

VALUE-ATTITUDES OF ADMINISTRATORS, TEACHERS, AND  
STUDENTS CONCERNING INSTRUCTIONAL  
TELEVISION CLASSES

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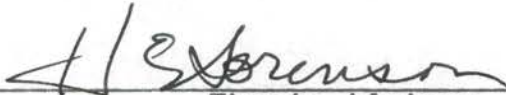
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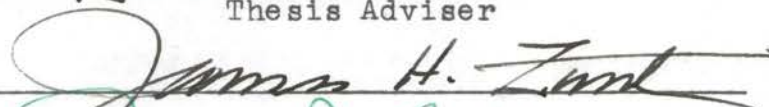
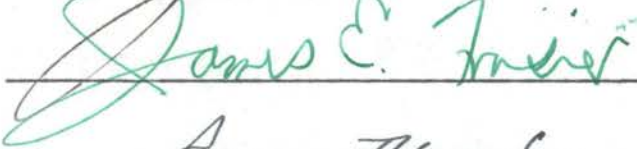
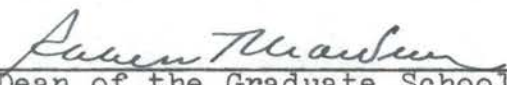
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## DEDICATION

This volume is dedicated to the memory of the late D. Ross Pugmire, a friend of the school children of Oklahoma. His influence will be felt in the schools of Oklahoma for many decades through the efforts of his former students who are now in teaching positions in Oklahoma's schools.

## PREFACE AND ACKNOWLEDGMENTS

The purpose of this study was to ascertain the stated value-attitudes of students, teachers, and administrators involved in instructional television classes in the State of Oklahoma television project.

Special indebtedness is acknowledged to Dr. R. W. Scofield for the guidance and encouragement he gave me during most of the study.

I am also indebted to Dr. H. E. Sorenson, Dr. James Frasier, and Dr. James H. Zant for their valuable guidance and assistance as members of the advisory committee; Mrs. Camillia Thompson for her assistance with the clerical work involved in the study; the workers at the Oklahoma State University Computing Center; the respondents to the questionnaire; and to the following for their help in overcoming specific hurdles involved in the study: Dr. Carl Marshall, Oklahoma State University; Dr. Cecil Bridges, Oklahoma City Public Schools; Dr. T. H. Broad, Oklahoma City Public Schools; Dr. M. W. Glasgow, Oklahoma State Department of Education; Dr. Oliver Hodge, Oklahoma State Superintendent of Public Instruction; and Dr. William Rambo, Oklahoma State University.

The one person who gave the most encouragement and sacrificed the most in order for this study to be made in addition to typing the thesis is my wife, Maxine.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION TO THE STUDY . . . . .	1
Statement of Problem . . . . .	1
Definition of Terms. . . . .	2
Scope. . . . .	3
Hypothesis . . . . .	3
Basic Assumptions. . . . .	3
Need for the Study . . . . .	4
II. STUDY DESIGN AND METHODS OF ANALYSIS. . . . .	10
Exploratory Study. . . . .	11
Techniques . . . . .	14
Construction of the Questionnaire. . . . .	15
Methods of Analysis. . . . .	22
III. STATED VALUE-ATTITUDES ACCORDING TO STATISTICAL ANALYSES. . . . .	25
Analysis of Variance . . . . .	25
t-Tests. . . . .	27
Status Comparisons . . . . .	39
IV. GENERALIZATIONS AND INTERPRETATIONS . . . . .	67
Review of Questionnaire Results. . . . .	67
Testing of Hypotheses. . . . .	69
Interpretations. . . . .	79
V. SUMMARY AND RECOMMENDATIONS . . . . .	84
Summary of the Study . . . . .	84
General Recommendations. . . . .	87
Recommendations for Further Research . . . . .	89
A SELECTED BIBLIOGRAPHY. . . . .	93
APPENDIX A . . . . .	96
APPENDIX B . . . . .	105

## LIST OF TABLES

Table	Page
I. Responses to Statements on Questionnaire Grouped as Paired Opposites. . . . .	28
II. The Difference of Means of Means Between Positive and Negative Statements When the Respondents Are Grouped on the Basis of Sex. . .	40
III. The Difference of Means of Means Between Positive and Negative Statements When the Respondents Are Grouped on the Basis of Age. . .	42
IV. The Difference of Means of Means Between Positive and Negative Statements When the Respondents Are Grouped on the Basis of Whether They Volunteered or Were Assigned to Teleclasses . . . . .	43
V. The Difference of Means of Means Between Positive and Negative Statements When the Respondents Are Grouped on the Basis of Whether They Continued Receiving Teleclasses . .	45
VI. The Difference of Means of Means Between Positive and Negative Statements When the Respondents Are Grouped on the Basis of the Teleclass on Which They Reported . . . . .	47
VII. The Difference of Means of Means Between Positive and Negative Statements When the Respondents Are Grouped on the Basis of Enrollment. . . . .	54
VIII. The Difference of Means of Means Between Positive and Negative Statements When Students Are Grouped on the Basis of School Represented .	56
IX. The Difference of Means of Means Between Positive and Negative Statements When Respondents Are Grouped on Basis of Distances From Studio. . . . .	58

Table	Page
X. The Difference of Means of Means Between Positive and Negative Statements When Oklahoma City Educators Are Grouped on the Basis of Status . . . . .	61
XI. The Difference of Means of Means Between Positive and Negative Statements When Outlying School Educators Are Grouped on the Basis of Status . . . . .	61
XII. Number of Oklahoma City Personnel Responses for Each Scale Value. . . . .	106
XIII. Number of Responses From Outlying Personnel for Each Scale Value. . . . .	108
XIV. Means Distributed According to Status . . . . .	110

## CHAPTER I

### INTRODUCTION TO THE STUDY

#### INTRODUCTION

The purpose of this study has been to ascertain the stated value-attitudes of students, teachers, and administrators involved in instructional television classes in the State of Oklahoma television project.<sup>1</sup> Such data provide evidence on which to base decisions for recommendations to the proper state agencies on how to organize instructional television classes more effectively for consideration of the feelings of persons involved in such classes.

A subsidiary purpose has been to develop an instrument which would ascertain the value-attitudes of individuals associated with instructional television classes.

#### Statement of Problem

The specific statement of the problem is given below.

What are the stated value-attitudes of individuals involved in secondary instructional television classes concerning instructional television classes and certain practices connected with the State of Oklahoma instructional television project?

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<sup>1</sup>See p. 2 of this report for definition.



## Definition of Terms

The terms used in this study are defined as follows:

Value-attitude. A preference and that degree or quality of the preference which renders it desirable or useful in a pleasurable or functional sense. The attitude determines direction (agreement or disagreement), but the value determines the intensity of the attitude.

Individuals involved. All teachers, students, and school administrators who are directly associated with secondary school instructional television classes. This includes studio and central office teachers, administrators, and supervisors.

Instructional television classes. Those classes accredited by the State Department of Education as such and used for formulating the basic course of study in certain subject area disciplines. These include secondary school level courses in chemistry, trigonometry, solid geometry, physics (live), physics (film), second-year algebra, and geology.

Practices. Those acts which are performed or should be performed, according to the opinions of the persons involved, with the intention of promoting student understanding of the principles of mathematics and science.

State of Oklahoma instructional television project.

Instructional television classes and materials produced and presented by television station KETA-TV, Oklahoma City, Oklahoma, and the Oklahoma State Department of Education.

## Scope

This study involves a survey of stated value-attitudes of students, teachers, and administrators of Oklahoma City secondary schools and fifty outlying secondary schools, using at least one of the television broadcasts as a basic course and the studio teachers and supervisors involved in the project during the 1957-58 school year. It also attempts to evaluate the functional aspects of the practices listed on the basis of consensus of stated value-attitudes.

## Hypothesis

The hypothesis tested in this study may be simply stated as: regardless of status, the persons involved in the State of Oklahoma secondary instructional television classes do not possess basic differences in their stated value-attitudes concerning instructional television classes.

## Basic Assumptions

For the purpose of this study it is assumed:

1. Instructional television can be used as an effective method of teaching.
2. Differences and similarities of value-attitudes can be ascertained by the analysis of answers that the persons involved in teleclasses will give on a questionnaire.
3. Instructional television will be more effective as a method of teaching when it is sensitive to educational purposes and to the value-attitudes of viewers.

## Need for the Study

Some of the historical development of educational television is presented in the first few paragraphs of the Cumming report.

For more than two decades, educators have been participating in various kinds of television activities.

Probably the most extensive of early endeavors in educational television programming were the more than 400 programs transmitted over a mechanical scanning system at the State University of Iowa's experimental station W9XK between 1932 and 1939.

W9XK's telecasts included lectures in art, engineering, shorthand, botany, and astronomy, among others, as well as entertainment events.....

The first TV station owned by an educational institution was Iowa State College's commercial outlet WOI-TV in Ames. Iowa State was the only school to have obtained a license by 1948 when the Federal Communications Commission froze channel assignments in order to re-examine the allocation picture. However, since then, educators have become increasingly concerned with efforts to secure TV channels for educational use.

On April 14, 1952, the FCC lifted the freeze on television assignments. The commission allocated 242 channels to noncommercial use - 80 VHF and 162 UHF.<sup>2</sup>

Educational television came to Oklahoma somewhat later than those first endeavors in Iowa; however, Oklahoma can claim a first in educational television.

The Oklahoma Legislature was the first state legislature to establish a state-wide network. In 1951 it requested the FCC to reserve ten TV channels in the state for educational use, and Governor Johnston Murray called a conference for concerted planning. The bill passed by the legislature in the spring of 1953 provided for stations in Oklahoma City, Tulsa, Muskogee, Tishomingo, Clayton, Woodward, Enid, Lawton, Elk City, and Guymon. It set up a thirteen-member Educational Television Authority with membership composed of the president of the University of

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<sup>2</sup>W. K. Cumming, This is Educational Television (Ann Arbor, 1954), pp. 1-2.

Oklahoma, the president of Oklahoma Agricultural and Mechanical College [Oklahoma State University], the state superintendent of public instruction, the chancellor of the Oklahoma State Regents of Higher Education, and representatives of additional public and private educational institutions of the state.

The bill also established a thirty-five member advisory committee of civic and business groups, selected by the authority, to keep the state-wide TV planning close to local needs. The legislature authorized the Educational Television Authority, for the purpose of retiring these bonds, all revenues accrued to the State Public Building Fund which were not otherwise appropriated. State-owned oil properties swell the annual income of this building fund to over \$200,000. The network has also received large gifts from private interests.<sup>3</sup>

The gifts from private interests have actually comprised the largest portion of the money used for establishing and operating the daytime television station KETA-TV in Oklahoma City.

The first telecasts over educational station KETA-TV in Oklahoma City were presented on an experimental basis during the summer of 1956 in the subjects of physics and trigonometry. On October 1, 1956, the first in-school teleclasses were begun in twelve schools located outside the Oklahoma City school district within a ninety-mile radius of Oklahoma City. In this study, schools of this type will hereafter be called outlying schools. The Oklahoma City Public Schools did not begin receiving in-school teleclasses until the fall of 1957 when, along with fifty outlying school districts, they started using in-school telecasts at both the elementary and secondary level. These in-school

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<sup>3</sup>Jennie Callahan, Television in School, College, and Community (New York, 1953), pp. 21-22.

teleclasses have been produced by the Oklahoma State Department of Education and the Oklahoma City Public School System over KETA-TV through the courtesy of the Oklahoma Television Authority and have been financed by grants from the Frontiers of Science Foundation of Oklahoma, Incorporated, and the Fund for the Advancement of Education.

At the time of this writing, KETA-TV in Oklahoma City is one of three educational television stations operating in Oklahoma. Night programs, some for college credit, are also presented over KETA-TV from a studio at the University of Oklahoma in Norman.

Swoveland<sup>4</sup> sent questionnaires to students participating in the 1956-57 Oklahoma in-school teleclasses and found that many of the students did not respond favorably to certain aspects of instructional television classes, but his study was not comprehensive enough to ascertain why the students believed as they did.

Shortly before the questionnaires were sent out for the present study, Bridges<sup>5</sup> sent free response questionnaires to each class of students using the teleclasses. With a 40 per cent return on his questionnaires, he found that 34 per cent of the Oklahoma City students gave

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<sup>4</sup>Wayne A. Swoveland, "An Evaluation of Educational Television in Oklahoma" (unpublished seminar study, Oklahoma A. & M. College, Stillwater, 1957).

<sup>5</sup>Cecil Bridges, "Evaluation of ETV Acceptance With Free Response Questionnaires" (unpublished monograph, Oklahoma City Public Schools, Oklahoma City, 1958).

favorable responses, 15 per cent neutral, and 52 per cent unfavorable, but 65 per cent of the students from outlying schools gave favorable responses, 14 per cent neutral, and 21 per cent unfavorable. He also found that a majority of the respondents gave favorable responses to the courses in physics, algebra, and geology and unfavorable responses to the courses in solid geometry and chemistry. His questionnaire consisted of two questions: (1) "In a few short statements, what do you think and how do you feel about your own experiences with educational television?" and (2) "What would you like to see changed?"

"Actual performance has far outstripped evaluation in instructional television programming."<sup>6</sup> There are probably many causes of this, such as lack of adequate financing, lack of adequate research in other areas of education as well as this one, and the faith and enthusiasm of the educators associated with the production of instructional television classes.

It appears that, in instructional television projects, evaluation is an afterthought and that evaluators are asked to get what information they can from the project after the experimental design has already been set.

"What can be said about the studies which have been made? On the whole, the quality is disappointing."<sup>7</sup> This

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<sup>6</sup>Hideya Kumata, An Inventory of Instructional Television Research (Ann Arbor, 1956), p. 1.

<sup>7</sup>Ibid., p. 3.

is especially true in the studies of value-attitudes since adequate attitude-studies are the last attempted in most television projects. "In a great many of the studies, a study of attitudes toward television instruction is a minor appendage to the main part of the study and is usually limited to one five point rating scale."<sup>8</sup>

Willis<sup>9</sup> found that teachers in Chicago whose secondary school classes were exposed to television instruction thought that the television instruction was either excellent or superior but less effective than regular classroom instruction. They also believed that too much material was covered and that the lessons on the whole were comparatively difficult. Students believed that too much material was presented in each television lesson.

The studies by Swoveland and Bridges are the only studies which have attempted to ascertain the attitudes of the students in the State of Oklahoma instructional television project, and neither of these has tried to derive the attitudes of the students by any method of direct contact with the students. No attempt has been made to ascertain the attitudes of teachers and administrators involved in the project.

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<sup>8</sup>Ibid., p. 18.

<sup>9</sup>B. C. Willis, Evaluation Report of the Two Week Experiment of Direct Teaching on Television (Chicago, 1956).

Attitude-studies where respondents are asked to compare television courses with other courses they have had should be interpreted with caution. The effect of immediate association with television instruction may result in a higher positive rating of television instruction than is warranted. Parsons<sup>10</sup> asked students who took his psychology course by regular instruction, by correspondence, and by television to rate their preferences as to the methods of instruction. Television students preferred television, correspondence students preferred correspondence, and regular classroom students preferred regular classroom instruction.

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<sup>10</sup>T. S. Parsons, A Comparative Analysis of Some Outcomes of Instruction by Kinescope, Correspondence Study, and Classroom Procedures (Ann Arbor, 1955).



## CHAPTER II

### STUDY DESIGN AND METHODS OF ANALYSIS

Having identified the specific concern in this study of value-attitudes of individuals in secondary school instructional television classes in Oklahoma and having exposed the gap in knowledge revealed by the meager amount of research done concerning value-attitudes toward instructional television, this investigator can now examine the problem more closely. The research design and devices for obtaining data are also described in this chapter.

As Assistant Director of the Division of Television Instruction with the Oklahoma State Department of Education, the writer formed the belief that negative value-attitudes were impairing the effectiveness of instruction by television in Oklahoma. It seemed that students with similar intellectual, social, and economic backgrounds produced significantly different levels of achievement simply because of their differences in value-attitudes toward instructional television; furthermore, teachers and administrators with similar backgrounds seemed to elicit different degrees of success from their students in instructional television classes because of the negative value-attitudes of these teachers and administrators toward television as a method of instruction. This was somewhat more understandable

when individuals (students, teachers, and administrators) from Oklahoma City schools were considered than it was when individuals were considered from the outlying schools. Many of the individuals from Oklahoma City believed they had been assigned to television classes, but those from outlying schools had entered their association with instructional television on a voluntary basis. Naturally, it was postulated that certain practices must be irritating these individuals in their association with instructional television classes (teleclasses) which were producing negative value-attitudes. This study investigates these practices in order that negative value-attitudes may be eliminated.

