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ABSTRACT

The extent to which teachers use the services provided by The School Television Service (STS), the instructional division of Channel 13/WNDT (New York), was studied. After determining that the STS is representative of many broadcast instructional television agencies, a five-page questionnaire was administered to a sample of 1037 teachers whose school districts participated in STS. The sample provided 752 usable responses. Results showed that a majority (57.9 percent) of the respondents used the program series regularly (at least several times a semester), and that the average regular use of the program series was 1.8 program series per teacher per semester. Three conditions were found to be statistically associated with the number of series a teacher uses: the storage location of the television set, the teacher's professional preparation, and the grade levels concerned. (Author/SP)

Sponsoring Committee: Dr. Irene F. Cypher, Chairman
Dr. Robert W. Clausen
Dr. Alfred Ellison

A STUDY OF THE USEFULNESS OF THE INSTRUCTIONAL TELEVISION SERVICES OF CHANNEL 13/WNDT AND RECOMMENDATIONS FOR THEIR IMPROVEMENT

Peter J. Dirr

Submitted in partial fulfillment of the requirements of the degree of Doctor of Philosophy in the School of Education of New York University

1970

ACKNOWLEDGMENTS

No piece of research today represents the work of only one man. While I bear the full responsibility for this final document, its completion would not have been possible without the cooperation of many persons.

I thank the members of my sponsoring committee, Professor Irene Cypher, Professor Robert Clausen and Professor Alfred Ellison, for their persistence and thoroughness in guiding my design and completion of this project.

Sincere thanks are also extended to the members of the School Television Service staff for opening their doors to me and providing me with necessary information. The members of the panels which evaluated my choice of the sample and design of the instruments contributed a valuable service for which I am grateful.

During the course of my research I have required several drafts of reports. I thank all who helped me with this task. I especially thank Sister Catherine Long, O.S.F., who patiently undertook the tedious task of typing this final document.

Lastly, I thank my wife, Janice, for supporting me through the many hours of work that have led to this point. Her encouragement and understanding made possible the completion of this project.

TABLE OF CONTENTS

LIST OF CHARTS

CHAPTER I

INTRODUCTION

The Problem

The usefulness of instructional television[1] services offered by broadcast television stations to school systems was the primary concern of this study. Specifically, the problem studied the extent to which teachers use the services provided by The School Television Service,[2] the instructional division of Channel 13/WNDT, New York.[3]

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1. The term instructional television may hereafter be referred to as ITV.

2. The term School Television Service may hereafter be referred to as STS.

3. There were approximately 130 ETV stations in the United States at the time this study was initiated. They can be categorized into four categories according to ownership and operation; a) State owned, b) Owned by the school district, c) University owned, d) Community owned. The total number is about equally divided among the four categories. The stations within each category all provide services for the schools within the viewing area, but the emphasis on programing differs according to the category. State owned and school owned stations provide programing with an emphasis on the elementary and secondary schools in the viewing area. The university owned stations concentrate on programing for the college campus, but provide some programing for the elementary and secondary schools. The community owned stations are devoted to the larger audience within their ranges as well as to the schools.

   The financial arrangement with school districts also differs. State owned and school owned stations, for the most part do not demand any monetary exchange between school and TV station. Of the stations that fall into the categories of university and community owned stations, about half charge a 'per pupil' fee for membership in their instructional division. The other half prorate their annual costs over the number of participating school districts.

   According to Chalmers Marquis of the National Association of Educational Broadcasters (NAEB), the universal instructional services performed by all ETV stations include: the offering of programs for school use, teacher's guides, and consultation services. To this extent, STS is

For the purpose of organization, the problem was divided into the following subproblems:

1. To trace the development of educational television[1] programing in the New York Metropolitan area as it relates to the present[2] offerings of the School Television Service of Channel 13/WNDT, New York.
2. To secure data concerning the use of STS programs by teachers in Member School Districts.
3. To prepare guidelines from the data for potential use of administrators, teachers and the management of STS.

Delimitations

Since it had been established that STS was representative of other ITV agencies this study was confined to school systems that were members of STS. Membership was determined by STS records as of October 1, 1966.

Since approximately 70 per cent of STS programing is geared to grades K - 6, the study was limited to use of programs by teachers of those grade levels.

Basic Assumption

It was assumed that some teachers in STS member school systems utilized STS services and others did not.

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representative of a service performed by all ETV stations in this country.

