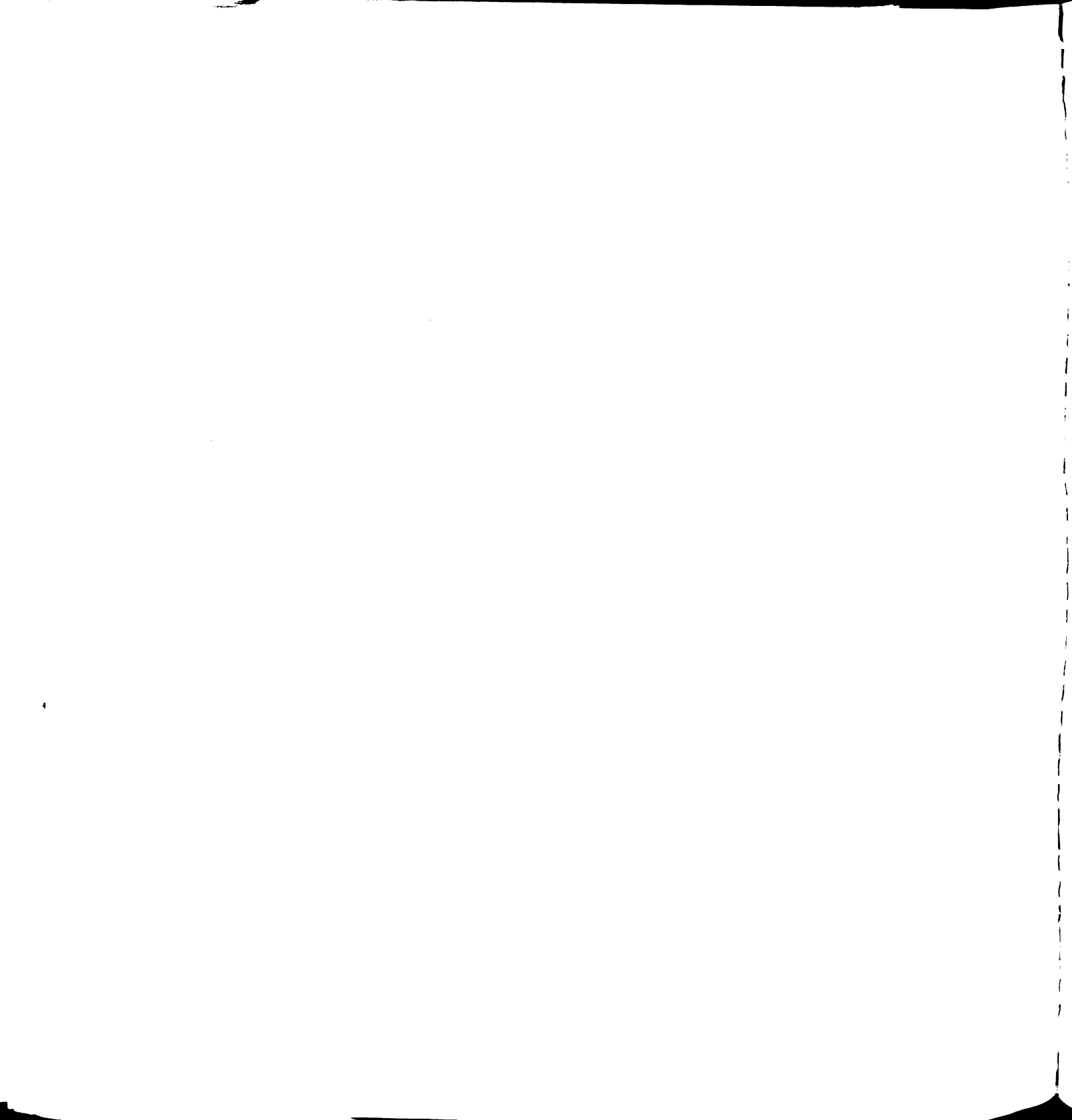
Title of TV Program Used: \_\_\_\_\_

Titles of Other Lessons Taught on This Subject as Preparation or follow-up:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Farming Practices:	Practice already being used when class started		Practice is partially or completely in use since class started		Have decided to use the practice	
	No.	Scope	No.	Scope	No.	Scope
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						

<sup>1</sup>This form, as mailed to the participating teachers, included sufficient numbers of these sheets that the topic of each class meeting and the practices adopted could be reported.