#### Exploratory Study

An exploratory study was made to ascertain whether certain facets of the teleclass project were contributing more to the production of negative value-attitudes than were others. Several sources of data were available for the development of statements of practices and value-attitudes connected with the practices. These statements were listed as to whether they were positive or negative in meaning. Positive statements were interpreted as those in which a practice was disclosed or observed, and the source indicated that more or continued use of this practice would be preferred and desirable. Negative statements were interpreted as those in which a practice was disclosed or

observed, and the source indicated that less or discontinued use of this practice would be preferred and desirable. General value-attitudes were listed negative or positive in accordance with the connotation of the statement. For example, the statement which implied that instructional television does more harm than good was interpreted as a negative statement.

Newspaper articles and all printed materials intended for distribution to persons concerned were first read and studied for statements of practice. Next, teleclass presentations were observed on many occasions at the broadcasting studio. Teleclasses were also visited in the receiving schools where practices were observed and listed. Observations and interviews were carried on simultaneously. Open-end interviews were carried on with a substantial sample of the persons associated with teleclasses. At least one person from each school (one exception), as well as each studio teacher and central office supervisor, was interviewed. Notes were not made during the interviews, but statements disclosed during the interviews were listed immediately following each interview. Each person from the central office and broadcasting studio prepared a diary of his activities and observations. These diaries were checked for statements of practices. Minutes of meetings of groups associated with teleclasses were checked for statements of existing and recommended practices. Statements of general attitude not necessarily connected with any certain

practice were observed and recorded during the described data-gathering process.

Approximately 400 different statements were derived during the process just described. From study of these statements it was possible to divide them into eleven definite value-attitude categories: general, materials, scheduling, purposes, assignments, teaching, testing and grading, supervision from central office, supervision from local school, viewing conditions, and admission. From frequency counts for each statement and the number of statements under each category it was apparent that certain hypotheses could be made and objectively tested concerning the value-attitude statements listed.

First Hypothesis. The general value-attitudes of persons involved in secondary school teleclasses in Oklahoma are definitely positive.

Second Hypothesis. The instructional materials provided in teleclasses are a source of difficulty so far as the forming of negative value-attitudes is concerned.

Third Hypothesis. The scheduling of teleclasses in conjunction with local school schedules does not appear to be a source of difficulty to most persons associated with teleclasses.

Fourth Hypothesis. Teleclasses are valuable to certain individuals in various ways, but the chief advantage is the offering of courses which the local school is not prepared to offer; and, if the school is prepared to offer the course locally, local presentation is preferred.

Fifth Hypothesis. The persons associated with teleclasses prefer that daily assignments be discussed over the air by the studio teachers. They also believe that assignments should be thoroughly checked and graded.

Sixth Hypothesis. Teleclass reviews given over the air are quite helpful and necessary to make teleclasses effective. The persons associated with television think that outstanding teachers should be used for teleclasses, but that

these teachers should be in the studio and not on film because of the inflexibility of filmed lectures.

Seventh Hypothesis. With certain classes excepted, tests should be given more often in teleclasses. The tests are valuable teaching aids and should be carefully prepared by the studio teacher rather than by some assistant.

Eighth Hypothesis. The persons associated with teleclasses in outlying schools recognize a need for supervision from the central office.

Ninth Hypothesis. Most persons associated with teleclasses believed that the person in charge of the local class has a great deal to do with the success or failure of teleclasses; however, there seems to be misunderstanding and lack of direction as to the relative amount of responsibility the local teacher should take in trying to make his teleclass successful.

Tenth Hypothesis. Viewing conditions affect the value-attitudes of viewers in teleclasses. Those with special viewing rooms seem to think that this is the best type of viewing condition, but those with receivers in regular classrooms prefer their viewing conditions. The production operations are of high enough quality that they affect value-attitudes very little.

Eleventh Hypothesis. There is conflict as to who should be allowed to enroll in teleclasses, but prerequisite courses should be set up. The statement concerning paying of tuition as a condition of enrollment gives conflicting results.

Having indicated the hypotheses to be tested, the writer now considers techniques used to obtain data for this testing.

#### Techniques

Data indicating the value-attitude system of persons associated with the instructional television project were obtained by one specific technique. This was to examine the value-attitudes of these students, teachers, and administrators by the use of a questionnaire.

The questionnaire was conveyed by the United States Postal Service to 532 of the persons associated with the secondary instructional television classes in Oklahoma. Since a representative group was desired as respondents to the questionnaire, a list of all the persons concerned was prepared from the records of the Curriculum Division of the Oklahoma City Public Schools and the Instructional Television Division of the Oklahoma State Department of Education. Questionnaires were sent to all teachers and administrators associated with the teleclasses; however, questionnaires were sent to only 30 per cent of the students associated with teleclasses. The students were selected from the total list of students by use of a table of random digits.<sup>1</sup> Care was taken to select 30 per cent of the Oklahoma City students and 30 per cent of the students in outlying schools.<sup>2</sup>

#### Construction of the Questionnaire

In constructing the questionnaire, the writer examined the 400 statements derived in the exploratory study. The statements most frequently observed were listed. These were further refined by combining and eliminating those statements with the same meaning. The statements were then

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<sup>1</sup>George W. Snedecor, Statistical Methods (Ames, 1956), p. 10.

<sup>2</sup>For number of persons responding in each category, see p. 22.

divided into the eleven categories stated previously in this chapter. Statements were selected which would concern several aspects of the various categories. Finally forty-two statements were chosen. Then, statements expressing views opposite from each of the derived statements were constructed. The reliability of the answers given could be checked by this method. It was also desirable that adequate opportunity be given for expression of both positive and negative views. Following are the eleven categories<sup>3</sup> with representative derived and constructed statements furnished.

General. In this category the desire was to ascertain whether the respondents had a general positive or negative value-attitude system toward instructional television. A sample of the derived (a) and constructed (b) statements used in this category is the following:

- a. Instructional television does more good than harm.
- b. Instructional television does more harm than good.

Materials. It was desired to ascertain whether the respondents thought the materials provided in the project were adequate and helpful. A sample of the derived (a) and constructed (b) statements used in this category is the following:

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<sup>3</sup>See Appendix A, Part III of the questionnaire for a complete listing of the statements. The odd-numbered statements are those of a positive value-attitude, and the even-numbered of a negative value-attitude.

- a. Those persons involved in teleclasses are not furnished enough general information.
- b. The general information furnished those involved in teleclasses is adequate.

Scheduling. In this category the desire was to ascertain whether conflicting schedules were a source of difficulty in the building of negative value-attitudes toward instructional television. A sample of the derived (a) and constructed (b) statements used is:

- a. The local school should be willing to change its schedule to fit the instructional television schedule.
- b. The instructional television schedule should be made to fit existing schedules of local schools.

Purposes. The desire was to ascertain the respondents' thoughts concerning reasons for using instructional television. A sample of the derived (a) and constructed (b) statements is:

- a. Teleclasses should be offered only in those areas of learning in which the local school is not prepared to offer courses.
- b. Teleclasses should be offered in all areas of learning.

Assignments. In this category the desire was to ascertain the respondents' thoughts concerning the assignments given in teleclasses. A sample of the derived (a) and constructed (b) statements is:

- a. The assignments given by the studio teacher should be thoroughly graded.
- b. It is not important that the assignments given by the studio teacher be graded.



Teaching. The desire was to ascertain the respondents' thoughts concerning the type of teaching over television. A sample of the derived (a) and constructed (b) statements is:

- a. The reviews given over television are quite helpful.
- b. The reviews given over television are of little value.

Testing. In this category the desire was to ascertain whether the testing in teleclasses was satisfactory. A sample of the derived (a) and constructed (b) statements is:

- a. Tests are given too frequently by the studio teacher.
- b. Tests should be given more often by the studio teacher.

Supervision From Central Office. The desire was to ascertain the respondents' thoughts concerning supervision from the central office. A sample of the derived (a) and constructed (b) statements is:

- a. The visitations of the supervisors from the central office are necessary to make instructional television classes of much value.
- b. The visitations of the supervisors from the central office are of little use in making the teleclasses valuable.

Supervision From Local School. In this category the desire was to ascertain the respondents' thoughts concerning the responsibility of the local school in regard to teleclasses. A sample of the derived (a) and constructed (b) statements is:

- a. The responsibility for the success or failure of teleclasses rests firmly on the local school.

- b. The local school has very little to do in determining the success or failure of teleclasses.

Viewing Conditions. The desire was to ascertain the value-attitudes of respondents concerning viewing conditions. A sample of the derived (a) and constructed (b) statements is:

- a. Any ordinary classroom equipped with a television set is the only physical facility needed for teleclasses.
- b. Special rooms should be set aside and equipped for teleclasses.

Admission. In this category the desire was to ascertain the respondents' value-attitudes concerning who should be allowed to enroll in teleclasses. A sample of the derived (a) and constructed (b) statements is:

- a. Students should never be required to pay any tuition for teleclasses.
- b. If the need arises, students should be willing to pay tuition in order to participate in teleclasses.

In the final questionnaire, statements were distributed in such a way that positive (not necessarily derived, because some were constructed) statements received odd numbers, and the negative value-attitude statements received even numbers. Several intervening statements were placed between the positive and negative statements of each pair.<sup>4</sup>

Several problems arose in constructing a questionnaire which could be answered by many types of students, teachers, and administrators. Some of the individuals were associated with the teleclass project at the time the questionnaires

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<sup>4</sup>Chapter III, p. 28.

were transmitted, others had dropped out; some were associated with one class, others with another class. To solve this problem, Part II of the questionnaire was constructed to allow the respondents to categorize themselves according to status. The responses were analyzed in terms of the variability of these status factors.

If the exploratory study were to be tested, however, the large number of respondents required for sampling made a questionnaire necessary. This also allowed responses from a greater number of individuals than the exploratory study allowed.

Provision was made for the recording of value attached to the attitude of persons associated with teleclasses. This was done by allowing these persons to indicate the degree to which they thought their preferences agreed with the selected value-attitude statements derived from the exploratory study. A six-point scale was used as follows:

- 0.....Not at all
- 1.....To a small degree
- 2.....To some degree
- 3.....To a considerable degree
- 4.....To a great degree
- 5.....To a very great degree<sup>5</sup>

It was believed that the technique of having each respondent rate each statement according to this scale would force the respondents to deliberate more fully before indicating a response to the statement; however, there was

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<sup>5</sup>Robert W. Scofield, "The Role of College Education in Occupational Mobility" (unpublished Ph.D. dissertation, University of Chicago, 1955), p. 63.

some concern whether the adult respondents would be willing to spend adequate time to complete the questionnaire with the six-point scale being applied to each statement. There was also concern as to whether the adolescents among the population to be tested could sufficiently understand the questionnaire in order to complete it; therefore, the sample lists of students to receive the questionnaire were selected and placed in reserve as were the lists of all teachers and administrators associated with teleclasses. This left 70 per cent of the students available for trial-runs in testing the validity of the questionnaire; however, only forty-three students were asked to complete questionnaires in the trial-runs. Eighteen questionnaires were sent to students not on the sample lists, and twelve of these questionnaires were returned and analyzed. As a result of this analysis, several statements were rephrased and revised. Then twenty-five of the revised questionnaires were sent to different students who were not on the sample lists. Thirteen of the revised questionnaires were returned and analyzed. As a result of this last analysis, three pairs of the statements were eliminated. These statements did not discriminate sufficiently. All respondents gave the same scale value to both the positive and negative statements of these three pairs. After this revision, final questionnaires were reproduced and sent to the selected sample. Neither the large number of statements on

the questionnaire nor the type of questionnaire appeared to affect the return rate.

#### Methods of Analysis

Of the 532 questionnaires sent out, 356 were returned. This was a return rate of 66.9 per cent; however, one return was left blank, and eighteen were so marked that no accurate recording of their data could be made. These were omitted in analyzing the data. Thus the final return rate was 59.6 per cent. This was an above-average return rate for mail questionnaires.<sup>6</sup> The respondents from Oklahoma City represented 150 students and 33 educators. This was 45 per cent and 10 per cent, respectively, of the total of 337 responses. The outlying schools were represented by eighty-two students and seventy-two educators for 24 per cent and 21 per cent, respectively, of the total responses. This ratio was in close agreement with the ratio of questionnaires transmitted to the population sample.

The types of schools which the respondents represented covered a wide variety of rural and urban schools located in central Oklahoma. The schools varied in size from 20 students enrolled to over 2,000 students enrolled. It was suspected that Oklahoma City respondents would have value-attitudes different from those of respondents in outlying schools; therefore, responses were classified under the two

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<sup>6</sup>Ibid., p. 70.

main headings of Oklahoma City and outlying schools. With the possibility that a different value-attitude system could exist between students and educators, the respondents were further classified as students or educators. All teachers, administrators, professional studio personnel, and central office personnel were arbitrarily classified as educators. By categorizing the responses into the four sections of Oklahoma City students, outlying students, Oklahoma City educators, and outlying educators, the data contained in the questionnaires were more scientifically analyzed.

Since the statements in Part III of the questionnaire were already categorized by assigning odd numbers to the positive statements and even numbers to the negative statements, eight sections of data were defined between which statistical tests were made. Mean values for the seventy-eight statements in each of the eight sections were computed.<sup>7</sup> To determine wherein significant differences in the responses lay, if any, analysis of variance was used. By the use of this statistical device it was determined whether the total responses from Oklahoma City respondents differed significantly from the total responses from respondents in outlying schools, if the total responses from students differed significantly from those of educators, and if responses to the odd-numbered statements

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<sup>7</sup>See Appendix B, p. 110 (Table XIV).

from all respondents differed significantly from the responses to the even-numbered statements from all respondents. The analysis also allowed a test for significant differences between the means of the scale values of the odd-numbered statements and the even-numbered statements assigned by Oklahoma City respondents and the odd-even-numbered statements by respondents in outlying schools. It further allowed a test of such significance between the odd-even responses by students and the odd-even responses by educators, as well as differences between total responses by students and educators in Oklahoma City and the outlying area. The difference of means between each pair of statements was tested by the t-test for significance. Through the use of these statistical devices, plus an inspection of the mean values assigned to the seventy-eight statements, interpretation of the data obtained from the questionnaire was scientifically derived.

It was believed that the method of selection of respondents, the method of constructing the questionnaire, the decision to use the technique of the value scale, the technique of identifying the status of the respondents, and the methods of analysis were all within limits of scientific research methodology. The results obtained thereby were accepted as representing the ideological system of the persons associated with the Oklahoma instructional television project.

## CHAPTER III

### STATED VALUE-ATTITUDES ACCORDING TO STATISTICAL ANALYSES

In this chapter the data concerning the value-attitudes of teachers, students, and administrators associated with instructional television classes in Oklahoma are presented as determined from results of the questionnaire. First, the value-attitudes in general as indicated by the analysis of variance are presented. Then the value-attitudes of the total respondent population are presented by comparing means given the paired statements. Means of the means of the total responses by status categories are presented simultaneously with means to specific statements where the attitude differed.

#### Analysis of Variance

The analysis of variance indicated that a significant differential existed at the .01 level of confidence between the total responses assigned to the odd-numbered positive statements and the total responses assigned to the even-numbered negative statements.<sup>1</sup> It further indicated that there was a significant difference at the .01 level of confidence between the responses to the positive and

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<sup>1</sup>F = 333.29      P < .01



negative statements assigned by outlying respondents and the responses to the positive and negative statements assigned by Oklahoma City respondents.<sup>2</sup> A significant difference existed at the .01 level of confidence between the responses to positive and negative statements assigned by educators and positive and negative statements assigned by students.<sup>3</sup> No significant differences existed between the means of the total responses of Oklahoma City respondents and those of the outlying respondents or between the means of the total responses of students and those of educators. Likewise, no significant differential existed between the responses between students and educators of Oklahoma City and the students and educators of the outlying schools.<sup>4</sup> Thus, in general, it was found that the respondents favored the thirty-nine positive statements over the thirty-nine negative statements to a significant degree, that respondents in the outlying schools favored the positive statements over the negative more than those in Oklahoma City to a significant degree, and that educators favored the positive statements over the negative more than students to a significant degree.

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<sup>2</sup>F = 17.86      P < .01

<sup>3</sup>F = 8.86      P < .01

<sup>4</sup>See Appendix B, p. 113.

t-Tests

The mean values<sup>5</sup> assigned to specific statements, both the positive and the negative, varied considerably from the mean of the total responses (2.17), as well as the mean of their respective category. [Table I shows the results of the t-tests for significance in which the means between each pair of statements were tested. Thirty-three of the thirty-nine positive statements were favored over their respectively paired negative statements to a significant degree at the .01 level of confidence. Three additional positive statements were favored over their paired negative statements, but the difference of means was not significant at the .01 level of confidence. Three of the negative statements were favored over their paired positive statements, but one negative statement was not favored to a significant degree at the .01 level of confidence.