As an ITV agency which makes monetary demands upon participating school districts it is representative of 50 per cent of the universe. In charging a 'per pupil' fee, it is representative of 25 per cent of that universe.

Based upon this evidence gathered from the NAEB, it is seen that STS is representative of many ITV services in this country both in structure and operation.

1. The term educational television may hereafter be referred to as ETV.
2. This study was designed in 1966 and data gathered in 1967. The findings and recommendations are limited to that data.

Basic Hypotheses

It was hypothesized that STS services were not useful since:

1. The majority (more than 50 per cent) of the teachers in school systems that are members of STS do not view the programs.
2. The use of the TV programs is haphazard in that:
   a) many of the teachers who do utilize the programing do not regularly refer to the Teacher's Manual, and
   b) they do not use the programs in conjunction with other classroom materials and procedures.

Significance of the Study

While many studies have attempted to show the benefits a teacher can derive by using ETV, or the effectiveness of utilizing the medium in the classroom, very few have been designed to determine the actual use of ETV by the teachers once a school system has adopted the medium.[1] Therefore, the results of this study will be of interest to school administrators who raise this question.

There are some 100 school districts that are members of STS.[2] Each of these districts contributes seventy-five cents per student per school year to meet the costs involved in providing the services (salaries, program production and acquisition, printing, mailing, kinescope library, etc.).

How many teachers from those districts utilize the programing provided by STS? Are many of the districts failing to take advantage of the full range of services provided? Why do some teachers use the

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1. See Kenneth J. Lenihan, et al., Utilization of the Regents Educational Broadcast Programs.
2. The figures cited are based on the situation that prevailed in October, 1966, when this study was being designed.

services and not others? Of those teachers who utilize the programs, how frequently do they utilize them? In what ways do they utilize them? Do they use the supplementary materials supplied by STS? Do they utilize the programs in conjunction with other teaching aids?

It was this investigator's experience that many teachers in participating school systems were not using the services available from STS. It was the purpose of this study to examine the extent to which this situation prevailed and some of the reasons for it, and to prepare general guidelines for the potential use of school administrators, classroom teachers and ITV management who sought to avoid repetition of the situation.

Related Literature

An examination of the standard sources revealed no doctoral dissertation which the present study would duplicate. The sources examined were: American Doctoral Dissertations Index, 1960-1966, and Dissertation Abstracts, 1960-1966.

Doctoral theses which are related to the present study include the following:

Bergsma, Stuart Kenneth, Ph. D. "The Relationship of Selected School District Characteristics to the Use of Educational Television in Michigan High School Districts." Michigan State University, 1963.

Geddes, Dorothy Clara, Ph. D. "The Use of Television in Teaching Tenth Year Mathematics: The Effectiveness of Teaching Tenth Year Mathematics By a Combined Method of Instruction; By Television and a Classroom Teacher as Compared With The Traditional Method of Instruction by a Single Classroom Teacher." New York University, 1961.

Kuipers, Ray Harry, Ed. D. "A Comparison of Student Perceptions of Televised And Conventional Instruction." Wayne State University, 1961.

Patron, Josefina Soldeville, Ed. D. "Teacher Opinions Concerning Some Aspects Related to Classroom Utilization of Instructional Television With Suggestions for Teacher Preparation in This Area." Indiana University, 1964.

In examining the adoption of ETV by school districts in Michigan, Bergsma used the questionnaire as his basic instrument. It was sent to 176 school administrators.

The findings of that study are pertinent to the present investigator. They indicate that the adoption rate of ETV in Michigan is "high" - over thirty per cent. The reasons cited by the author are the following:

Rapid returns. ETV begins to pay off almost immediately after adoption. Teachers begin to utilize the medium and students begin to learn through it.

Simplicity. As far as the consumer is concerned, the medium is not complex, although the production of programs is very complex.

Divisibility. The medium lends itself to trial and limited adoption. It needn't be fully accepted or fully rejected.

Visibility. The author maintains that any medium that is open to public inspection has a better chance of being adopted than those that are concealed from the public.

Compatability. The medium and its content are compatable with existing practices of the schools. Yet, the author adds a warning at a later point: "An observation coming out of the study is that made by administrators who felt that a major difficulty in using television is the fact that it requires a change in district policy in most cases."[1]

Some questions concerning the effectiveness of ITV were raised by Geddes. Although she is careful to limit her findings to the specific circumstances under which the experiment was conducted, they seem to be indicative of the findings of other studies to be mentioned later.