Form J  
Sheet 1b

Title of TV Program used: \_\_\_\_\_

Titles of Other Lessons Taught on This Subject as Preparation  
or Follow-up:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Farming Practices:	Practice already being used when class started		Practice is partially or completely in use since class started		Have decided to use the practice	
	No.	Scope	No.	Scope	No.	Scope
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						

Title of TV Program Used: \_\_\_\_\_

Titles of Other Lessons Taught on This Subject as Preparation or  
Follow-Up:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Farming Practices:	No.	Scope	No.	Scope	No.	Scope
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						

Form J  
Sheet 2

## Section II

Title of a Lesson Taught When a  
TV Program Was Not Used:

	Practice already being used when class started		Practice is partially or complete in use since class started		Have decided to use the practice	
	No.	Scope	No.	Scope	No.	Scope
<u>Farming Practice:</u>						
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						

Title of a Lesson Taught When a  
TV Program Was Not Used:

	No.		Scope		No.		Scope	
	No.	Scope	No.	Scope	No.	Scope	No.	Scope
<u>Farming Practice:</u>								
1. _____								
2. _____								
3. _____								
4. _____								
5. _____								
6. _____								



Form J  
Sheet 3

### Section III

Fill out the form below with those practices which do not fit into the other two sections:

Farming Practice:	Practices already being used when class started		Practice is partially or completely in use since class started		Have decided to use the practice	
	No.	Scope	No.	Scope	No.	Scope
1. _____						
2. _____						
3. _____						
4. _____						
5. _____						
6. _____						
7. _____						
8. _____						
9. _____						
10. _____						
11. _____						
12. _____						
13. _____						
14. _____						
15. _____						

## APPENDIX O

## COPY OF DIRECTIONS ACCOMPANYING FORMS H, I, AND J

## Directions to the Teacher:

1. Distribute Form H to your class members at the last class meeting or as close to the last meeting as is desirable, but not later than May 1, 1955. Read the directions on the form to them and explain that their ratings should be based upon the TV programs as a part of the class activities, not by themselves, in the "Talking Sense" series which they saw. Point out that the form calls for an overall rating.
2. Form I is to be filled out by you giving your overall rating of the TV programs as an instructional aid, and the prepared subject matter materials.
3. Form J is also to be filled out by you securing the necessary information from your class members:
  - a. On sheets 1a and 1b report the practices which are related to the particular TV program topic or other lesson topics taught as preparation or follow-up of this topic, where possible. The "No." column refers to the number of class members who either were already using the practice when the class started, are partially or completely using the practice since the class started, or have decided to use the practice. The "Scope" column refers to the total units (where applicable); reported as pounds of milk, pounds of meat, acres, bushels, dozens of eggs, number of head, etc.; of all class members for each practice.
  - b. On sheet 2 report the practices which are related to the lesson topics not listed on sheets 1a and 1b and in which a TV program was not used.
  - c. On sheet 3 list the practices which do not fit into the two sections on sheets 1a, 1b, or 2.
  - d. If you do not have space to list all of the practices under a particular topic, write them on the back of that sheet and so indicate. Extra sheets are enclosed to be used if needed.
  - e. Be as specific as possible in reporting the practices. For example, report as a practice, "Top-dressing pastures"; not "Improving pastures."

4. Return all completed forms after your last class meeting or not later than May 1, 1955, to:

Charles E. King  
206 Morrill Hall  
Michigan State College  
East Lansing, Michigan



## APPENDIX P

## COPY OF INTERVIEW SCHEDULE

Form K

## Interview Schedule

School \_\_\_\_\_ Date \_\_\_\_\_

Teacher \_\_\_\_\_

## Note to investigator:

Study the previously secured information and forms in each teacher's folder and the survey forms received by Dr. Sweany prior to the interview. Discuss Form I (Teachers' Rating Sheet of TV Programs and Reference Materials) and Form J (Report of Farming Practice) with teachers to clarify any questionable answers.

## I. Personal information:

1. Age \_\_\_\_\_

2. Education \_\_\_\_\_

3. a. Audio-visual courses: \_\_\_\_\_

b. Professional courses: \_\_\_\_\_

4. Number of years teaching experience:  
In vocational agriculture \_\_\_\_\_, other \_\_\_\_\_.

5. Number of years in present school \_\_\_\_\_.

6. Number of classes taught this year:  
high school \_\_\_\_\_ enrollment \_\_\_\_\_  
adult farmer \_\_\_\_\_ enrollment \_\_\_\_\_  
young farmer \_\_\_\_\_ enrollment \_\_\_\_\_

7. Number of classes taught prior to this year:  
adult farmer \_\_\_\_\_, young farmer \_\_\_\_\_

8. Number of in-service meetings attended: \_\_\_\_\_

## II. Special problems encountered:

1. In preparation?

2. In presentation?

3. In follow-up?

4. Administrative?

5. Securing the TV set and determining where to place it in the school building?

6. Others?

III. Interpretation or Relationships:

Were any activities planned and carried out to inform the administrators, teachers, students, and lay persons concerning the Television Project and your use of these TV programs? \_\_\_\_\_ If so, what?

What were the reactions of the above persons to the use of TV?

IV. Content and Methodology:

a. How were the following determined:

(1) Subject matter series to be taught?

(2) Specific topics to be taught?

(3) Specific TV programs and the number to be used?

b. How did you generally prepare for teaching the classes?

Was this procedure different from previous years? \_\_\_\_\_  
If so, how?

c. What procedure did you use in teaching the classes including the use of TV programs?

Was this procedure different from previous years? \_\_\_\_\_  
If so, how?

d. Did you plan follow-up activities? \_\_\_\_\_ If so, what activities?

e. Were any reference materials sent by the Department of Vocational Education or Department of Agricultural Economics used? \_\_\_\_\_ If so, which ones and in what way?

f. Have you evaluated outcomes of instruction to previous adult and young farmer classes? \_\_\_\_\_ If so, how?