The respondents agreed that the studio teacher should spend some time in discussing the assignments over the air (mean value 2.70) rather than not to discuss the assignments over the air (mean value 1.07). This was in agreement with results of the exploratory study.

It was the emphatic view of the individuals involved in instructional television classes that attendance at tele-classes is just as important as it is at regular classes (mean value of 4.43 compared with a mean value of 0.78).

<sup>5</sup>See Table I, p. 28.

*Factor Scores*

*Navable Company: The differences are significant*

*Here*

TABLE I

## RESPONSES TO STATEMENTS ON QUESTIONNAIRE GROUPED AS PAIRED OPPOSITES

No.	Statements	Mean Value	Diff. of Means	t	P
1 62	Teacher spend time discussing assignments Assignments need not be discussed	2.10 1.07	1.63	14.40	<.01
3 12	Attendance as important as in regular classes Attendance not so important as regular classes	4.43 0.78	3.66	33.05	<.01
5 68	Allows each student to develop abilities Does not allow student to develop abilities	2.50 2.08	0.42	2.91	<.01
7 42	Will always have a place in schools Necessary only until other aids can be found	2.84 1.63	1.21	10.15	<.01
9 52	Should be supervised as other classes Local teachers should have little supervisory	3.91 0.72	3.19	29.41	<.01
11 54	Important that assignments be completed Not important that assignments be completed	4.10 0.90	3.20	28.50	<.01
13 24	Teleclasses exclusively filmed lectures Films should not be used	1.71 1.38	0.33	2.50	>.01
15 28	Assignments should be thoroughly graded Assignments do not need to be graded	3.25 1.10	2.15	17.71	<.01
17 46	Not a greater source of difficulty Greater source of difficulty than conventional	2.28 1.32	0.96	6.85	<.01

TABLE I (continued)

No.	Statements	Mean Value	Diff. of Means	t	P
19	Should offer in all courses presented	1.60			
22	Only in those areas local school cannot	4.14	-2.54	21.70	<.01
21	Good picture important	4.21			
34	Quality of picture of little importance	1.05	3.15	27.61	<.01
23	More valuable than films	2.93			
48	Films more valuable	1.39	1.55	12.27	<.01
25	Should pay tuition	1.24			
30	Should not pay tuition	2.55	-1.31	9.54	<.01
27	Teachers should help students learn to watch	3.88			
74	Teachers do not need to help students watch	0.93	2.95	27.49	<.01
29	Attendance more important than extra-curricular	3.14			
64	Extra-curricular participation more important	1.16	1.98	17.32	<.01
31	Beginning teachers should use	2.55			
20	Beginning teachers should not use	1.65	0.90	6.72	<.01
33	Laboratory equipment should be furnished	3.88			
6	Laboratory equipment need not be furnished	1.20	2.68	24.39	<.01
35	Supervisors should visit more often	2.72			
2	Supervisors visit too often	0.41	2.31	24.41	<.01
37	Necessary to make school effective	1.95			
60	Not necessary	1.68	0.27	2.04	>.01

TABLE I (continued)

No.	Statements	Mean Value	Diff. of Means	<u>t</u>	<u>P</u>
39	Tests should be given more often	1.96			
10	Tests given too often	0.47	1.49	13.79	<.01
41	Regular develop tests rather than assistant	2.93			
76	Assistant should develop tests	1.22	1.71	14.02	<.01
43	Supervisors make visits of longer duration	2.19			
26	Supervisors spend too much time	0.35	1.82	18.39	<.01
45	Special rooms	2.51			
40	Usual classroom	2.89	-0.38	2.47	>.01
47	Tests help students learn	3.18			
4	Tests not valuable	1.59	1.59	12.96	<.01
49	Usually stimulating	2.28			
70	Usually dull	2.20	0.08	0.62	>.01
51	Only teachers of outstanding ability	3.76			
38	Do not need outstanding teachers	0.96	2.80	22.93	<.01
53	Can be improved in spite of obstacles	3.62			
14	Little improvement is possible	1.53	2.09	19.42	<.01
55	Visitations necessary	2.40			
66	Visitations of little use	1.63	0.76	5.64	<.01
57	Valuable to education	3.44			
16	Are of little value to education	0.86	2.58	21.82	<.01

TABLE I (continued)

No.	Statements	Mean Value	Diff. of Means	<u>t</u>	<u>P</u>
59	Local school build schedule around TV	2.56			
56	If schedules conflict, should not be held	2.07	0.49	3.56	<.01
61	Study guides essential	2.61			
32	Study guides of little value	2.08	0.53	3.87	<.01
63	Should be broadcast every school day	3.27			
78	Should be broadcast only occasionally	1.03	2.24	17.19	<.01
65	Does more good than harm	2.95			
8	Does more harm than good	0.76	2.19	16.99	<.01
67	Reviews are helpful	3.41			
44	Reviews of small value	1.47	1.94	14.31	<.01
69	Encourage skills to prepare for college	3.29			
36	Do little to help prepare for college	1.33	1.96	15.31	<.01
71	General information adequate	2.65			
18	Not furnished enough general information	1.89	0.76	6.38	<.01
73	Younger students to take basic courses	2.64			
58	Do not need basic courses	1.31	1.33	10.29	<.01
75	Production operations good	3.09			
50	Production operations poor	1.40	1.69	14.92	<.01
77	Student purchase own textbook	2.92			
72	Student not to purchase own textbook	1.39	1.53	13.16	<.01

The respondents indicated that instructional television allows each student to develop as far as his ability permits (mean value of 2.50 compared with a mean value of 2.08 not indicating this).

The respondents indicated that instructional television will always have a place in our schools (mean value 2.84). They only slightly accepted the notion that instructional television is necessary only until other aids can be found (mean value 1.63).

The respondents overwhelmingly agreed that some member of the local faculty should supervise each teleclass as he would any of his other classes (mean value 3.91). This was compared with the statement that the local faculty member in charge of a teleclass should take little responsibility in seeing that the teleclass functions properly (mean value 0.72).

The respondents very emphatically indicated that it is important that assignments given by the studio teacher be completed by the student (mean value 4.10). The reliability of the difference, however, when compared with those who did not believe this way (mean value 0.90) may be questionable when actual performance is considered.

The respondents found it difficult to indicate their preference between the statement that they would be willing to have teleclasses which are composed exclusively of filmed lectures (mean value 1.71) and the statement that films should not be used in teaching teleclasses (mean value 1.38).

The statement that assignments given by the studio teacher should be thoroughly graded (mean value 3.25) rather than the statement that assignments need not be graded (mean value 1.10) was preferred by the respondents. This was indicated several times in the exploratory study.

The respondents were in general agreement that television instruction had not been a greater source of difficulty to them than conventional instruction (mean value of 2.28 compared with mean value of 1.32).

The respondents believed that the local school should offer teleclasses only in those areas of learning in which the local school is not prepared to offer courses (mean value 4.14) rather than offer all classes presented over television (mean value 1.60). Many of the respondents came from schools which were not prepared to offer these courses without the aid of television.

As anticipated, the respondents indicated a preference for the statement that television sets and accessories which will constantly produce a good picture are important in influencing the amount that students learn in teleclasses (mean value 4.21) rather than the statement that the quality of the picture on the television screen is of little importance in influencing the amount that students learn by television (mean value 1.05).

Teleclasses are more valuable than classroom films as a teacher's aid (mean value of 2.93 compared with a mean value of 1.39), according to the respondents.



Students should never be required to pay tuition for teleclasses (mean value of 2.55 compared with a mean value of 1.24), according to the respondents.

The respondents emphatically indicated that local supervising teachers should help students learn how to watch teleclasses profitably (mean value of 3.88 compared with a mean value of 0.93).

The respondents marked the statement that attendance at teleclasses is more important than participation in extra-curricular activities when they occur at the same time (mean value 3.14) over the statement that participation in extra-curricular activities is more important than attendance at teleclasses when they occur at the same time (mean value 1.16).

The respondents indicated that beginning teachers should use teleclasses to help themselves become better teachers (mean value of 2.55 compared with a mean value of 1.65).

The respondents indicated that laboratory equipment should be provided for students in teleclass courses usually requiring such equipment, irrespective of the fact that they are offered by television which usually provides for access to many and varied demonstrations not ordinarily available (mean value of 3.88 compared with mean value of 1.20).

The statement that supervisors from the central office could quite profitably visit teleclasses more often (mean

value 2.72) was chosen by the respondents over the statement that supervisors from the central office visit the teleclasses too often (mean value 0.41).

The respondents indicated that instructional television is necessary to make our schools effective (mean value 1.95) in contrast to its not being necessary in our schools (mean value 1.68).

The respondents indicated that tests should be given more often (mean value 1.96) rather than that they are given too often (mean value 0.47).

The statement that regular studio teachers should develop unit tests rather than that the tests should be developed by the assistant studio teachers (mean value 2.93) was selected by the respondents over the statement that assistant studio teachers should develop the tests (mean value 1.22).

The respondents indicated that supervisors could quite profitably make their visits of longer duration to each teleclass (mean value 2.17) rather than that the supervisors spend too much time when they visit teleclasses (mean value 0.35). The mean value of 0.35 was the lowest assigned among the entire seventy-eight statements.

The usual classroom, equipped with a television set, (mean value 2.89) was the indicated preference by the respondents in contrast to special rooms for teleclasses (mean value 2.51).

The respondents indicated that the tests sent out by the studio teacher are valuable in helping students learn the subject matter (mean value 3.18) rather than the negative of this statement (mean value 1.59).

The respondents did not indicate to a significant degree any difference between the statement that instructional television classes are usually stimulating (mean value 2.28) and the statement that instructional television classes are usually dull (mean value 2.20). The mean values were both above the overall mean value, with the respondent population not able to make a definite preference.

The respondents agreed that because of the importance of instructional television only teachers of outstanding ability should be allowed to teach teleclasses (mean value 3.76). They gave little value to the idea that teleclasses are not of enough importance to warrant having outstanding teachers teach them (mean value 0.96).

The respondents also indicated that instructional television can be improved in spite of obstacles involved in telecasting such programs (mean value 3.62). A mean value of 1.53 was assigned to the opposite statement that the limitations of instructional television are such that little improvement over present conditions is possible.

The visitations of the supervisors from the central office are necessary to make instructional teleclasses of much value (mean value 2.40) was a statement chosen by

the respondents over the opposite statement that the visitations are of little use in making the teleclasses valuable (mean value 1.63).

The respondents assigned a high mean value to the idea that instructional television classes are valuable to education (mean value 3.44), but the mean value assigned to the idea that instructional television classes have little value in education was low (mean value 0.86).

The respondents were not so emphatic in their selection of the statement that the local school should build its schedule around the teleclass schedule (mean value 2.56) over the statement that if the teleclass schedule and the local school schedule conflict, teleclasses should not be held (mean value 2.07).

The statement that study guides sent to students by the studio teacher are essential for understanding material in the course (mean value 2.61) was chosen over the statement that the study guides sent out to students by the studio teacher are of little value other than as assignment sheets (mean value 2.08).

The respondents to the questionnaire indicated a preference for daily broadcasts (mean value 3.27) instead of for only occasional broadcasts (mean value 1.03).

Instructional television does more good than harm (mean value of 2.95 compared with a mean value of 0.76), according to the indicated choice of the respondents.

The exploratory study brought forth the indication that persons receiving teleclasses were eager to have more reviews of material in the courses before each test. It appeared that these reviews had a culminating effect on all the previous activity. The respondents agreed that the reviews were quite helpful (mean value 3.41). They gave a mean value of 1.47 to the statement that the reviews were of small value.

The respondents gave a mean value of 3.29 to the statement that teleclasses encourage skills and attitudes which will be useful for students who attend college and a mean value of only 1.33 to the statement that such classes do little to help prepare students for college.

The statement that general information furnished those involved in teleclasses is adequate (mean value 2.65) was chosen by the respondents over the idea that they are not furnished enough general information (mean value 1.89).

The respondents indicated that younger students should now be taking basic courses to prepare themselves for teleclasses (mean value 2.64) instead of indicating that younger students do not need to take specific basic subjects to prepare themselves for teleclasses (mean value 1.31).

The findings of the exploratory study indicated that the production operations at the studio were good. This was especially true when the persons interviewed were aware of the fact that many of the operations were performed by student labor. The responses to the questionnaire continued

to reveal this feeling, for a mean value of 3.09 was given to the statement that these production operations were good in relation to a mean value of 1.40 given to the statement that these operations were poor.

Since many of the textbooks were available on a loan basis to students in teleclasses, the response to the statement that teleclasses are important enough to warrant the student's purchasing his own textbook (mean value 2.92) in preference to the statement that teleclasses are not important enough to warrant such a purchase (mean value 1.39) was considered important in indicating value-attitudes toward teleclasses.

#### Status Comparisons

In this section, means of means of the total responses by status categories are compared.<sup>6</sup> Also the means of specific statements are compared when the attitude indicated for these specific statements in one status category differs from the attitude indicated for another status category. For example, the question concerning the sex of the respondent, in Part II of the questionnaire, gives an indication of a representative status group (sex), but the attitude from the male-female categories differed in connection with two of the paired statements, 13-24 and 49-70.

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<sup>6</sup>Means of means were obtained by first computing the arithmetical average values assigned each statement by each status category. Then the arithmetical averages of these derived values were computed.

The male respondents gave a mean of means value of 2.89 to the positive statements and a mean of means value of 1.47 to the negative statements, whereas the female respondents gave a mean of means value of 2.96 to the positive statements and a mean of means value of 1.25 to the negative statements. Table II shows that female respondents favored instructional television slightly more than did the male respondents. There were 262 males and 75 females who returned questionnaires.

TABLE II

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE  
AND NEGATIVE STATEMENTS WHEN THE RESPONDENTS  
ARE GROUPED ON THE BASIS OF SEX

	Male	Female
Positive Statements	2.89	2.96
Negative Statements	1.47	1.25
Difference	1.42	1.71

The male respondents gave a mean value of 1.82 to the statement that they would be willing to have teleclasses composed exclusively of filmed lectures and a mean value of 1.29 to the negative statement that films should not be used in presenting teleclasses, whereas the females gave mean values of 1.33 and 1.71 to these respective statements. Male and female respondents differed in their attitudes toward filmed lectures: the males favored filmed lectures,

but the females indicated that films should not be used in presenting teleclasses.

Female respondents indicated a mean value of 2.57 to the statement that teleclasses are usually stimulating and a mean value of 1.84 to the statement that teleclasses are usually dull, but the males indicated mean values of 2.19 and 2.30 to the respective statements. Female and male respondents differed as to whether teleclasses are usually stimulating. Males indicated that teleclasses are usually dull.

The 14-19-year-age persons indicated mean of means values of 2.76 and 1.55, respectively, to the positive and negative statements. The 20-35-year-age persons indicated mean of means values of 3.19 and 1.21, respectively, to the positive and negative statements. The 36-49-year age persons indicated mean of means values of 3.14 and 1.04, respectively, to the positive and negative statements. The 50-and-over-age persons indicated mean of means value of 3.31 and 1.15, respectively, to the positive and negative statements. Table III shows that the 14-19-year-age persons were lowest, and the 50-and-over-age persons were highest in stated value-attitudes.

Since the 14-19-year-age persons were students, their attitudes concerning specific statements are compared elsewhere in this study; therefore, this age category is omitted in the comparison of age categories in regard to specific statements. There were 228, 43, 37, and 29



respondents from the 14-19, 20-35, 36-49, and 50-and-over-age categories, respectively.

TABLE III

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND NEGATIVE STATEMENTS WHEN THE RESPONDENTS ARE GROUPED ON THE BASIS OF AGE

	14-19	20-35	36-49	50 and over
Positive Statements	2.76	3.19	3.14	3.31
Negative Statements	1.55	1.21	1.04	1.15
Difference	1.21	1.98	2.10	2.16

The attitude concerning payment of tuition was the only attitude in which the 20-35, 36-49, and 50-and-over age-categories differed. The 20-35-age category indicated that students should not pay tuition for teleclasses (positive mean value 1.79, negative mean value 2.30), but the 36-49-age category (positive mean value 1.95, negative mean value 1.51) and the 50-and-over-age category (positive mean value 1.93, negative mean value 1.66) agreed that if the need arises, students should pay tuition in order to participate in teleclasses.

Those persons who believed they were assigned to teleclasses gave means of means of 2.68 and 1.61, respectively, to the positive and negative statements, but those who believed they volunteered to use teleclasses gave means of means of 3.12 and 1.23, respectively, to the positive and negative statements. Table IV shows that those who

indicated they volunteered for teleclasses definitely favored instructional television more than those who indicated they had been assigned to teleclasses. There were 168 respondents who indicated they were assigned to teleclasses and 169 who indicated they had volunteered.