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1. Stuart Kenneth Bergsma, "The Relationship of Selected School District Characteristics to the Use of Educational Television in Michigan High School Districts," p. 184.

Using a traditional IQ test and the students' Ninth Year Mathematics Grades as concomitent variables, she pretested her subjects and divided them into two groups of equal ability. One group (A) was taught by a teacher using "traditional classroom techniques" of teaching Tenth Year Mathematics. The other group (B) was taught by a classroom teacher who used a televised Math series in his classroom as well as traditional classroom techniques. At the end of the year, both groups were tested using the Shaycoft Plane Geometry Test and the New York State Regents Examination in Tenth Year Mathematics.

The findings can be summarized in the way that most experiments of this nature can be summarized - no significant difference. The two methods of instruction are, under those circumstances, equally effective. Both groups scored the same in the areas of achievement, critical thinking, spatial visualization, and motivation for further study.

The author of that study makes a recommendation concerning ETV which is relevant to this study. She warns against "on high" decisions to use ETV.[1] The initiative must come from the teachers. The present investigator determined the frequency of "on high" decisions by question No. 1 on the Administrator Survey Instrument.[2]

Although Kuipers was dealing with students at an academic level different from that of the present study, and focuses primarily on the student, his study is included here because it answers some questions concerning the effectiveness of the medium. It was found that

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1. Dorothy Clara Geddes, "The Use of Television in Teaching Tenth Year Mathematics: The Effectiveness of Teaching Tenth Year Mathematics By a Combined Method of Instruction; By Television and a Classroom Teacher as Compared With The Traditional Method of Instruction by a Single Classroom Teacher." New York University, 1961, p. 114.

2. See Appendix C, p. 103.

students receiving a course of instruction solely from television were as highly motivated as a matched group receiving the same course from the same teacher in a classroom setting. It also showed that under those circumstances, students engaged in a TV learning siaution can and do respond with greater commitment to the learning situation.

The study by Patron discloses teacher attitudes and opinions toward ETV. Her findings describe in detail the role of the teacher who uses ETV:

1. When a teacher uses ETV he must modify his role accordingly. Most teachers agreed that their role had changed; some felt it had declined. "There was agreement that as participants in ITV, classroom teachers become members of a teaching team.[1]
2. Modification must take place in the areas of instructional procedures, classroom organization and management, evaluation, control and guidance, use of audio visual materials.
3. Problems faced by a teacher using ITV include:

   --improving the student's note taking ability

   --allowing for individual differences

   --involving all students in follow up activities

   --training the student's listening and viewing habits

   --adjusting to the rigid TV time schedule

   --evaluating learning

   --the student's inability to ask questions of the television teacher

   --testing

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1. Josefina Soldeville Patron, "Teacher Opinions Concerning Some Aspects Related to Classroom Utilization of Instructional Television With Suggestions for Teacher Preparation in This Area." Indiana University, 1964, p. 114.

4. The use of other audio visual materials by the classroom teacher is likely to decrease in terms of frequency but perhaps not in the length of use.
5. Essential competencies needed by the teacher who uses ETV are similar to those needed by the teacher who does not use the medium:

   --knowledge of the subject matter

   --a cordial personality

   --sound evaluation, control, and guidance techniques

   --sound classroom management and organization procedures

   --knowledge of audio visual methods

   --knowledge of ETV utilization techniques

   --ability for team teaching

   Only the last two are unique to the teacher who uses ETV, according to the study.
6. The teachers considered informal training in the use of ETV and audio visual materials more useful than formal audiovisual courses.

There are many questions concerning the use of TV in the classroom which are tangentially related to the present study. Some concern technical matters such as types of antennae needed on a school building or minimum screen size recommended for a class of twenty-five students. Other questions relate to the logistics of using TV in the classroom. How many sets are needed in a school housing twenty-five classes? Still other questions concern utilization techniques. Is there a "right way" or a "wrong way" to use ETV?

These questions have been raised in studies of ETV projects over the past decade. The majority of the projects were sponsored by the Ford Foundation and are reported in publications issued by the Foundation

or one of its subsidiaries. It has been the experience of this investigator that these publications must be criticized for printing elaborate accounts of the positive outcomes of the projects while ignoring the failures or long range inadequacies. For instance, the Chelsea Project reported in Teaching By Television[1] was well on its way toward extinction by the time that publication was printed. No mention is made of that fact.