V. Evaluation:

a. Did the TV programs have specific value for your situation? \_\_\_\_\_ If so, what?

- b. Do you recommend any changes concerning the reference materials that were sent to you?\_\_\_\_\_ If so, what?
- c. Did the TV programs have any weak points?\_\_\_\_\_ If so, what were they?
- d. Did the TV programs have any strong points?\_\_\_\_\_ If so, what were they?
- e. Do you recommend any changes concerning the TV programs? \_\_\_\_\_ If so, what changes?
- f. Should educational TV programs presenting agricultural subject matter be offered next year?\_\_\_\_\_ If so, for what group or groups?

What subject-matter area?

- VI. Were there other pertinent activities, information, opinions, problems, questions, or miscellaneous data which has not been discussed previously?



## APPENDIX Q

COPY OF TYPICAL LETTER SENT TO PARTICIPATING  
TEACHERS PRIOR TO THE INTERVIEWMICHIGAN STATE COLLEGE  
EAST LANSINGSchool of Education  
Department of Vocational Education

April 5, 1955

Mr. \_\_\_\_\_  
\_\_\_\_\_ High School  
\_\_\_\_\_, Michigan

Dear \_\_\_\_\_,

The last phase of collecting data for the research study of the Television Project consists of interviewing the participating teachers. Therefore, I would like to visit with you for approximately two hours on Wednesday afternoon, April 13, at 2:00 to conduct the interview. I am interested in securing information in the following areas: (1) personal information concerning your education and teaching experience, (2) special problems encountered, (3) relationships, (4) content of the course and teaching methods, (5) evaluation, and (6) any other information or data which are pertinent and peculiar to your department. May I suggest that you group and organize any forms, information, or data in such a way that you can easily refer to them during the interview, if necessary?

Please advise me if the above date is not convenient and suggest another afternoon date. If I do not hear from you, I will assume that the recommended date is satisfactory.

Sincerely,

Charles E. King

CEK/n  
cc: Mr. \_\_\_\_\_  
Superintendent

## APPENDIX R

## TELEVISION PROGRAMS USED AND NUMBER

Date	Television Program	A	B	C
Oct. 6	Democracy is Everybody's Business			
Oct. 13	Where Are Michigan's Farm Products Sold?		15	
Oct. 20	Should I Go Into Farming?			
Oct. 27	The United Nations and You			
Nov. 3	This Thing Called "Parity"			
Nov. 10	Marketing Livestock		11	
Nov. 17	Ways of Getting Started			
Nov. 24	The Job of a General Farm Organization			
Dec. 1	State or Local Equalization of Taxes			
Dec. 8	Who Sets Milk Prices?		34	22 Y
Dec. 15	Income Tax Tips	X	10	16 Y
Dec. 22	Effect of Trade on Michigan Farmers			X
Jan. 5	Farmers and the Social Security Program	X		26 Y
Jan. 12	Bulk-Handling of Milk	X	14	24 Y
Jan. 19	Costs and Returns from Farming			24
Jan. 26	Cooperative Marketing		4	
Feb. 2	Farm Commercial License			
Feb. 9	Farmers' Week Special		4	
Feb. 16	Acquiring a Farm			23
Feb. 23	Producer's Share of the Consumer's Dollar		5	
Mar. 2	Water Rights			
Mar. 9	Are Direct Payments the Answer?			
Mar. 16	Going Into Debt Safely			22
Mar. 23	Marketing Poultry**		X	25
Total	24	3	9	13

Mean\*\*\*

Mean No. of Viewers Per Program Per School

Range of Viewers Per Program

\*Determined by multiplying programs viewed times attendance.  
Average attendance (See Table II) was used in cases where attendance was unknown.

\*\*Seven additional programs, making a total of 31, were telecast weekly until May 11, 1955, but none were used by the participating teachers.

\*\*\*Based upon programs used, N = 21

TABLE XLIII

## OF PERSONS VIEWING BY SCHOOLS

Schools		F	G	H	I	J	No. Classes Viewing	No. Viewers Per Program*
D	E							
							0	0
							1	15
							0	0
							0	0
			X	4		10	3	22
11			X	6			4	35
16		X					2	20
		X					1	3
		X					1	3
16		X	X	8			7	106
13		X	X				7	73
		X					2	27
19	X		X	27			7	113
16		X	X			12	8	98
	7	X	X		X		5	94
	X	X	X				4	25
12	X	X					3	25
		X					2	7
	X	5	X		X		5	98
	X	X	X				4	26
		X					1	3
	X		10				2	20
X	X					X	4	49
					X		3	89
8	8	14	11	4	3	3	76	951
							3.6	45.3
								12.51
								3-113

X = Programs used but attendance unknown.

Y = Same programs used with another class.



'b

1

ROOM USE ONLY

Sep 4 '56

Oct 5 '56

Feb 25 '57

Mar 9 '57

Dec 9 '57

~~Jun 2 '58~~

~~JUN 1 1958~~

~~JUN 10 1964~~

~~DEC 7 1965~~

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