TABLE IV

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND NEGATIVE STATEMENTS WHEN THE RESPONDENTS ARE GROUPED ON THE BASIS OF WHETHER THEY VOLUNTEERED OR WERE ASSIGNED TO TELECLASSES

	Volunteers	Assignees
Positive Statements	3.12	2.68
Negative Statements	1.23	1.61
Difference	1.89	1.07

Several specific statements were given different value-attitudes when those who volunteered were compared with those who believed they were assigned to teleclasses. Those who volunteered indicated that teleclasses allow each student to develop as far as his ability permits (positive mean value 2.86, negative mean value 1.56), but those who believed they were assigned to teleclasses did not agree (positive mean value 2.13, negative mean value 2.60). The volunteers were willing to have teleclasses composed exclusively of filmed lectures (positive mean value 2.14, negative mean value 1.19), but those assigned indicated that filmed lectures should not be used (positive mean

value 1.27, negative mean value 1.58). The volunteers believed that instructional television was necessary to make our schools effective (positive mean value 2.29, negative mean value 1.46), but those assigned did not agree (positive mean value 1.61, negative mean value 1.92). The volunteers believed that instructional television classes are usually stimulating (positive mean value 2.69, negative mean value 1.54), but those assigned gave a mean value of 1.85 to the statement that teleclasses are stimulating and a mean value of 2.87 to the statement that they are dull. Those respondents who believed they volunteered for teleclasses gave a mean value of 2.92 to the statement that the visitations of supervisors are necessary to make teleclasses of much value and a mean value of 1.27 to the opposite statement, but those who believed they were assigned gave mean values of 1.88 and 1.99, respectively, to the statements. The local school should build its schedule around the television schedule according to the attitude of the respondents who volunteered (positive mean value 2.70, negative mean value 1.72), but the persons who were assigned differed in this attitude (positive mean value 2.40, negative mean value 2.43). The volunteers indicated that the study guides are essential for understanding material in the course (positive mean value 2.97, negative mean value 1.80), but those assigned indicated this was not right (positive mean value 2.24, negative mean value 2.37). In each of the specific

statements where the stated attitudes were different, the volunteers were positive in their value-attitudes, but the assignees were negative.

A similar situation existed when the responses of those respondents who dropped out of television classes were compared with the responses of those who continued in teleclasses. Those who continued in teleclasses gave mean of means values of 2.94 and 1.38, respectively, to the positive and negative statements, but those who dropped gave mean of means values of 2.78 and 1.58, respectively, to the positive and negative statements. Table V gives the relative differences. There were 268 respondents who stated that they continued in teleclasses and 69 who stated they dropped.

TABLE V

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND NEGATIVE STATEMENTS WHEN THE RESPONDENTS ARE GROUPED ON THE BASIS OF WHETHER THEY CONTINUED RECEIVING TELECLASSES

	Dropped	Continued
Positive Statements	2.78	2.94
Negative Statements	1.58	1.38
Difference	1.20	1.56

Four pairs of statements evoked different attitudes from respondents who dropped than they did from those who continued. Those who continued indicated that instructional

television allows each student to develop as far as his ability permits (mean value 2.57 to positive statement and mean value of 1.97 to negative statement), but those who dropped disagreed (mean value 2.23 to positive statement and mean value of 2.48 to negative statement). Those who continued indicated they would be willing to have teleclasses composed exclusively of filmed lectures (positive mean value 1.75, negative mean value 1.31), but those who dropped were in disagreement (positive mean value 1.55, negative mean value 1.64). The study guides are essential for understanding material in the course, according to those respondents who remained in teleclasses (positive mean value 2.72, negative mean value 1.96), but those who dropped gave a positive value of 2.16 and a negative mean value of 2.55 to the same pair of statements. Those respondents who continued indicated that instructional television classes are stimulating (positive mean value 2.34, negative mean value 2.12), but those who dropped teleclasses did not agree (positive mean value 2.03, negative mean value 2.49).

When the means of means of the responses were compared, according to the teleclass for which the respondent reported, an interesting report was obtained. The means of means computed for each of the teleclasses to the positive and negative statements, respectively, are as follows: trigonometry, 2.71 and 1.70; solid geometry, 2.78 and 1.42; physics (live), 3.00 and 1.33; physics (film), 2.87 and

1.48; algebra, 2.78 and 1.37; geology, 3.22 and 1.19; and chemistry, 2.86 and 1.41. Table VI shows that geology ranked higher than any other of the teleclasses. According to this information, the live physics program was ranked second. The course that ranked lowest by this method was trigonometry. Chemistry was given a slightly higher rating than was algebra. Bridges<sup>7</sup> found that physics, algebra, and geology evoked positive responses from the students but that chemistry and solid geometry evoked negative responses. He was of the opinion that this reflected an attitude toward the teleclass teacher rather than the subject matter per se. The present study included responses from teachers and administrators, in addition to students. This should be given consideration when results of this study are compared with results of the Bridges study.

TABLE VI

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE  
AND NEGATIVE STATEMENTS WHEN THE RESPONDENTS  
ARE GROUPED ON THE BASIS OF THE TELECLASS  
ON WHICH THEY REPORTED

	Trig.	S. Geom.	Physics (live)	Physics (film)	Alg.	Geol.	Chem.
Positive Statements	2.71	2.78	3.00	2.87	2.78	3.22	2.86
Negative Statements	1.70	1.42	1.33	1.48	1.37	1.19	1.41
Difference	1.01	1.36	1.67	1.39	1.41	2.03	1.45

<sup>7</sup>Bridges, p. 6.

The number of respondents for each of the subject-matter categories was as follows: trigonometry, 32; solid geometry, 33; physics (live), 19; physics (film), 60; algebra, 91; geology, 24; and chemistry, 78. This ratio was in close agreement with the ratio of individuals actually associated with the various teleclasses.

Of the thirty-nine paired statements, ten evoked different attitude-responses from at least one of the subject-matter status categories. For example, respondents from six of the categories may have indicated they were in favor of the positive statement of the pair, but respondents from one of the categories indicated they were in favor of the negative statement of the pair. Although the means for each statement were computed for each of the subject-matter status categories, only those which show differences in attitude have been listed.

The statement that instructional television allows each student to develop as far as his ability permits and its opposite statement evoked the following mean-value responses, respectively, from each of the subject-matter status categories: trigonometry, 1.75 and 2.78; solid geometry, 2.67 and 2.15; physics (live), 3.00 and 2.00; physics (film), 2.47 and 2.22; algebra, 2.62 and 1.98; geology, 3.22 and 1.92; and chemistry, 2.28 and 1.84. The trigonometry respondents indicated that television classes do not allow each student to develop as far as his ability permits, but the others indicated opposite views.

The statement that the respondent would be willing to have teleclasses composed exclusively of filmed lectures as compared with the opposite statement evoked the following mean-value responses, respectively, from each of the subject-matter status categories: trigonometry, 1.66 and 1.44; solid geometry, 2.00 and 1.55; physics (live 2.37 and 0.89; physics (film), 2.20 and 0.95; algebra, 1.27 and 1.69; geology, 2.35 and 1.21; and chemistry, 1.38 and 1.44.

The algebra and chemistry respondents indicated filmed lectures should not be used in teaching teleclasses, but the others indicated opposite views.

The respondents from six of the seven status categories of this group did not believe that television has been a greater source of difficulty to them than conventional means of instruction have been. The positive and negative mean-value responses, respectively, are as follows: trigonometry, 1.81 and 1.88; solid geometry, 2.64 and 0.88; physics (live), 2.21 and 0.79; physics (film), 2.40 and 1.60; algebra, 2.32 and 0.97; geology, 2.91 and 0.71; and chemistry, 1.99 and 1.81. The trigonometry respondents indicated the attitude that they had more difficulty with television instruction than with conventional instruction. The others indicated that teleclasses have not been a greater source of difficulty than conventional classes have been.

The statement that instructional television is necessary to make our schools effective as compared with its opposite statement evoked the following mean-value responses,



respectively, from each of the subject-matter status categories: trigonometry, 2.09 and 2.41; solid geometry, 1.91 and 1.45; physics (live), 2.58 and 1.00; physics (film), 1.77 and 2.05; algebra, 1.98 and 1.65; geology, 2.70 and 0.79; and chemistry, 1.65 and 1.70. The chemistry, physics (film), and trigonometry respondents indicated the attitude that television classes are not necessary in our schools, but the others indicated that teleclasses are necessary to make our schools effective.

The statement that special rooms should be set aside for teleclasses as compared with the opposite statement that the usual classroom, equipped with a television set, should be used for teleclasses brought forth the following mean-value responses, respectively, from each of the subject-matter status categories: trigonometry, 2.63 and 2.59; solid geometry, 2.82 and 2.45; physics (live), 2.42 and 3.63; physics (film), 2.18 and 3.05; algebra, 2.43 and 2.90; geology, 2.52 and 3.04; and chemistry, 2.60 and 2.83. The trigonometry and solid geometry respondents indicated that special rooms should be set aside for teleclasses. The others indicated that teleclasses should be held in the usual classroom.

The statement that instructional television classes are usually stimulating as compared with its paired opposite statement, which stated that instructional television classes are usually dull, evoked the following mean-value responses, respectively, from each of the subject-matter

status categories: trigonometry, 1.81 and 2.88; solid geometry, 2.06 and 1.94; physics (live), 2.58 and 1.42; physics (film), 2.37 and 2.50; algebra, 2.34 and 2.14; geology, 2.61 and 1.83; and chemistry, 2.22 and 2.18. The trigonometry and physics (film) respondents indicated that teleclasses are usually dull, but the others indicated that teleclasses are usually stimulating.

The statement that the visitations of the supervisors in the central office are necessary to make teleclasses of much value in contrast to the statement that these visitations are of little value evoked the following mean-value responses, respectively, from each of the subject-matter status categories: trigonometry, 2.22 and 2.31; solid geometry, 1.67 and 1.88; physics (live), 3.16 and 1.32; physics (film), 2.40 and 1.87; algebra, 1.81 and 1.51; geology, 2.61 and 1.29; and chemistry, 2.69 and 1.38. The trigonometry and solid geometry respondents indicated the attitude that the visitations of supervisors were not necessary, but the other respondents indicated that the visits were necessary.

The statement that the local school should build its schedule around the instructional television schedule so that teleclasses may be held as compared with its paired opposite statement evoked the following mean-value responses, respectively, from each of the subject-matter status categories: trigonometry, 2.13 and 2.53; solid geometry, 2.18 and 2.56; physics (live), 3.26 and 1.74; physics

(film), 2.73 and 1.87; algebra, 2.33 and 1.92; geology, 3.43 and 1.33; and chemistry, 2.19 and 2.31. The chemistry, solid geometry, and trigonometry respondents indicated the attitude that if the teleclass schedule and the local school schedule had conflicts, teleclasses should not be held, but the respondents from the other subject-matter classes indicated that the local school schedule could be changed to accommodate teleclasses.

The statement that study guides sent out by the studio teacher are essential for understanding material in the course as compared with its paired opposite statement brought forth the following mean-values, respectively, from each of the subject-matter status categories: trigonometry, 1.56 and 3.50; solid geometry, 2.30 and 2.33; physics (live), 3.26 and 1.84; physics (film), 2.52 and 1.97; algebra, 2.24 and 1.78; geology, 4.00 and 1.21; and chemistry, 2.44 and 2.16. The trigonometry and solid geometry respondents indicated an attitude that the study guides are of little value, but the other respondents indicated that the study guides are essential.

All of the subject-matter status category respondents except physics (live) respondents indicated the attitude that the general information furnished those involved in teleclasses is adequate. Following is a list of the mean-value responses assigned by each of the status categories for the positive and negative statements, respectively: trigonometry, 2.31 and 2.03; solid geometry, 2.85 and 1.36;

physics (live), 2.16 and 2.95; physics (film), 2.62 and 2.38; algebra, 2.59 and 1.38; geology, 3.57 and 1.54; and chemistry, 2.13 and 2.08.

In most of the paired statements where the attitudes differed, trigonometry and solid geometry respondents were the ones who differed, but the others were in agreement. These two status categories were also usually negative in their attitude toward these statements. The geology respondents usually rated the positive statement higher and the negative statement lower than did respondents from the other categories.

The outlying school respondents were also compared when they were classified according to the enrollment of the secondary school with which they were associated. Respondents from secondary schools with an enrollment of from twenty to fifty gave a mean of means value of 3.09 to the positive statements and a mean of means value of 1.67 to the negative statements. Respondents from secondary schools with an enrollment of from 51 to 100 gave mean of means values of 3.24 to the positive statements and 1.01 to the negative statements. Respondents from secondary schools with an enrollment of from 101 to 300 gave a mean of means value of 3.14 to the positive statements and a mean of means value of 1.16 to the negative statement, but those from schools with larger enrollments gave a mean of means value of 3.04 to the positive statements and a mean of means value of 1.20 to the negative statements.

These data outlined in Table VII indicate that respondents in outlying schools, regardless of enrollment, accepted instructional television with little difference in the degree of acceptance.

TABLE VII

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND NEGATIVE STATEMENTS WHEN THE RESPONDENTS ARE GROUPED ON THE BASIS OF ENROLLMENT<sup>a</sup>

	20-50	51-100	101-300	301-800
Positive Statements	3.09	3.24	3.14	3.04
Negative Statements	1.67	1.01	1.16	1.20
Difference	1.42	2.23	1.98	1.84

<sup>a</sup>Only outlying respondents are considered for this table.

There were eighteen, fifty-nine, fifty-eight, and eighteen respondents, respectively, from each of the following enrollment-size categories: 20-50, 51-100, 101-300, and 301-800.

When stated attitudes were compared for specific paired statements, it was found that respondents from all but one of the enrollment categories indicated that tele-classes are necessary to make our schools effective, this exception being those respondents from secondary schools with an enrollment of from twenty to fifty. The mean-value responses to this statement and its paired opposite, respectively, are as follows when divided into enrollment

categories: 20-50, 1.82 and 1.94; 51-100, 2.75 and 0.76; 101-300, 2.26 and 1.45; and 301-800, 2.33 and 1.56.

Respondents also gave the following mean-values to the statement that special rooms should be used and that the usual classroom should be used, respectively, when the respondents were divided into enrollment categories: 20-50, 1.53 and 3.50; 51-100, 3.05 and 2.88; 101-300, 2.84 and 3.02; and 301-800, 2.22 and 3.44. The outlying respondents in schools with an enrollment of from 51 to 100 indicated the attitude that special rooms should be provided for teleclasses, but those in schools with enrollments of other sizes indicated the attitude that the usual classrooms should be used for television classes.

When compared by enrollment categories, the outlying school respondents agreed in stated attitude on the other thirty-seven paired statements.

The Oklahoma City students responding gave mean of means values of 2.61 and 1.66, respectively, to the positive and negative statements, but the outlying students responding gave mean of means values of 3.07 and 1.28, respectively, to the positive and negative statements. Table VIII delineates this information.

The Oklahoma City students were represented by 150 respondents, but the outlying students were represented by 82 respondents.

TABLE VIII

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND  
NEGATIVE STATEMENTS WHEN STUDENTS ARE GROUPED  
ON THE BASIS OF SCHOOL REPRESENTED

	Oklahoma City	Outlying
Positive Statements	2.61	3.07
Negative Statements	1.66	1.28
Difference	0.95	1.79

There were seven paired statements in which the stated attitudes of Oklahoma City students differed from stated attitudes of outlying students.

Oklahoma City students did not believe that television classes allow each student to develop as far as his ability permits, but the outlying students disagreed with them. The mean-value responses to the negative statements, respectively, regarding this question are as follows: Oklahoma City students, 1.80 and 2.80; outlying students 3.00 and 1.59.

Outlying students were willing to have teleclasses composed exclusively of filmed lectures, but Oklahoma City students indicated that film should not be used in the teaching of teleclasses. The mean values students gave the respective statements are as follows: Oklahoma City students, 1.51 and 1.56; outlying students, 1.82 and 1.45.

Outlying students indicated that beginning teachers should use teleclasses to help themselves become better teachers, but Oklahoma City students indicated that

beginning teachers should not use teleclasses. The mean values that students gave the respective statements are as follows: Oklahoma City students, 1.86 and 2.27; outlying students, 2.72 and 1.42.

Outlying students expressed the attitude that instructional television is necessary to make our schools effective, but Oklahoma City students expressed the attitude that instructional television is not necessary in our schools. The mean values that students gave the respective statements are as follows: Oklahoma City students, 1.55 and 2.11; outlying students, 2.41 and 1.41.