Realizing this shortcoming, the investigator still elects to include some materials from this source in his literature in view of the fact that they describe projects which have historical significance for ETV. One such report is that of the Washington County Closed Circuit Project located in Haagerstown, Maryland. The final report of this project[2] presents the results of experimentation and testing over a period of eight years. The novelty effect had worn off over this period of time, thereby eliminating a variable that appears in many earlier studies. This project also happens to be one that has continued to the present day in a large scale manner.

Begun in 1956, the Washington County project was one of the first large scale ventures into ETV. The schools involved in the original experiment were connected with 73.4 miles of coaxial cable. This closed circuit system enabled the schools to receive six channels of instructional television programing simultaneously.

During the first year of the experiment, eight schools with a total enrollment of 4,941 students received televised instruction in ten subjects. By 1960, thirty-six schools (grades 1-12) with a total

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1. The Ford Foundation, Teaching By Television, p. 44.

2. The Washington County Board of Education, Washington County Closed Circuit Television Report.

enrollment of 16,500 students were receiving telecasts in at least forty subjects. Now all forty-five schools are wired into the system.

What have been the results? Teaching has been improved. Studio teachers were released from all other duties. This meant that they had time to prepare lessons more carefully and develop appropriate audio visual materials. Their refined lessons, in turn, became exemplary models for the classroom teachers.

Has this improved learning? This would seem to be the case in some subjects. Most teachers felt inadequate in the areas of art, music and science. When the TV teachers (who had specialized in these fields) presented more accurate and better planned lessons in these subjects the students learned more and so did the classroom teachers.

In controlled experiments, the "television classes" also showed marked improvement in arithmetic over a three year period when compared to equivalent groups of "non-television" students, as well as standard national norms measured by the Iowa Test of Basic Skills. In other curriculum areas, there were tendencies toward improvement but in general the results must be classified as "no significant difference."

What is responsible for the apparent success of this project? Certainly the $1.8 million assistance from various sources helped to get the system started. But there had to be a solid commitment by the entire community to keep the system in operation after outside assistance subsided. This commitment was present.

Perhaps an even more important element was the involvement of the classroom teacher in all phases of the project. Long before TV was introduced to the classrooms, the school authorities set out to explain the medium to the teachers and involve them in the planning stages.

During a summer workshop immediately preceding the first semester of telecasts, teachers and supervisors planned the major portions of the first year's programs. In so doing, the classroom teacher became more aware of her role in relation to the new medium. She would handle classroom discussion, care for the individual differences of her pupils, clear up immediate misunderstandings, supervise drill and problem-solving sessions, provide remedial teaching, and attend to the establishment of desirable habits and traits.[1]

Each classroom teacher received a teacher's guide for the daily lessons. These general outlines, developed by the studio teacher, enabled the classroom teacher to prepare her class for the telecast. After the telecast, her immediate contact with the studio teacher came in the form of her daily "feed-back" sheets. In this way she influenced the future of the televised series.

The National Program in the use of Television in the Public Schools was devised to test hypotheses put forth by Stoddard in "Schools for Tomorrow."[2] That author contended that TV could be a powerful force in the teaching of large classes; that substantial savings in classroom space and teaching positions could be effected; and that the quality of education could be improved by using the TV medium.

The National Program ultimately included school districts in nineteen states, representing over 200,000 students in 800 schools. The schools were truly a representative cross section of the nation's schools in terms of size, geographic location, and socio-economic level.

The results of this project lack much impact because of the varied

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1. The Ford Foundation, Teaching By Television, p. 48.
2. Alexander Stoddard, Schools For Tomorrow.

evaluation procedures used by the school districts. However, in those instances where comparisons were made on the basis of controlled groups and experimental groups, the experimental groups (television classes) scored significantly higher on achievement tests three times more often than the control groups. Areas such as student appreciations, understandings, attitudes, and problem solving abilities were not studied in any organized fashion.

Other observations that grew out of that project include the following:

1. The introduction of television brought about a rethinking of the curriculum.
2. By exposing the classroom teacher to specialists in certain fields, in-service training of teachers was improved.
3. Since the studio teacher had more time to prepare, the courses were better organized and more material was covered.
4. Since most of the systems used broadcast television, the parents often tuned into their children's classes.
5. Librarians reported that students made more extensive use of the library.
6. Some school systems reported substantial savings in teaching positions and classroom space, with no sacrifice of quality.

The schools involved in the project also encountered common problems:

1. Most schools had facilities that were inadequate for using television.
2. The television schedule had to be incorporated into the schedule of the school systems served.
3. The medium must be adapted to the abilities of the individual students.

4. The curriculum must be reorganized to take maximum advantage of the medium.
5. The telecast must be carefully integrated with the other elements of the entire lesson.
6. It is difficult to locate and train studio teachers.

Closed-circuit television has also been used on a state-wide basis in South Carolina. From the scant literature available, the project would seem to be well coordinated and integrated with other educational practices throughout the state. It is interesting to note, however, that although one of the stated policies of the seven man Educational Television Commission is "Development of an expert system of evaluating results," none have been published thus far.

A unique experiment in educational television was undertaken in 1961. The Midwest Program on Airborne Television Instruction[1] transmitted lessons on videotape from an airplane flying at a high altitude over east central Indiana. The telecast covered a 200 mile radius and reached schools in parts of Indiana, Illinois, Kentucky, Michigan, Ohio, and Wisconsin.[2] Purdue University was the host institution for the Program and provided many of the services necessary to sustain the operation. Due to rising costs, MPATI was forced to discontinue transmission of telecasts in 1968. Its operations are now limited to maintaining a library of recorded programs. The Program is further described here because of its historical value and the influence it exerted over the evolution of instructional television in this country.

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1. The term MPATI will hereafter refer to the Midwest Program on Airborne Television Instruction.
2. Mary Howard Smith, Using Television in the Classroom, p. ix.

Since the operation served school districts in six different states, curriculum planning and time scheduling were two problems that required constant attention. Two committees with representatives from each state sought solutions for these problems. Once a course was outlined by the committee, the TV teacher developed each lesson within the boundaries of the outline.

MPATI participants firmly believed in the concept of team teaching in the use of ETV. It was thought that the studio teacher and the classroom teacher must function harmoniously in order to present a unified lesson to the class.[1] Through the means of communication open to them (workshops, classroom visits, feedback sheets, telephone calls) they must work together toward the same objectives.

Out of this concept has evolved a three phased classroom presentation. The classroom teacher, having received a lesson guide from the studio teacher, and using this knowledge of the telelesson as a guide, conducts a "pre-teach" session with the class. This session varies from lesson to lesson and from teacher to teacher, but the purpose of this phase is to motivate the students in the direction of the telelesson.

The second phase is the telelesson itself. While the studio teacher is ostensibly responsible for this phase, the classroom teacher must view it with her students. If the situation permits, she might quietly attempt to answer some questions an individual might have during the presentation. Or she might observe a student's note-taking habits. Or she might observe her students while they are engaged in the learning process.

The third phase takes place sometime after the telelesson. It is

1. Ibid., pp. 23 ff.

often called the "follow up" session. In some cases it may take the form of merely answering questions. In other instances it may be an involved class project dealing with a topic related to the telelesson

The literature mentioned above does not begin to exhaust the many resources available on the topic of educational television. That is not the purpose of this study. It is the investigator's opinion, however, that the sources included give a sampling of some of the historically important experiments that relate to the present study.

Methodology

As previously stated,[1] the subject matter facing the investigator was broken down into three subproblems:

1. To trace the development of ETV programing in the New York Metropolitan Area as it relates to the present offerings of the School Television Service of Channel 13/WNDT, New York.
2. To secure data concerning the use of STS programs by teachers in Member School Districts.
3. To prepare guidelines from the data for potential use by administrators, teachers and the management of STS.

Subproblem 1

"To trace the development of ETV programing in the New York Metropolitan Area as it relates to the present offerings of the School Television Service of Channel 13/WNDT, New York."

In order to put the problem in its proper perspective, the investigator developed a brief history of STS. To do so, he consulted the Annual Reports for WNDT as well as the school files of STS, to the extent that such materials existed.[2]

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1. See p. 2.
2. There were some records, but until 1964 they were poorly kept.

Information concerning the use of ETV in the New York Metropolitan Area prior to the advent of WNDT came primarily from four sources:

1. The New York Times.
2. The New York State Regents Project Report.[1]
3. A recent doctoral dissertation by Richard J. Meyer.[2]
4. Conversations with personnel of the Department of Radio and Television of the New York City Board of Education.