Outlying students expressed the attitude that teleclasses are usually stimulating, but Oklahoma City students expressed the attitude that teleclasses are usually dull. The mean values that students gave the respective statements are as follows: Oklahoma City students, 1.59 and 3.01; outlying students, 2.52 and 1.75.

Outlying students indicated that visitations of the supervisors were necessary to make teleclasses of much value, but Oklahoma City students indicated that visitations of supervisors were of little use in making teleclasses of value. The mean values that students gave the respective statements are as follows: Oklahoma City students, 1.69 and 2.30; outlying students, 3.04 and 1.07.

Outlying students expressed the attitude that the study guides were necessary for understanding the material in the courses, but the Oklahoma City students indicated



that the study guides were of little value other than as assignment sheets. The mean values that students gave the respective statements are as follows: Oklahoma City students, 1.91 and 2.62; outlying students, 3.08 and 1.65.

When Oklahoma City students expressed attitudes different in direction from those expressed by the outlying students, the Oklahoma City students were always negative in direction, but the outlying students were always positive.

When the outlying respondents were categorized into distances of their schools from the broadcasting studio, little difference was found as is shown in Table IX. The means of means given the positive and negative statements by respondents in each of the mileage distance categories are as follows: 0-30, 3.21 and 1.12; 31-60, 3.14 and 1.20; and 61-90, 3.14 and 1.15.

TABLE IX

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND  
NEGATIVE STATEMENTS WHEN RESPONDENTS ARE GROUPED  
ON BASIS OF DISTANCES FROM STUDIO<sup>a</sup>

	0-30	31-60	61-90
Positive Statements	3.21	3.14	3.14
Negative Statements	1.12	1.20	1.15
Difference	2.09	1.94	1.99

<sup>a</sup>Only outlying respondents are considered in this table.

The mileage distance categories were also divided as follows as far as number of outlying respondents from each category is concerned: 0-30, 43; 31-60, 79; and 61-90, 32. Approximately twice as many respondents were in the mileage distance category of 31-60 miles from the broadcasting studio as there were from either of the other categories.

The outlying respondents from the different mileage distance categories differed in stated attitude on only one pair of statements. Those in the 61-90 miles category expressed the attitude that if the need arises, students should pay tuition in order to participate in teleclasses, but the others indicated the belief that students should never be required to pay tuition for teleclasses. Following are the expressed mean values to the respective statements in each of the categories: 0-30, 1.65 and 2.26; 31-60, 1.28 and 2.34; and 61-90, 1.88 and 1.59.

In the analysis of variance, which was previously discussed,<sup>8</sup> all classroom teachers, administrators, and professional persons connected with the central office or broadcasting center were combined into a large group called educators; however, it was suspected that educators had different attitudes in accordance with their status within the group. Oklahoma City supervising classroom teachers, Oklahoma City administrators, and central office or broadcasting center personnel, therefore, were compared.

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<sup>8</sup>See Chapter II, p. 23.

Outlying supervising classroom teachers, outlying supervising classroom teachers and administrators, and outlying administrators were also compared.

The mean of means values assigned to the positive and negative statements, respectively, for each of the status categories are as follows: Oklahoma City supervising classroom teachers, 2.76 and 1.67; Oklahoma City administrators, 3.37 and 1.47; central office or broadcasting center personnel, 3.60 and 0.65; outlying supervising classroom teachers, 3.22 and 1.10; and outlying administrators, 3.22 and 1.00. The central office or broadcasting center personnel ranked the positive statements higher and the negative statements much lower than did the other status categories, but the Oklahoma City supervising teachers ranked the positive statements lower and the negative statements higher than any other of the status categories. Members of all the status categories, however, ranked the positive statements much higher than the negative statements. A summary of these differences is shown in Tables X and XI.

The number of respondents from each of the educator status categories is as follows: Oklahoma City supervising classroom teachers, 21; Oklahoma City administrators, 4; central office or broadcasting center personnel, 10; outlying supervising classroom teachers, 24; outlying supervising classroom teachers and administrators, 19; and outlying administrators, 27.

TABLE X

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND  
NEGATIVE STATEMENTS WHEN OKLAHOMA CITY EDUCATORS  
ARE GROUPED ON THE BASIS OF STATUS

	Teachers	Administrators	Central Office
Positive Statements	2.76	3.37	3.60
Negative Statements	1.67	1.47	0.65
Difference	1.09	1.90	2.95

TABLE XI

THE DIFFERENCE OF MEANS OF MEANS BETWEEN POSITIVE AND  
NEGATIVE STATEMENTS WHEN OUTLYING SCHOOL EDUCATORS  
ARE GROUPED ON THE BASIS OF STATUS

	Teachers	Teachers and Adm.	Adm.
Positive Statements	3.22	3.31	3.22
Negative Statements	1.02	1.10	1.00
Difference	2.20	2.21	2.22

The Oklahoma City supervising teachers, Oklahoma City administrators, and central office or broadcasting center personnel differed in stated attitude on nine of the paired statements.

Oklahoma City supervising classroom teachers indicated that teleclasses do not allow each student to develop as far as his ability permits; the Oklahoma City administrators were undecided in attitude; and central office or broadcasting center personnel definitely indicated that teleclasses allow each student to develop as far as his ability

permits. Following are the mean values assigned to the positive and negative statement, respectively, by the status categories: Oklahoma City supervising teachers, 2.19 and 2.57; Oklahoma City administrators, 2.75 and 2.75; and central office or broadcasting center personnel, 3.33 and 0.67.

Indicated mean values assigned by the educator status categories to the statement that teleclasses have not been a greater source of difficulty than have been conventional means of instruction as compared with its paired opposite statement, respectively, are as follows: Oklahoma City supervising teachers, 1.71 and 1.95; Oklahoma City administrators, 2.50 and 1.00; and central office or broadcasting center personnel, 3.89 and 0.56. The Oklahoma City supervising teachers indicated the attitude that teleclasses have been a greater source of difficulty than have been conventional means of instruction, but the others indicated the opposite attitude.

The central office or broadcasting center personnel indicated the attitude that if the need arises, students should pay tuition in order to participate in teleclasses, but the others indicated an opposite view. Following are the mean values assigned to the positive and negative statements, respectively, by the educator status category respondents: Oklahoma City supervising teachers, 1.81 and 2.67; Oklahoma City administrators, 1.50 and 2.25; and central office or broadcasting center personnel, 3.00 and 0.56.

The statement that instructional television is necessary to make our schools effective was chosen by Oklahoma City administrators and central office or broadcasting center personnel, but Oklahoma City teachers indicated an opposite attitude. The following mean values were given by the educator status category respondents to the positive and negative statement, respectively: Oklahoma City supervising teachers, 1.19 and 2.71; Oklahoma City administrators, 3.25 and 1.00; and central office or broadcasting center personnel, 2.11 and 0.

Teleclasses were usually dull to Oklahoma City supervising teachers, but they were usually stimulating to the others in their status group. The following mean values were assigned to the positive and negative statement, respectively, by the educator status category respondents: Oklahoma City supervising teachers, 2.00 and 2.62; Oklahoma City administrators, 2.75 and 1.75; and central office or broadcasting center personnel, 2.89 and 0.89.

The following mean values were assigned the statement that visitations of the supervisors from the central office are necessary to make teleclasses of much value as compared with its paired opposite statement, respectively, by the educator status category respondents: Oklahoma City supervising teachers, 1.19 and 2.29; Oklahoma City administrators, 3.50 and 1.00; and central office or broadcasting center personnel, 3.33 and 0. The Oklahoma City supervising teachers stated the attitude that the visitations of supervisors were

of little value, but the others indicated that the visitations were necessary to make teleclasses effective.

Oklahoma City administrators and central office or broadcasting center personnel indicated the attitude that the local school should build its schedule around the television schedule, but Oklahoma City supervising teachers indicated that teleclasses should not be held if the schedules conflict. Following are the mean values assigned the respective statements by the educator status category respondents: Oklahoma City supervising teachers, 2.14 and 3.14; Oklahoma City administrators, 3.75 and 3.25; and central office or broadcasting center personnel, 3.33 and 0.67.

Teleclasses should be broadcast every school day according to the stated attitude of Oklahoma City administrators and central office or broadcasting center personnel, but Oklahoma City supervising teachers stated that teleclasses should be broadcast only occasionally. Following are the mean values assigned the respective statements by the educator status category respondents: Oklahoma City supervising teachers, 1.95 and 2.29; Oklahoma City administrators, 2.00 and 1.50; and central office or broadcasting center personnel, 3.22 and 0.33.

Oklahoma City supervising teachers and Oklahoma City administrators stated that general information furnished those involved in teleclasses is adequate, but central office or broadcasting center personnel stated that the

information furnished is inadequate. Following are the mean values assigned the respective statements by the educator status category respondents: Oklahoma City supervising teachers, 3.19 and 2.24; Oklahoma City administrators, 3.25 and 3.00; and central office or broadcasting center personnel, 2.11 and 2.56.

When mean of means values given by outlying supervising teachers, outlying supervising teachers and administrators, and outlying administrator respondents were compared, the following values were obtained for the positive and negative statements, respectively: outlying supervising teachers, 3.22 and 1.02; outlying supervising teachers and administrators, 3.31 and 1.10; and outlying administrators, 3.22 and 1.00. It was evident from this information that very little difference existed in total value-attitudes among the status group of outlying educators.

Outlying administrators indicated the attitude that if the need arises, students should pay tuition in order to participate in teleclasses, but the other outlying educators indicated that students should never pay tuition in order to participate in teleclasses. The following mean values were assigned the respective statements by the respondents from these status categories: outlying supervising teachers, 1.54 and 1.88; outlying supervising teachers and administrators, 1.32 and 2.37; and outlying administrators, 2.27 and 1.44.



Outlying supervising teachers and administrators and outlying administrators also indicated that general information furnished those in teleclasses is sufficient, but outlying supervising teachers indicated that persons in teleclasses are not furnished enough general information. The following mean values were assigned the respective statements by the respondents from these status categories: outlying supervising teachers, 2.08 and 2.13; supervising teachers and administrators, 3.05 and 1.16; and outlying administrators, 2.69 and 1.78.

## CHAPTER IV

### GENERALIZATIONS AND INTERPRETATIONS

In undertaking this study, the concern was whether certain practices within the Oklahoma instructional television project were irritating the persons involved in these classes to the extent that negative value-attitudes impairing effective instruction were being produced. Persons involved in teleclasses had formed general value-attitudes in relation to instructional television which were also being scrutinized. These concerns were answered only in descriptive generalities; nevertheless, patterns did evolve through the data collected which indicate strong tendencies. These tendencies are discussed in this chapter.

#### Review of Questionnaire Results

Oklahoma students, teachers, and administrators associated with instructional television classes appeared to believe that instructional television was worthwhile. They further believed that there was room for improvement of these classes and that steps should be taken to remedy shortcomings.

A conflict existed within several divisions of the total project because of the respondents' feelings as to

what should be done and their knowledge of actual operational practices. Five times the respondents assigned an above-mean value<sup>1</sup> or a below-mean value to both of the paired statements.<sup>2</sup> For example, when asked if special rooms should be provided, the respondents assigned the above-mean value of 2.51, in terms of the rating scale. Yet they assigned an above-mean value of 2.89 to the statement that the usual classroom should be used for teleclasses. When asked if teleclasses were necessary to make our schools effective, the respondents assigned a below-mean value of 1.95. Yet they assigned a below-mean value of 1.68 to the statement that teleclasses were not necessary to make our schools effective.

In the individual questionnaires, conflicts within the respondents' answers were even more apparent than the statistical means of the total returns indicated. Occasionally, the same scale-value was assigned by the individual to both statements of a pair.

Conflicts were expected to occur; therefore the statements chosen for the questionnaire were such that several would be combined to support or refute a particular hypothesis. Some provided a blunt statement of the

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<sup>1</sup>The theoretical mean of the value scale would be 2.50, if one assumes equal distribution of value responses to each statement. The actual mean of the value responses was 2.17 for the entire questionnaire.

<sup>2</sup>See Chapter II for the method of pairing positive and negative statements.

hypothesis, but others were more indirect. It was presumed that some respondents would reject the blunt statements; however, these persons were more likely to indicate their real value-attitudes through the indirect statements. In the substantiation of the hypotheses, therefore, several statements were used in the examination of each hypothesis. These hypotheses were the eleven hypotheses stated in Chapter II and the hypothesis concerning status stated in Chapter I.

### Testing of Hypotheses

The hypotheses were tested for substantiation in the following manner.

First Hypothesis. The general value-attitudes of persons involved in secondary school teleclasses in Oklahoma are definitely positive.

The data reveal, to a significant degree, that the persons involved in teleclasses believed that instructional television allows each student to develop as far as his ability permits (Statement 5), will always have a place in our schools (Statement 7), has not been a greater source of difficulty to them than conventional means of instruction (Statement 17), can be improved in spite of obstacles in telecasting such programs (Statement 53), is valuable to education (Statement 57), should be broadcast every school day (Statement 63), does more good than harm (Statement 65), and encourages skills and attitudes which will be useful for students who attend college (Statement 69).

These persons further believed that instructional television is necessary to make our schools effective (Statement 37) and that teleclasses are usually stimulating (Statement 49) but not to any substantially significant degree. This was probably due to the fact that Oklahoma City students, Oklahoma City supervising classroom teachers, drops, assignees, and trigonometry and physics (film) respondents expressed the negative attitudes to these statements.

Those who dropped out of teleclasses, those who were assigned to teleclasses, and those who were concerned with trigonometry, as well as Oklahoma City students and Oklahoma City supervising classroom teachers, stated that instructional television does not allow each student to develop as far as his ability permits. Those concerned with trigonometry and the Oklahoma City supervising classroom teachers also stated that teleclasses have been a greater source of difficulty than conventional classes have been. Oklahoma City supervising classroom teachers stated that teleclasses should be broadcast only occasionally.

Since all of the positive general value-attitude statements elicited favorable responses with different attitudes expressed only for the status categories listed, it was concluded, subject to further research, that the general value-attitudes of persons in secondary school teleclasses in Oklahoma were positive.

Second Hypothesis. The instructional materials provided in teleclasses are a source of difficulty in so far as the forming of negative value-attitudes is concerned.

The persons associated with teleclasses in Oklahoma believed that laboratory equipment should be provided for students in teleclasses if these courses require laboratory work when offered by conventional means (Statement 33), that the study guides sent out to students by the studio teacher are essential for understanding material in the course (Statement 61), that the general information furnished is adequate (Statement 71), and that teleclasses are important enough to warrant the student's purchasing his own textbook (Statement 77). Since these statements were established beyond the .01 level of confidence, it was concluded that the second hypothesis was not substantiated; however, those persons who volunteered for teleclasses, outlying students, and those who remained in teleclasses believed that the study guides were essential for understanding material in the course, but those persons assigned to teleclasses, Oklahoma City students, and those who dropped out did not agree. The persons concerned with trigonometry and solid geometry also believed that the study guides were of little value, but those from other classes believed that study guides were essential.

The general information furnished was adequate except for those persons concerned with physics (live), the central office or broadcasting center personnel, and outlying supervising teachers.

This additional information appeared to reveal that some difficulty resulted from the printed materials provided for teleclasses, but more information was needed to substantiate the second hypothesis.

Third Hypothesis. The scheduling of teleclasses in conjunction with the local school schedules does not appear to be a source of difficulty to most persons associated with teleclasses.

Attendance at teleclasses is just as important as it is at regular classes, according to the persons involved in teleclasses (Statement 3). This statement was included in this category because it was a difficult problem to schedule teleclasses at the local level so that teleclasses received equal status with the regular classes.

Attendance at teleclasses is more important than participation in extra-curricular activities when teleclasses and activities occur at the same time (Statement 29). Again, it was difficult to schedule teleclasses at the local level so that extra-curricular activities did not interfere. Apparently the scheduling problem did not occur, for the teleclasses appeared to take precedence over extra-curricular activities.

According to the persons involved, the local school should build its schedule around the instructional television schedule so that teleclasses may be held (Statement 59). If the local school compromises to the extent of building its schedule around the television schedule, no problem in scheduling exists.

Those persons who believed they were assigned to teleclasses, along with Oklahoma City supervising teachers and those persons concerned with chemistry, solid geometry, and trigonometry, agreed that if the local school schedule conflicted with the teleclass schedule, teleclasses should not be held. Some conflicts existed in value-attitudes when scheduling was considered; however, this difference in attitude was slight and really did not include many individuals.

Thus it was concluded, subject to further research, that the third hypothesis was substantiated.

Fourth Hypothesis. Teleclasses are valuable to certain individuals in various ways, but the chief advantage is the offering of courses which the local school is not prepared to offer; and, if the school is prepared to offer the course locally, local presentation is preferred.

Teleclasses, according to the individuals involved, should be offered by a local school only in those areas of learning in which the local school is not prepared to offer courses (Statement 22). These teleclasses are more valuable than classroom films as a teacher's aid (Statement 23) and should be used by beginning teachers so that they may help themselves become better teachers (Statement 31); however, Oklahoma City students indicated that beginning teachers should not use teleclasses.

It was concluded that the fourth hypothesis was substantiated, subject to further inquiry.

Fifth Hypothesis. The persons associated with teleclasses prefer that the daily assignments be discussed over the air by the studio teacher. They also believe that the assignments should be thoroughly checked and graded.



According to the individuals associated with teleclasses, the studio teacher should spend some time in discussing the assignments over the air (Statement 1), and it is important that the assignments given by the studio teacher be completed by the student (Statement 11). The statement that assignments given by the studio teacher should be thoroughly graded was selected over its paired opposite statement by the individuals involved in teleclasses.

Thus subject to further inquiry, it was concluded that the fifth hypothesis was substantiated.

Sixth Hypothesis. Teleclass reviews given over the air are quite helpful and necessary to make teleclasses effective. The persons associated with teleclasses think that outstanding teachers should be used for teleclasses but that these teachers should be in the studio and not on film because of the inflexibility of filmed lectures.

Although the respondents indicated that they preferred teleclasses composed exclusively of filmed lectures (Statement 13) over the statement that films should not be used in the teaching of teleclasses (Statement 24) to a significant degree, the difference in mean value assigned the two statements was significant only at the .025 level of confidence. The mean values assigned to both of these statements were far below the overall mean value for the entire questionnaire. There was also the fact that physics (live) was favored considerably over physics (film). Males were in favor of filmed lectures, but females were not. Those who volunteered were willing to have teleclasses composed exclusively of filmed lectures as were those who continued

in teleclasses, but those who were assigned and those who dropped teleclasses were not in favor of filmed lectures. Those associated with chemistry and algebra, along with the Oklahoma City students, indicated that filmed lectures should not be used in teaching teleclasses, but the others in these status groups indicated opposite views. Although this information denotes some conflict, the fact that the mean values were all below the overall mean value should take precedence in reaching conclusions.

Only teachers of outstanding ability should be allowed to teach teleclasses (Statement 51). The individuals associated with teleclasses indicated that the reviews given over television were quite helpful (Statement 67).

It was concluded, therefore, until further inquiry, that the sixth hypothesis was substantiated.

Seventh Hypothesis. With certain classes excepted, tests should be given more often in teleclasses. The tests are valuable learning aids and should be carefully prepared by the studio teacher rather than by some assistant.

Since the individuals involved were none too emphatic in their belief that tests should be given more often (Statement 39) and no differences in attitude were found in this area when comparisons were made according to classes, this part of the seventh hypothesis could not be considered as substantiated unless additional information were obtained; however, these persons indicated that the regular studio teacher should develop unit tests rather than the

assistant studio teachers (Statement 41) and that the tests sent out by the studio teacher are valuable in helping the student learn the subject matter (Statement 47).

Thus it was concluded, subject to further research, that the seventh hypothesis was substantiated in part.

Eighth Hypothesis. The persons associated with teleclasses in outlying schools recognize a need for supervision from the central office.

The supervisors could quite profitably visit teleclasses more often (Statement 35). The visitations of supervisors from the central office are necessary to make instructional television of much value (Statement 55), and the supervisors could profitably make their visits to each teleclass of longer duration (Statement 43). The data above were obtained by analysis of answers given by the total respondent population.

When status categories were considered, however, some interesting results were obtained. Those persons concerned with trigonometry and solid geometry believed that the visitations of supervisors were not necessary. Students from outlying schools believed that visitations of the supervisors were necessary to make teleclasses of much value, and Oklahoma City students believed that the visitations were of little value. The Oklahoma City supervising teachers expressed the attitude that the visitations were of little value, but the other educator status category persons believed the visitations were necessary.

Subject to further research, it was concluded that the eighth hypothesis was substantiated.

Ninth Hypothesis. Most persons associated with teleclasses believe that the person in charge of the local class has a great deal to do with the success or failure of teleclasses; however, there seems to be misunderstanding and lack of direction as to the relative amount of responsibility the local teacher should take in trying to make his teleclasses successful.

Some member of the local faculty should supervise each teleclass as he would any of his other classes (Statement 9), and the local supervising teacher should help students learn how to watch teleclasses profitably (Statement 27).

Two pairs of the statements originally planned to help ascertain the value-attitudes toward the ninth hypothesis were eliminated from the questionnaire during the second trial-run. They were considered too ambiguous; therefore no decision was reached concerning the substantiation of this hypothesis.

Tenth Hypothesis. Viewing conditions affect the value-attitudes of viewers in teleclasses. Those with special viewing rooms seem to think that this is the best type of viewing condition, but those with receivers in regular classrooms prefer their viewing conditions. The production operations are of high enough quality that they affect value-attitudes very little.

Television sets and accessories which will constantly produce a good picture are important in influencing the amount that students learn in teleclasses (Statement 21). Production operations of the studio technicians (camera operators, directors, etc.) are generally quite good (Statement 75). Special rooms set aside for teleclasses

(Statement 45) are not preferred to the usual classroom for viewing teleclasses (Statement 40).

The persons concerned with trigonometry and solid geometry believed that special rooms should be set up for teleclasses, but persons from the other subject matter categories believed that the usual classroom provided with a television receiver was better.

Since both statements concerning viewing rooms were given mean-values above the overall mean-value and since the other parts of the tenth hypothesis were supported, it was concluded, subject to further research, that this hypothesis was substantiated.

Eleventh Hypothesis. There is conflict as to who should be allowed to enroll in teleclasses, but prerequisite courses should be set up. The statement concerning paying of tuition as a condition of enrollment gives conflicting results.

The total population indicated that students should not be required to pay tuition in order to participate in teleclasses (Statement 30). The 20-35-year-age group also indicated that students should not pay tuition for teleclasses as did the 0-30 and 31-60 miles distant persons. Outlying school administrators and central office or broadcasting center personnel indicated that if the need arises, students should be required to pay tuition for teleclasses.

Younger students should now be taking basic courses to prepare themselves for teleclasses (Statement 73). Here again, one pair of the statements in the original questionnaire designed to present information on this

subject was eliminated in the trial-run because of ambiguity. It was obvious that prerequisite courses should be required, for the scope of teleclasses was designed on the assumption that certain basic knowledges and skills had been mastered.

Thus it was concluded, subject to further research, that the eleventh hypothesis was substantiated.

General Hypothesis. Regardless of status, the persons involved in the State of Oklahoma secondary instructional television classes do not possess basic differences in their stated value-attitudes concerning instructional television classes.

Results of the analysis of variance were sufficient evidence to conclude that the general hypothesis concerning status was not substantiated.<sup>3</sup>

#### Interpretations

The small difference of mean values on the questions concerning filmed lectures was interpreted as an indication between what the respondents believed acceptable and the factual situation as it existed. Filmed lectures were used exclusively in some of the teleclass presentations. There may also have been conflict in interpretation of the statements by the respondents because of poor wording of the statements. Since the mean value assigned both statements was considerably below the overall

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<sup>3</sup>See Chapter III, p. 26.

mean, the indication was that filmed lectures were generally not desired.

Teleclasses were not considered to have been a greater source of difficulty than conventional classes were. This was surprising, for completely different procedures and problems of communication were prominent.

The greatest difficulty in the belief that supervising teachers should help students learn how to watch teleclasses was that most of the teachers had no training or experience in television instruction techniques.

There may be some doubt concerning the reliability of the indicated belief that attendance at teleclasses is more important than participation in extra-curricular activities; however, while visiting teleclasses, the writer saw such evidence in the form of changing schedules as a means of relieving interference with teleclasses, dropping out of school activities that interfered with teleclasses, and giving up inter-school trips because the trips interfered with teleclasses.

The relative medium mean value given the statement that supervisors could quite profitably visit the teleclasses more often was construed to mean that the frequency of visitations was considered to be about right.

Since the statement that the tests should be given more often was given a mean value somewhat lower than the overall mean, it was believed that this indicated that the tests were given at about the right frequency.

The results of the study indicated that supervisors should have spent more time in their visitations; however, because of the wide range of course offerings, scheduling difficulties, and the distances between schools, this problem may never be solved satisfactorily. The possibility may exist that some of the techniques of supervision needed to be changed.

How could respondents think that teleclasses are usually both stimulating and dull? Possibly the word usually was interpreted to mean sometimes.

The writer believes that the indications concerning the necessity of study guides were indications that the study guides were essential for understanding material in the courses because the guides contained assignments and not because they had any other helpful attributes.

Many of the teleclasses are, at this writing, only presented four days a week. This arrangement was made to allow time for testing and review at the local level, and this is evidently an acceptable practice. This relieved daily scheduling problems usually confronted by local schools when teleclasses were presented five days a week.

A surprising finding was that teleclasses were generally accepted to a higher degree by older persons than by younger persons. One of the most significant indications of the study was that teleclasses were considered to do more good than harm.



The belief that reviews were quite helpful in teleclasses was understandable. Most persons associated with teleclasses were accustomed to the tradition of a class review preceding a test.

The possibility exists that adequate general information was furnished for schools, but the information did not reach the proper persons or was not called to their attention. Frequently school administrators failed to distribute printed information intended for students.

One not oriented in the general field of television production may think that the findings concerning the production operations were of little importance; however, instructional television was compared with commercial television. Viewers soon lost interest if television production operations were poor.

The 20 per cent drop rate seemed high on first observation; however, since virtually no pre-counseling was given the students, this rate did not appear to be any higher than it was for the same courses offered by conventional means.

The algebra and chemistry respondents indicated that filmed lectures should not be used in teleclasses. Neither of these courses was taught by filmed lectures.

Of the eighteen questionnaires so marked that no accurate recording of their data could be made, four were from Oklahoma City administrators.

The response to the pair of statements concerning the paying of tuition appeared to be significant to the writer; therefore a follow-up study was made to ascertain why the respondents objected to tuition. In many cases the objection was not against paying tuition to help defray the costs of teleclasses but against having students pay this tuition in a nation where there is free public education.

A summary of the study and recommendations for further research are presented in Chapter V.

## CHAPTER V

### SUMMARY AND RECOMMENDATIONS

#### Summary of the Study

This study attempted to ascertain stated value-attitudes toward instructional television.

Subjects for the study were students, teachers, and school administrators associated with instructional television classes broadcast from KETA-TV in Oklahoma City during the 1957-58 school year. These subjects represented all Oklahoma City secondary schools and fifty schools outside the Oklahoma City School District.

An exploratory study was completed to derive statements for a questionnaire. This derived questionnaire was the principal measuring device used in the study. The questionnaire was completed by a randomly selected sample of the subjects. The return rate was 66.9 per cent. Reliability of answers to statements on the questionnaire was checked by the technique of paired-opposite statements. The differences of mean values assigned these paired-opposite statements were statistically analyzed by the t-test. Analysis of variance was used to statistically analyze the total study. Inspection of mean values

assigned the statements on the questionnaire was also used when the subjects were compared on the basis of certain status factors.

In general, it was found that the subjects favored the thirty-nine positive statements over the thirty-nine negative statements to a significant degree, that subjects in the outlying schools favored the positive statements over the negative statements more than those in Oklahoma City to a significant degree, and that educators favored the positive statements over the negative statements more than students to a significant degree.

Thirty-three of the thirty-nine positive statements were favored over their respectively paired negative statements to a significant degree. Three additional positive statements were favored over their paired negative statements, but the difference of means was not significant. Three of the negative statements were favored over their paired positive statements, but one negative statement was not favored to a significant degree.

The general value-attitudes of persons involved in secondary school teleclasses in Oklahoma were found to be positive.

The scheduling of teleclasses in conjunction with local school schedules did not appear to be difficult.

Teleclasses were valuable to certain individuals in various ways, but the chief advantage was to offer courses which the local school was not prepared to offer. If the

local school were prepared to offer the course locally, local presentation was preferred.

The persons associated with teleclasses preferred that the daily assignments be discussed over the air by the studio teacher. They also believed that the assignments should be thoroughly checked and graded.

The persons associated with teleclasses thought that outstanding teachers should be used for teleclasses but that these teachers should be in the studio and not on film because of the inflexibility of filmed lectures. Teleclass reviews given over the air were considered to be quite helpful and necessary to make teleclasses effective.

The teleclass tests were considered as valuable learning aids, and it was believed that the tests should be carefully prepared by the studio teacher rather than by some assistant.

The persons associated with teleclasses from outlying schools recognized a need for supervision from the central office.

The subjects agreed that some member of the local faculty should supervise each teleclass as he would any of his other classes and that the local supervising teacher should help students learn how to watch teleclasses.

Viewing conditions affected the value-attitudes of viewers in teleclasses. Those with special viewing rooms thought that this was the best type of viewing condition, but those with receivers in regular classrooms preferred

their viewing conditions. The production operations were considered to be of high quality.

There was conflict as to who should be allowed to enroll in teleclasses. The statement concerning paying of tuition offered conflict among the persons associated with teleclasses.

Teleclasses were not considered to have been a greater source of difficulty than conventional classes were.

The results of the study indicated that supervisors should have spent more time in visiting teleclasses.

A surprising discovery was that teleclasses were generally accepted to a higher degree by older persons than by younger persons. One of the most significant indications of the study was that teleclasses were considered to do more good than harm.

The writer's purpose in making such a study evolved from his belief that negative value-attitudes were impairing the effectiveness of instruction by television in Oklahoma. Certain practices were believed to be producing these negative value-attitudes. This study investigates these practices in order that negative value-attitudes may be eliminated and more effective instruction may be produced.

#### General Recommendations

Instructional television is new in the field of education in general and in the State of Oklahoma in particular; therefore it is recommended that persons who

come in contact with this medium of instruction neither accept nor reject it without first giving it due study, trial, and experimentation. This recommendation did not emerge from direct results of the study; however, it is given to direct attention to the fact that instructional television is often fully accepted or rejected without adequate information. According to the persons who have been associated with instructional television classes, some believe that instructional television will solve most of the problems in the field of education, but others believe that it creates more problems than it solves. Obviously, neither of these extremes is justifiable.

In reality, television is a means of communication and should be used in education to make instruction more effective. Many students in outlying schools do not have opportunities for advanced mathematics and science instruction if these courses are not offered by television. It seems obvious that this is a justifiable reason for using instructional television. It is recommended that these programs be continued until schools are so organized that each secondary school student in Oklahoma, with sufficient interest and ability, has the opportunity for advanced local science and mathematics instruction.

It is also recommended that persons responsible for policy-making in the area of instructional television in Oklahoma consider the results of this study when new policies or changes in old policies are initiated. If

any good is to come from this study, it will most probably be from inferences that instructional television policy-makers draw from the results outlined. When these policy-makers are sensitive to the value-attitude of the viewers, policy will be developed with the feelings of the viewers in mind. This will make instructional television more acceptable to individual viewers.

#### Recommendations for Further Research

Because of the descriptive generalities with which this study was concerned, it is evident that further research on many specific factors involved in instructional television is required. Those factors which seem most able to reveal pertinent knowledge are presented.

The first and certainly a most important research problem is a longitudinal study of a group of television students. This study should investigate their success in the same subject-matter which they studied in television classes. Specific data could be obtained by this method pertaining to the actual value of instructional television classes.

A second important question to be answered is whether the degree of success of students in television classes is related to their degree of success in local classes. Do students who do well in local English classes also do well in television mathematics classes, and vice versa? Do



those who fail to do well in television classes also fail to do well in local classes?

A third area of inquiry is a detailed investigation of students before they are allowed to participate in television classes. The students could be given attitude, aptitude, and achievement pre-tests and could be compared by the aid of post-tests to ascertain whether attitude toward instructional television makes any difference in the amount that students learn from teleclasses.

A fourth important question concerns the extent to which the attitude of local supervising teachers affects the amount that their students learn in teleclasses.

A fifth area of investigation is a study of the influence television plus correspondence study will have on value-attitudes of these persons. Does correspondence study plus teleclasses keep student interest high and provide for more individual direction than does the usual method of television presentation?

A sixth area of inquiry concerns the scheduled time of television presentations. Will morning presentations elicit more positive attitude reactions than afternoon presentations?

A seventh question is to what extent the greater involvement of the local supervising teachers influences their value-attitudes. Do local supervising teachers believe that their relationship with students is one only

clerical in nature and unnecessary for a professional educator to perform?

An eighth area of study is that of the value of testing in television classes. Is it actually necessary that unit tests be given in connection with teleclasses? Would pre- and post- standardized achievement tests alone serve the same purpose as unit tests? Would daily short examinations be more satisfactory?