The data gathered from those sources were subject to the criteria of external and internal criticism found in Good and Scates.

> Problems of external criticism (authenticity). In testing the genuineness of a document or remain, the problems of external criticism involve the questions of authorship and textual criticism to determine all the conditions that may have influenced the production of the document, such as time, place, purpose, and circumstances of composition, and what part of the document is true to the original.[3]

> Principles and problems of internal criticism (credibility). After questions of authorship, time, place, and genuineness have been answered and the actual language or text of the original document has been determined as nearly as possible, it remains for internal criticism to determine the accuracy and value of the statements made. The shift of emphasis is from the document as such to statements within the document. Proof of the genuineness of a document by external criticism does not guarantee that it tells the truth.[4]

Thus gathered and critically analyzed, the data were arranged so as to describe the evolution and development of STS and enumerate its present services. Chapter II[5] is this investigator's solution to Subproblem 1.

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1. Kenneth J. Lenihan, op. cit.
2. Richard J. Meyer, "The Development of Educational Television Councils in New York State." New York University, 1968.
3. Carter V. Good and Douglas E. Scates, Methods of Research, pp. 188 ff.
4. Ibid., pp. 198 ff.
5. See pp. 28-35.

Subproblem 2

"To secure data concerning the use of STS programs by teachers in Member School Districts."

As this study evolved, Subproblem 2 was broadened to include not only the use of STS programing but also all the other major services offered at that time.[1] Its solution involved a seven step process: design, test, and revision of instruments; selection of a sample population; administration of the instruments on the sample; follow-up for returns; transfer of data to IBM punch cards; statistical analysis of data; analysis of non-quantified responses.

The Instruments

The gathering of data concerning the use of STS services by teachers in member school systems had never before been attempted in an organized manner. Therefore, it was necessary to devise original instruments designed to achieve this task. In this effort, the investigator was guided by instruments used in other studies and the valued judgment of a panel of judges selected for their varied competencies.

Instruments used in other studies which were helpful in the initial design steps for the present study were those used by: The Regents Educational Broadcast Programs Study; WCNY School Services Department, Syracuse, New York; WETA-TV, Washington, D.C.; WQED School Services, Pittsburg, Pennsylvania; Research and Development Center, The University of Texas (for KLRN), Austin, Texas.

Since the study concerned the use to which the classroom teacher put STS services, it was necessary to gather data from classroom teachers. But since the classroom teachers function within a formal school structure,

1. See p.34 for a list of major services offered by STS as described in a brochure from STS entitled Benefits of Membership.

certain information was required from the school administrators. The investigator designed two instruments to acquire this information. In order to protect against omissions and irrelevant questions, he submitted the instruments to a panel of three judges who examined them for apparent flaws. In selecting a panel, three types of persons were chosen: an educator, an educational broadcaster and a researcher. The following qualities were used as criteria in making the selection:

1. Experience in school and classroom administration. This person had to be a school administrator who was also familiar with the organization and scope of STS. He was to examine the instruments as they pertain to the administrators and teachers in the school districts.
2. Familiarity with educational television, especially with the practices of the School Television Service. This person was to examine the instruments in terms of their accuracy as it related to STS.
3. Familiarity with current research techniques. This person was to examine the instruments in terms of their value as research tools.

The following individuals met these criteria, were asked,[1] and agreed to serve on the panel.

Dr. Berj Harootunian
Director of Research
University of Delaware
Newark, Delaware

Dr. Herbert Jensen
Audiovisual Supervisor
Greenwich Public Schools
Greenwich, Connecticut

Dr. Richard J. Meyer
Director
School Television Service
Channel 13/WNDT
New York, New York

1. See Appendix A, p. 95.

As a result of the recommendations made by the panel, the investigator made several changes in questionnaire wording and layout and two major changes in design of the study. The word and layout changes resulted in the Teacher Questionnaire[1] used in the Pilot Study. The two major changes in the design of the study were: (1) to distribute the teacher questionnaire through the Audiovisual (AV) Coordinator or whoever coordinates the instructional television services in the school system rather than directly to the teachers as had been planned. In this way the AV Coordinator could act as local intermediary and assure a greater rate of return. (2) to discard the proposed administrator questionnaire as a written instrument for building principals and devise an instrument to be completed by the investigator during a telephone interview with the local person in charge of the instructional television program.[2] The two changes were made (and carefully scrutinized during the pilot study).

The Pilot Study

The Pilot Study Teacher Questionnaire was administered to a group of forty-eight (48) teachers in three systems selected at random (Dixon's Table of Random Numbers administered to school systems and then to teachers). Follow up was made until forty-six (46) of the forty-eight (48) had responded. Their responses were analyzed according to the criteria of Good and Scates[3] to determine internal validity of the instrument. Ten of the forty-six were interviewed in person (using the questionnaire as the basis for the interview) to determine if the questions were

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1. See Appendix B, p.98.

2. See Appendix C, p.103.

3. See Appendix A, p.96.

understood clearly, whether they had been answered with care and if they had "pull."

As a result of the pilot study some changes were made in the Pilot Teacher Questionnaire.[1] Question 1 was eliminated and minor changes were made in questions 8, 13, 14, 16, 18. The result was the Final Teacher Questionnaire.[2] The Administrator Survey Instrument was found to be workable and required no changes for the final study.

The Sample

There are some 10,000 classroom teachers that participate in STS, about 6,000 in grades K-6. It was decided that a representative sample could be selected from among those teachers that would supply a sufficient number of replies for statistical analysis. In selecting the sample, the investigator sought to guard against bias by selecting teachers who would be representative of many different school systems. Therefore, he sought to isolate and control five characteristics of the school systems which he considered a potential source of bias. They were:

a. Size. The sample population included systems with varying student enrollments--small (up to 1,000 students), medium (1,000-5,000 students), large (over 5,000 students).

b. Affiliation. The sample was drawn from among private and public schools.

c. Location. Since the Channel 13 broadcast area extends well into three states, teachers from New York, New Jersey and Connecticut were included.

d. Length of Membership. The sample included school systems that

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1. See Appendix B, pp. 98 ff.

2. See Appendix D, pp. 104 ff.

had been using STS for four years and those which had started using it in 1966.

e. Wealth. The percentage of students eligible for Title I, ESEA funds was the criterion used in judging this characteristic.

In order that he not establish himself as the final judge in the selection of the sample, the investigator submitted his selection to a panel of five judges for verification and/or recommended changes. In selecting the panel, the following criteria were met:

a. Familiarity with the scope, organization and services of STS.

b. Familiarity with the conditions of education in the New York Metropolitan area.

c. Familiarity with the school systems in the New York Metropolitan area.

The persons listed below met those criteria, were asked,[1] and agreed to serve on the panel.

Mr. A. Richard Clark
Audiovisual Director
Scarsdale Public Schools
Scarsdale, New York

Mr. Arthur Lalime
Audiovisual Director
Darien Public Schools
Darien, Connecticut

Sister Margaret, O.P.
Supervisor
Archdiocese of Newark
Newark, New Jersey

Mr. Ralph Perschino
Principal
Darien Public Schools
Darien, Connecticut

Mr. Myron Turner
Principal
Eatontown Public Schools
Eatontown, New Jersey

1. See Appendix E, p. 109.

Based on their recommendations, one change was made in the investigator's original sample to allow for a more even distribution among size of school systems. Pertinent characteristics of the school systems included in the final sample may be found in Chart I.[1]

Distribution and Follow up

A total of 1,037 questionnaires were distributed to teachers in thirteen (13) school systems. In accordance with the suggestions from the panel who evaluated the instruments,[2] they were distributed through the AV Coordinator or whoever in the local system was responsible for supervising the instructional television program on a system-wide basis. The teachers were asked to complete the form within one week and return it to their local Coordinator. He, in turn, forwarded them to the investigator.

At the end of the first week the investigator contacted the AV Coordinator to:

a. Urge him to follow up (in person) on the questionnaires that had not been returned;

b. Obtain the necessary administrative information pertaining to his system.

Calls were made at the end of the second and third weeks to request additional follow up. (In one case, complete administrative information was not available until the end of the second week.)

Returns

Ultimately, 808 questionnaires were returned (77.91 per cent of those distributed) but 56 had to be rejected due to insufficient or inadequate information. The final usable response was 752 or 72.52 per cent

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1. See Chart I, p. 23.