The ninth area of inquiry concerns the attitudes of persons involved in teleclasses toward instructional television compared with their attitudes toward conventional classes. Do the persons who react unfavorably toward instructional television also react unfavorably toward conventional classes? Information derived from such a study would be extremely interesting.

A tenth question is whether courses presented over television in areas other than science or mathematics elicit entirely different value-attitudes toward instructional television. Are advanced courses in science and mathematics so difficult that they elicit negative value-attitudes only because of their difficulty?

An eleventh study area is that of the influence of the studio teacher on students. Is conviction more easily established by the studio teacher than by the regular classroom teacher? This type of question is especially important in such subjects as social studies.

Numerous other studies of specific concern are needed. The knowledge of what constitutes an effective teleclass still has not been adequately established. Many of the variables need to be eliminated. A researcher in charge of establishing policy could help establish more definite answers concerning instructional television in Oklahoma. Although much has been discovered, much more should be discovered before more than descriptive generalities concerning the value-attitudes toward instructional television in Oklahoma are made.

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APPENDIX A

A QUESTIONNAIRE CONCERNING INSTRUCTIONAL  
TELEVISION CLASSES IN OKLAHOMA

Introduction--Part I

The purpose of this inquiry is to obtain the extent of agreement of students, teachers, and administrators in Oklahoma with a number of statements regarding Instructional Television Classes in Oklahoma. Similar statements have been made by different persons who have been associated with instructional television classes (teleclasses).

An expression of your degree of agreement with the statements will be appreciated.

Please do NOT sign your name. Make some MARK FOR EVERY STATEMENT.

The questions in PERSONAL INFORMATION--Part II, are about yourself in order that the results from different groups of students, teachers, and administrators can be compared.

Personal Information--Part II

Directions: Answer each of the following questions by placing the number of the statement which best answers the question in the blank space provided before the question.

Example:   2   The capital city of the United States is...  
(1) Little Rock (2) Washington D.C.  
(3) Dallas

- 1   I am associated with teleclasses in the following way: (1) Student (2) Supervising Classroom Teacher (3) Supervising Classroom Teacher and Administrator (4) Administrator (5) Professional person connected with the central office or broadcasting center.
- 2   Please indicate your sex. (1) Male (2) Female.
- 3   I am regularly associated with...(1) the Oklahoma City school system (2) a school system outside the Oklahoma school system.
- 4   In which of these categories is your age? (1) 14-19 (2) 20-35 (3) 36-49 (4) 50 and over.
- 5   With which size high school are you associated? (Persons connected with central office or broadcasting center need not answer this) (1) 20-50 enrollment (2) 51-100 enrollment (3) 101-300 enrollment (4) 301-800 enrollment (5) 801 and over enrollment.
- 6   Which is the case for you?  
(1) Volunteered to work with instructional television classes (2) Assigned to work with instructional television classes.



- \_\_\_ 7. Teleclass for which you are reporting in this questionnaire. Mark only one class even though you may be associated with more than one. (1) Chemistry (2) Trigonometry (3) Solid Geometry (4) Physics (Live-12:30) (5) Physics (Film-1:30) (6) Algebra (7) Geology.
- \_\_\_ 8. Which is the case for you? (1) I am associated with instructional television at the present time (2) I am not associated with instructional television at the present time, but have been for at least one month during the 1957-58 school year.
- \_\_\_ 9. What is the approximate distance (air miles) of your school from the broadcasting studio? (1) 0-30 (2) 31-60 (3) 61-90.

Questionnaire--Part II

Directions: The following list contains statements pertaining to instructional television classes and certain practices connected with these classes.

Please indicate by encircling the number after each statement the degree to which you agree with the statement, according to the following scale:

- 0-----Not at all  
 1-----To a small degree  
 2-----To some degree  
 3-----To a considerable degree  
 4-----To a great degree  
 5-----To a very great degree

For example: Most persons are willing to help someone who needs help. 0 1 2 3 4 5

This would mean that you agree to a great degree with the statement.

1. The studio teacher should spend some time in discussing the assignments over the air. 0 1 2 3 4 5
2. Supervisors from the central office visit the teleclasses too often. 0 1 2 3 4 5
- X 3. Attendance at teleclasses is just as important as it is for regular classes. 0 1 2 3 4 5
- X 4. The tests sent out by the studio teacher are not valuable in helping the student learn the subject matter. 0 1 2 3 4 5
5. Instructional television allows each student to develop as far as his ability permits. 0 1 2 3 4 5
- X 6. Students, in courses which usually require laboratory work, do not need laboratory equipment when these courses are taken by television. 0 1 2 3 4 5
7. Instructional television will always have a place in our schools. 0 1 2 3 4 5

8. Instructional television does more harm than good. 0 1 2 3 4 5
9. Some member of the local faculty should supervise each teleclass as he would any of his other classes. 0 1 2 3 4 5
- x10. Tests are given too often by the studio teacher. 0 1 2 3 4 5
11. It is important that the assignments given by the studio teacher be completed by the student. 0 1 2 3 4 5
12. Attendance at teleclasses is not as important as it is for regular classes. 0 1 2 3 4 5
13. I would be willing to have teleclasses which are composed exclusively of filmed lectures. 0 1 2 3 4 5
14. x The limitations of instructional television are such that little improvement over present conditions is possible. 0 1 2 3 4 5
15. The assignments given by the studio teacher should be thoroughly graded. 0 1 2 3 4 5
16. y Instructional television classes have little value in education. 0 1 2 3 4 5
17. Instructional television has not been a greater source of difficulty to me than conventional means of instruction. 0 1 2 3 4 5
18. Those persons involved in teleclasses are not furnished enough general information. 0 1 2 3 4 5
- x19. Schools should offer teleclasses in all courses presented over television. 0 1 2 3 4 5
20. Beginning teachers should not use teleclasses to help themselves become better teachers. 0 1 2 3 4 5
21. Television sets and accessories which will constantly produce a good picture are important in influencing the amount students learn in teleclasses. 0 1 2 3 4 5
22. Teleclasses should be offered by a local school only in those areas of learning in which the local school is not prepared to offer courses. 0 1 2 3 4 5
23. Teleclasses are more valuable than classroom films as a teacher's aid. 0 1 2 3 4 5
24. Films should not be used in the teaching of teleclasses. 0 1 2 3 4 5
- x25. If the need arises, students should pay tuition in order to participate in teleclasses. 0 1 2 3 4 5
26. Supervisors from the central office spend too much time at each school when they visit teleclasses. 0 1 2 3 4 5
27. Local supervising teachers should help students learn how to watch teleclasses profitably. 0 1 2 3 4 5
28. The assignments given by the studio teacher do not need to be graded. 0 1 2 3 4 5
29. Attendance at teleclasses is more important than participation in extra-curricular activities when they occur at the same time. 0 1 2 3 4 5

- X30. Students should never be required to pay tuition for teleclasses. 0 1 2 3 4 5
31. Beginning teachers should use teleclasses to help themselves become better teachers. 0 1 2 3 4 5
32. The study guides sent out to students by the studio teacher are of little value other than as assignment sheets. 0 1 2 3 4 5
- X33. Laboratory equipment should be provided for students in teleclasses if these courses require laboratory work when offered by conventional means. 0 1 2 3 4 5
34. The quality of the picture on the television screen is of little importance in influencing the amount students learn by television. 0 1 2 3 4 5
35. The supervisors from the central office could quite profitably visit teleclasses more often. 0 1 2 3 4 5
- X36. Instructional television classes do little to help prepare students for college. 0 1 2 3 4 5
37. Instructional television is necessary to make our schools effective. 0 1 2 3 4 5
38. Teleclasses are not of enough importance to warrant having outstanding teachers teach them. 0 1 2 3 4 5
- X39. Tests should be given more often by the studio teacher. 0 1 2 3 4 5
40. The usual classroom, equipped with a television set, should be used for teleclasses. 0 1 2 3 4 5
- X41. The regular studio teachers should develop unit tests rather than the assistant studio teachers. 0 1 2 3 4 5
42. Instructional television is necessary only until other aids can be found. 0 1 2 3 4 5
43. Supervisors from the central office could quite profitably make their visits to each teleclass of longer duration. 0 1 2 3 4 5
44. The reviews given over television are of small value. 0 1 2 3 4 5
45. Special rooms should be set aside for teleclasses. 0 1 2 3 4 5
46. Instructional television has meant only trouble for me as a means of instruction. 0 1 2 3 4 5
- X47. The tests sent out by the studio teacher are valuable in helping the student learn the subject matter. 0 1 2 3 4 5
48. Classroom films are more valuable than teleclasses as a teacher's aid. 0 1 2 3 4 5
49. Instructional television classes are usually stimulating. 0 1 2 3 4 5
50. The quality of the teleclass production by the studio technicians (camera operators, etc.) is generally poor. 0 1 2 3 4 5

51. Because of the importance of instructional television, only teachers of outstanding ability should be allowed to teach teleclasses. 0 1 2 3 4 5
52. The local faculty member in charge of a teleclass should take little responsibility in seeing that the teleclass functions properly. 0 1 2 3 4 5
53. Instructional television can be improved in spite of obstacles involved in telecasting such programs. 0 1 2 3 4 5
54. It is not important for the assignments given by the studio teacher to be completed by the student. 0 1 2 3 4 5
55. The visitations of the supervisors from the central office are necessary to make instructional teleclasses of much value. 0 1 2 3 4 5
56. If the teleclass schedule and the local school schedule conflict, teleclasses should not be held in the school. 0 1 2 3 4 5
57. Instructional television classes are valuable to education. 0 1 2 3 4 5
58. Younger students do not need to take specific basic subjects to prepare themselves for teleclasses. 0 1 2 3 4 5
59. The local school should build its schedule around the instructional television schedule so that teleclasses may be held. 0 1 2 3 4 5
60. Instructional television is not necessary in our schools. 0 1 2 3 4 5
61. The study guides sent out to <sup>teachers</sup> students by the studio teacher are essential for understanding material in the course. 0 1 2 3 4 5
62. The assignments need not be discussed by the studio teacher over the air. 0 1 2 3 4 5
63. Instructional television classes should be broadcast every school day. 0 1 2 3 4 5
64. Participation in extra-curricular activities is more important than attendance at teleclasses when they occur at the same time. 0 1 2 3 4 5
65. Instructional television does more good than harm. 0 1 2 3 4 5
66. The visitations of the supervisors from the central office are of little use in making the teleclasses valuable. 0 1 2 3 4 5
67. The reviews given over television are quite helpful. 0 1 2 3 4 5
68. Instructional television does not allow each student to develop as far as his ability permits. 0 1 2 3 4 5
69. Instructional television classes encourage skills and attitudes which will be useful for students who attend college. 0 1 2 3 4 5

70. Instructional television classes are usually dull. 0 1 2 3 4 5
71. The general information furnished those involved in teleclasses is adequate. 0 1 2 3 4 5
- \*72. Teleclasses are not important enough to warrant the student's purchasing his own textbook. 0 1 2 3 4 5
- \*73. Younger students should now be taking basic courses to prepare themselves for teleclasses. 0 1 2 3 4 5
74. Local supervising teachers do not need to help students learn how to watch teleclasses profitably. 0 1 2 3 4 5
75. Production operations of the studio technicians (camera operators, directors, etc.) are generally quite good. 0 1 2 3 4 5
- \*76. An assistant studio teacher should be in charge of the testing and responsible for making the tests instead of the regular studio teacher. 0 1 2 3 4 5
- \*77. Teleclasses are important enough to warrant the student's purchasing his own textbook. 0 1 2 3 4 5
78. Instructional television classes should be broadcast only occasionally. 0 1 2 3 4 5

## STATE DEPARTMENT OF EDUCATION

Oliver Hodge, Superintendent  
E. H. McDonald, Asst. Superintendent

OKLAHOMA CITY, OKLAHOMA

April 28, 1958

Dear Administrators, Teachers, and Students:

A copy of the enclosed questionnaire is being sent to all school administrators and teachers and approximately thirty percent of the students who are or have been associated with instructional television classes during the 1957-58 school year.

We hope that one hundred percent of these questionnaires will be completed and immediately returned. If this is done, we will have information which may enable us to determine which practices connected with instructional television classes in Oklahoma are considered good and which are not considered good.

Please do not sign your name.

This project has the approval of Dr. T. H. Broad, Dr. Merle Glasgow, and Dr. Cecil Bridges.

Your immediate response to this inquiry will be greatly appreciated. Please use the enclosed self-addressed stamped envelope to return the questionnaire.

Copies of the results of this study will be available at the State Department of Education sometime during the summer months. If you would like a copy, please address a post card to the undersigned requesting the results.

Very truly yours,  
s/  
Leon Hibbs  
Assistant State Supervisor  
of Television Instruction

LH:ct  
Encl.

## FOLLOW-UP POSTCARD

May 12, 1958  
Okla. City, Okla.

Dear \_\_\_\_\_ :

On April 28, 1958, we mailed you an inquiry concerning certain practices connected with Oklahoma's instructional television project.

The response to date has been gratifying and we are most anxious to have all questionnaires returned. If you have not already done so, we will appreciate your filling out the questionnaire and returning it at the earliest possible date.

Very truly yours,  
s/  
Leon Hibbs

APPENDIX B



TABLE XII  
 NUMBER OF OKLAHOMA CITY PERSONNEL  
 RESPONSES FOR EACH SCALE VALUE

Question No.	STUDENTS						EDUCATORS					
	Scale Value						Scale Value					
	0	1	2	3	4	5	0	1	2	3	4	5
1	11	24	41	39	17	18	4	5	9	3	4	8
2	104	30	12	1	0	3	21	6	5	0	1	0
3	5	7	6	14	35	83	0	0	1	0	3	29
4	51	22	16	28	19	14	15	6	6	3	2	1
5	44	27	29	25	15	10	4	3	10	7	5	4
6	87	16	14	19	7	7	24	0	5	4	0	0
7	17	24	37	36	16	20	4	5	6	7	2	9
8	74	36	19	8	4	9	19	3	5	3	0	3
9	10	9	6	21	32	72	2	0	2	5	6	18
10	101	24	16	6	1	2	27	3	2	1	0	0
11	4	11	11	26	33	65	1	0	0	1	6	25
12	89	19	10	10	10	12	30	0	0	1	0	2
13	73	22	11	12	13	19	15	5	4	3	3	3
14	42	29	32	24	12	11	14	6	2	3	5	3
15	11	16	30	24	27	42	4	0	3	7	6	13
16	69	32	24	13	4	8	16	5	4	3	3	2
17	46	23	10	25	19	27	9	3	5	6	5	5
18	49	22	32	14	20	13	7	3	8	7	3	5
19	69	22	14	17	13	15	17	1	6	1	6	2
20	50	16	18	12	16	38	18	5	2	4	2	2
21	7	5	3	19	29	87	1	1	1	1	4	25
22	7	3	8	22	32	78	1	0	1	5	5	21
23	26	16	27	28	27	26	8	0	2	10	4	9
24	65	18	23	22	8	14	17	2	8	5	1	0
25	97	21	13	10	4	5	14	2	3	3	4	7
26	112	18	11	4	2	3	26	5	2	0	0	0
27	8	5	15	22	40	60	0	1	1	4	8	19
28	85	19	15	13	10	8	21	2	2	7	0	1
29	25	12	25	24	27	37	2	0	8	1	4	18
30	30	14	10	10	28	57	15	3	1	1	3	10
31	56	22	15	23	12	22	2	3	2	7	7	12
32	34	20	10	23	29	34	13	4	5	6	3	2
33	6	5	10	21	37	71	0	0	2	2	11	18
34	88	20	9	8	8	17	22	2	2	1	1	5
35	18	20	30	29	23	30	3	4	6	11	4	5
36	52	23	16	25	18	16	16	6	7	2	0	2
37	54	34	15	25	16	6	15	4	6	0	2	6
38	96	16	12	8	5	13	18	4	1	3	2	5
39	49	26	20	27	13	15	11	2	5	5	3	7
40	21	17	25	34	25	28	4	5	3	9	3	9
41	27	12	12	29	36	34	3	1	3	8	7	11
42	53	29	21	16	12	19	12	7	3	4	1	6
43	29	30	28	32	11	20	7	5	5	7	2	7
44	66	21	14	8	18	23	13	4	2	1	8	5
45	34	26	14	18	25	33	14	4	4	1	4	6

TABLE XII (continued)

Question No.	STUDENTS						EDUCATORS					
	Scale Value						Scale Value					
	0	1	2	3	4	5	0	1	2	3	4	5
46	50	27	16	19	11	27	14	7	2	4	3	3
47	16	22	22	32	35	23	1	5	2	9	6	10
48	54	31	16	24	12	13	15	4	2	6	4	2
49	48	27	34	24	13	4	4	9	5	8	3	4
50	47	31	23	17	14	13	14	6	7	4	2	0
51	13	8	13	16	30	70	2	2	0	1	9	19
52	106	13	8	8	6	9	27	1	2	0	2	1
53	6	8	15	39	40	42	1	0	2	4	7	19
54	81	23	16	9	12	9	26	4	0	0	2	1
55	42	41	21	22	16	8	11	6	2	4	6	4
56	38	24	16	22	20	30	8	5	4	3	2	11
57	15	15	26	34	39	21	2	4	4	6	3	14
58	58	30	21	19	12	10	18	1	4	7	1	2
59	35	16	19	35	25	20	7	1	7	7	5	6
60	45	28	15	17	19	26	14	4	2	5	2	6
61	40	33	20	30	11	16	5	4	6	3	4	11
62	84	19	18	12	7	10	19	8	2	0	1	3
63	32	10	13	19	41	35	12	3	5	1	3	9
64	56	29	29	21	4	11	17	7	4	4	0	1
65	35	17	18	24	25	31	6	0	5	7	2	13
66	34	31	17	19	25	24	13	6	4	4	4	2
67	18	16	20	23	31	42	4	7	4	4	8	6
68	22	21	24	18	27	38	10	4	5	4	5	5
69	21	23	23	27	27	29	2	4	7	4	5	4
70	14	23	21	26	21	45	9	5	3	7	7	2
71	18	24	33	40	23	12	1	5	5	10	6	6
72	47	30	28	17	15	13	14	6	7	4	2	0
73	20	29	26	27	23	25	8	4	8	3	2	8
74	84	24	18	10	3	11	23	5	2	0	1	2
75	13	24	21	34	34	24	1	0	4	9	13	6
76	69	30	17	22	6	6	20	3	2	4	3	1
77	13	24	21	34	34	24	1	0	4	9	13	6
78	71	20	10	19	13	17	15	4	3	3	2	6

TABLE XIII

NUMBER OF RESPONSES FROM OUTLYING PERSONNEL  
FOR EACH SCALE VALUE

Question No.	STUDENTS						EDUCATORS					
	Scale Value						Scale Value					
	0	1	2	3	4	5	0	1	2	3	4	5
1	4	9	24	26	13	6	1	5	19	22	11	14
2	63	13	4	1	1	0	61	4	7	0	0	0
3	0	1	3	8	13	47	0	1	0	2	1	68
4	40	11	7	8	11	5	35	13	8	4	8	4
5	6	9	14	19	18	16	2	4	9	20	23	14
6	39	13	13	4	6	7	26	15	10	16	4	1
7	4	5	20	18	20	15	2	4	18	13	11	24
8	61	12	4	1	1	3	62	5	4	0	0	1
9	1	9	4	13	17	38	1	2	3	9	17	40
10	63	7	6	4	1	1	65	2	1	3	1	0
11	1	3	5	11	26	36	0	0	0	7	16	49
12	62	7	1	2	4	6	66	2	0	2	2	0
13	28	11	15	15	5	8	21	7	12	15	8	9
14	28	14	20	11	4	5	39	16	7	5	4	1
15	9	9	11	12	21	20	3	3	5	19	14	28
16	59	10	3	7	1	2	60	7	3	1	0	15
17	25	9	9	22	8	9	16	5	10	12	14	1
18	23	14	13	18	5	9	20	18	12	14	10	6
19	16	17	12	13	11	13	40	9	13	7	1	2
20	43	5	10	15	2	7	50	6	4	6	2	4
21	3	0	7	9	21	42	0	0	0	12	19	40
22	4	0	0	11	26	41	1	2	2	7	14	46
23	6	6	12	19	22	17	3	9	8	12	19	21
24	35	13	11	12	6	5	40	10	9	7	3	3
25	36	13	76	8	7	2	23	16	10	10	4	9
26	69	9	3	1	0	0	63	4	2	3	0	0
27	3	2	5	20	24	28	1	1	3	8	23	36
28	41	8	10	12	6	5	47	11	5	2	4	3
29	8	11	16	12	14	21	5	0	11	12	13	31
30	22	13	9	10	9	8	30	7	8	17	6	4
31	13	7	11	21	16	14	6	4	7	16	17	22
32	33	13	9	10	9	8	30	7	8	17	6	4
33	2	1	9	12	26	32	1	2	13	16	21	19
34	50	8	5	8	6	5	52	11	1	2	5	1
35	2	12	12	22	19	15	9	16	17	12	9	9
36	54	11	2	6	4	5	45	10	3	4	5	2
37	12	10	21	17	13	9	13	11	11	16	12	9
38	57	5	5	5	6	4	51	7	2	6	2	4
39	21	14	14	19	7	7	18	13	7	18	7	9
40	6	7	7	22	23	17	8	5	15	14	15	15
41	7	11	10	23	15	16	9	12	9	14	13	15
42	37	12	11	7	7	8	31	11	10	11	4	5
43	12	15	13	22	12	8	16	14	17	17	5	3
44	56	5	4	5	4	8	43	6	7	4	8	4
45	13	8	10	15	15	21	17	13	5	10	9	18

TABLE XIII (continued)

Question No.	STUDENTS						EDUCATORS					
	Scale Value						Scale Value					
	0	1	2	3	4	5	0	1	2	3	4	5
46	54	11	8	2	3	4	54	10	2	4	1	1
47	2	6	7	18	31	18	2	2	7	21	18	22
48	44	17	8	4	2	7	38	13	8	6	3	4
49	11	5	20	24	18	4	2	3	8	23	19	17
50	33	20	13	8	4	4	38	17	5	8	4	0
51	5	4	5	13	26	29	3	4	2	12	18	33
52	53	12	2	8	2	5	57	9	2	2	0	2
53	2	6	7	27	22	18	0	4	3	20	18	27
54	53	9	7	3	5	5	60	5	1	1	2	3
55	6	9	14	18	16	19	4	7	10	12	19	20
56	26	22	11	7	11	5	27	10	12	10	4	9
57	2	3	9	12	24	32	1	0	3	12	17	39
58	47	15	7	7	3	3	39	7	7	9	3	7
59	10	8	19	15	11	19	16	6	10	11	17	12
60	37	12	13	8	5	7	39	10	8	12	2	1
61	6	9	13	19	14	21	4	5	7	16	24	16
62	43	13	7	11	6	2	48	6	5	7	4	2
63	3	3	9	9	36	22	2	2	0	10	25	33
64	38	18	12	8	2	4	47	14	6	4	1	0
65	14	3	4	9	23	29	16	3	2	2	21	28
66	45	15	7	5	8	2	44	13	4	4	3	4
67	3	1	4	11	24	39	4	5	4	8	24	27
68	35	11	10	9	11	6	36	10	10	14	2	0
69	3	4	5	12	30	28	0	1	3	16	24	28
70	23	16	19	9	7	7	34	16	9	10	2	1
71	5	11	13	27	20	6	6	6	14	18	21	6
72	33	20	13	8	3	4	38	17	5	8	4	0
73	11	12	9	9	21	20	16	6	6	17	14	13
74	50	10	4	7	6	5	51	13	0	4	3	1
75	6	12	8	24	25	7	1	0	6	14	41	10
76	39	12	15	10	2	4	37	7	10	10	5	3
77	6	12	9	24	25	6	1	0	6	14	41	10
78	63	8	4	2	2	3	62	8	0	2	0	0

TABLE XIV  
MEANS DISTRIBUTED ACCORDING TO STATUS

Question No.	OKLAHOMA CITY		OUTLYING	
	STUDENTS	EDUCATORS	STUDENTS	EDUCATORS
	ODD			
1	2.54	2.67	2.64	3.10
3	4.11	4.51	4.49	4.88
5	1.80	2.54	3.00	3.40
7	2.47	2.76	3.10	3.40
9	3.81	4.03	3.78	4.21
11	3.79	4.61	4.04	4.60
13	1.51	1.48	1.82	2.13
15	3.11	3.51	3.02	3.69
17	2.19	2.30	2.08	2.67
19	1.52	1.51	2.34	.97
21	4.13	4.45	4.10	4.33
23	2.61	2.88	3.13	3.36
25	.79	2.06	1.29	1.75
27	3.74	4.30	3.71	4.21
29	2.85	3.80	2.89	3.69
31	1.86	3.51	2.72	3.40
33	3.94	2.85	3.84	3.54
35	2.73	2.73	3.05	2.32
37	1.55	1.64	2.41	2.42
39	1.83	2.24	1.95	2.14
41	2.91	3.45	2.90	2.76
43	2.17	2.40	2.36	1.86
45	2.49	1.85	2.87	2.50
47	2.78	3.33	3.47	3.62
49	1.59	2.27	2.52	3.46
51	3.68	4.12	3.64	3.90
53	3.50	4.21	3.39	3.85
55	1.69	2.00	3.04	3.32
57	2.87	3.40	3.82	4.24
59	2.39	2.61	2.80	2.60
61	1.91	2.91	3.08	3.38
63	2.88	2.21	3.66	4.12
65	2.53	3.15	3.36	3.32
67	3.06	2.70	4.07	3.72
69	2.69	3.49	3.80	4.04
71	2.41	3.00	2.78	2.81
73	2.53	2.33	2.96	2.64
75	2.83	3.24	2.86	3.72
77	2.09	3.24	3.05	3.72
TOTAL	101.83	116.30	120.04	127.79

TABLE XIV (continued)

Question No.	OKLAHOMA CITY		OUTLYING	
	STUDENTS	EDUCATORS	STUDENTS	EDUCATORS
	EVEN			
2	.05	.61	.34	.25
4	1.91	1.21	1.42	1.29
6	1.10	.67	1.37	1.45
8	1.07	1.12	.51	.25
10	.06	.30	.54	.24
12	1.13	.39	.80	.22
14	1.79	1.64	1.57	.92
16	1.17	1.33	.61	.29
18	1.81	2.33	1.93	1.67
20	2.27	1.18	1.42	.97
22	4.01	4.30	4.12	4.35
24	1.56	1.12	1.45	1.05
26	.05	.12	.22	.24
28	1.12	.97	1.36	.81
30	3.07	2.12	2.46	1.79
32	2.62	1.63	1.65	1.64
34	1.20	1.15	1.10	.61
36	1.88	1.09	.89	.81
38	.98	1.45	.89	.79
40	2.71	2.88	3.18	2.94
42	1.76	1.79	1.48	1.46
44	1.73	2.06	1.01	1.17
46	1.97	1.51	.78	.49
48	1.66	1.58	1.06	1.10
50	1.73	1.21	1.28	.93
52	.82	.55	.88	.40
54	1.17	.52	.93	.46
56	2.36	2.58	1.61	1.73
58	1.50	1.36	.95	1.32
60	2.11	1.85	1.41	1.04
62	1.13	.94	1.17	.88
64	1.48	.97	1.16	.58
66	2.30	1.58	1.07	.90
68	2.80	2.15	1.59	1.11
70	3.01	2.12	1.75	1.07
72	1.85	1.21	1.25	.93
74	1.05	.70	1.08	.58
76	1.23	1.09	1.20	1.28
78	1.55	1.73	.54	.19
<b>TOTAL</b>	<b>64.77</b>	<b>55.01</b>	<b>50.03</b>	<b>40.20</b>

## ANALYSIS OF VARIANCE COMPUTATION

$$\begin{aligned} \text{T.S.S.} &= 2.54^2 + 4.11^2 + \dots + 1.28^2 + 0.19^2 - \frac{675.97^2}{312} \\ &= 417.86 \end{aligned}$$

$$\begin{aligned} \text{Tot. Bet.} &= \frac{64.77^2}{39} + \frac{55.01^2}{39} + \frac{50.03^2}{39} + \frac{40.20^2}{39} + \frac{101.83^2}{39} + \\ &\quad \frac{116.30^2}{39} + \frac{120.04^2}{39} + \frac{127.79^2}{39} - \frac{675.97^2}{312} = 227.12 \end{aligned}$$

$$\begin{aligned} \text{Total Within} &= \text{T.S.S.} - \text{Total Between} = 417.86 - 227.12 \\ &= 190.74 \end{aligned}$$

$$\begin{aligned} \text{A (School)} &= \frac{(101.83 + 64.77 + 116.30 + 55.01)^2}{156} + \\ &\quad \frac{(120.04 + 50.03 + 127.79 + 40.20)^2}{156} - \frac{(675.97)^2}{312} \\ &= -0.10 \end{aligned}$$

$$\begin{aligned} \text{B (Status)} &= \frac{(101.83 + 64.77 + 120.04 + 50.03)^2}{156} + \\ &\quad \frac{(116.30 + 55.01 + 127.79 + 40.20)^2}{156} - \frac{(675.97)^2}{312} \\ &= 0.02 \end{aligned}$$

$$\begin{aligned} \text{C (Odd-)} &= \frac{(101.83 + 116.30 + 120.04 + 127.79)^2}{156} + \\ \text{(Even)} &\quad \frac{(64.77 + 55.01 + 50.03 + 40.20)^2}{156} - \frac{(675.97)^2}{312} \\ &= 209.97 \end{aligned}$$

## Interaction

$$\begin{array}{l} \text{Bet. A \& B} \\ \begin{array}{r} \text{O.C. Outly.} \\ \text{S } 166.60 \text{ } 170.07 \\ \text{E } 171.31 \text{ } 167.99 \end{array} \end{array} \frac{(341.38 - 344.59)^2}{312} = 0.14775$$

$$\begin{array}{l} \text{Bet. A \& C} \\ \begin{array}{r} \text{O.C. Outly.} \\ \text{O } 218.13 \text{ } 247.83 \\ \text{E } 119.78 \text{ } 90.23 \end{array} \end{array} \frac{(367.61 - 308.36)^2}{312} = 11.25$$

## ANALYSIS OF VARIANCE COMPUTATION (Continued)

$$\text{Bet. B \& C} = \frac{\frac{S.}{0} \frac{Ed.}{244.09} (358.89 - 317.08)^2}{\frac{E}{114.80} \frac{95.21}{312}} = 5.5849$$

$$\begin{aligned} \text{Bet. A, B, \& C} &= \text{Total Between} - \text{A} - \text{B} - \text{C} - \text{Bet. A \&} \\ &\quad \text{B} - \text{Bet. A \& C} - \text{Bet. B \& C} = 227.12 \\ &\quad + 0.10 - 0.02 - 209.97 - 0.15 - 11.25 \\ &\quad - 5.58 = 0.25 \end{aligned}$$

Source	S.S.	D.F.	M.S.	<u>F</u>	<u>P</u>
Total S.S.	417.86	311			
Total Bet.	227.12	7			
A	-0.10	1	-0.10	-0.16	<u>P</u> >.05
B	0.02	1	0.02	0.03	<u>P</u> >.05
C	209.97	1	209.97	333.29	<u>P</u> <.01
AB	0.15	1	0.15	0.24	<u>P</u> >.05
AC	11.25	1	11.25	17.86	<u>P</u> <.01
BC	5.58	1	5.58	8.86	<u>P</u> <.01
ABC	0.25	1	0.25	0.40	<u>P</u> >.05
Total Within	190.74	304	0.63		



VITA

Elvin Leon Hibbs

Candidate for the Degree of  
Doctor of Education

Thesis: VALUE-ATTITUDES OF ADMINISTRATORS, TEACHERS, AND  
STUDENTS CONCERNING INSTRUCTIONAL TELEVISION  
CLASSES

Major Field: Educational Administration

Biographical:

Personal data: Born near Balko, Oklahoma, October 15,  
1930, the son of P. O. and Louella Hibbs.

Education: Attended elementary school in Balko, Alva,  
Elmwood, Woodward, Guthrie, and Beaver, Oklahoma;  
graduated from Beaver High School in 1948;  
received the Bachelor of Science degree from  
Northwestern State College, with a major in  
mathematics, in May, 1952; received the Master  
of Education degree from Oklahoma University,  
with a major in school administration, in August,  
1956; received the Master of Science degree from  
the Oklahoma Agricultural and Mechanical College,  
with a major in natural science, in May, 1957;  
completed requirements for the Doctor of  
Education degree in August, 1959.

Professional experience: Entered teaching profession  
in 1952 and was teaching principal until 1956;  
employed by the Oklahoma State Department of  
Education, Division of Television Instruction,  
in 1957; recently employed as Assistant Director,  
Division of Instruction, Oklahoma State Department  
of Education.

Professional organizations: Beaver County School-  
master's, Beaver County Teachers, Oklahoma  
Education Association, National Education  
Association, National Council of Teachers of  
Mathematics, National Association of Secondary  
School Principals, Kappa Delta Pi, Who's Who  
in American Colleges and Universities, 1951.