2. See pp. 18, 19.

CHART I

Pertinent Characteristics of School Systems Included in the Sample

School District	State	Length of Membership[1]	Source of Membership	Affiliation	Wealth[2]	Size[3]	AV Director
Bayport-Blpt.	N.Y.	3	Cooperative	Public	MC	Medium	Part time
Elizabeth	N.J.	3	Administrat.	Public	LC, MC	Large	Full time
Englewood	N.J.	3	Administrat.	Public	MC	Medium	Full time
Gill	N.J.	3	Cooperative	Private Protestant	MC	Small	Part time
Greenwich	Conn.	4	Administrat.	Public	UC	Large	Full time
Harrison	N.Y.	4	Administrat.	Public	MC, UC	Medium	Full time
Hauppauge	N.Y.	1	Cooperative	Public	MC	Medium	Full time
Montrose	N.Y.	2	Administrat.	Public	MC	Medium	Part time
Newark Diocese	N.J.	4	Cooperative	Private Catholic	LC, MC	Large	Part time
New Canaan	Conn.	3	Administrat.	Public	MC, UC	Medium	Part time
Putnam Valley	N.Y.	1	Administrat.	Public	MC	Small	Part time
Trinity	N.Y.	1	Cooperative	Private Protestant	MC	Small	Part time
White Plains	N.Y.	4	Administrat.	Public	LC, MC	Large	Full time

1. As of March, 1967

2. Based on number of students eligible for Title I assistance and other information provided by the panel listed on page 21. LC = lower class; MC = middle class; UC = upper class.

3. Small = up to 1,000; Medium = 1,000-5,000; Large = over 5,000.

of the total number of questionnaires distributed.[1]

As an additional follow up measure, twenty-five teachers were selected and interviewed in person. The interviews (based on the structure of the questionnaire) assured the investigator that the responses of those teachers were accurate and complete as given in the questionnaires.

Each response was numbered as it was received and the information (with the exception of comments and the last question[2]) was transferred to IBM cards for statistical analysis. Thus gathered, the information was analyzed in terms of frequency distribution and percentages. The investigator's solution to subproblem 2 forms the basis of Chapter III[3] of this study.

Subproblem 3

"To prepare guidelines from the data for potential use by administrators, teachers and the management of STS."

Based on his experience and discussions with classroom teachers and school administrators, the investigator raised several questions concerning the relationship of instructional television and STS to teachers' classroom strategies. The answers to those questions formed the basis on which he postulated guidelines for teachers, administrators and ITV management.

Nine major questions were asked, each relating to data gathered by the Teacher Questionnaire and the Administrator Survey Instrument.[4]

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1. See Chart II, p. 25 for list of responses by school system.
2. See Final Teacher Questionnaire in Appendix D, p. 104.
3. See pp. 36-50.
4. The numbers following each question refer to the sources of data. E.g. T8 refers to question 8 on the Teacher Questionnaire; A2 refers to question 2 on the Administrator Survey Instrument. See Appendices D and C, pp.103 ff for those instruments.

CHART II

Teacher Response by District

District	Number of Teachers Enrolled in STS[1]	Number Polled[2]	Number of Useful Responses	Percentage of Useful Responses
Bayport-Blue Point	60	60	39	65
Elizabeth	310	310	233	75
Englewood	71	49	37	76
Gill	3	3	2	67
Greenwich	212	212	151	71
Harrison	40	40	30	75
Hauppauge	10	10	6	60
Montrose	30	30	24	80
Newark Diocese	3,325	30	21	70
New Canaan	73	50	39	78
Putnam Valley	13	13	10	77
Trinity	5	5	3	60
White Plains	225	225	157	70
Totals		1037	752	73

1. STS membership, K - 6, is on a systemwide basis but excludes classrooms not capable of receiving Channel 13's signal.

2. The investigator sought to poll all enrolled teachers in the selected districts but found that Englewood, Newark Diocese and New Canaan are so besieged by questionnaires that the administrators distribute a limited number of each questionnaire in order to control the amount of extra work requested of teachers. He was assured by the administrators in these districts that the questionnaires were distributed without bias to those teachers who were "next in line."

1. Is there a significant association between the location of the TV set and the extent to which teachers use broadcast TV in their classrooms? (T7 and T16D)
2. Is there a significant association between the amount of professional preparation a teacher has and the number of program series he uses in the classroom? (T4 and T16D)
3. Is there a significant association between teaching experience and the number of program series a teacher uses regularly? (T3 and T16D)
4. Is there a significant association between grade level and the number of program series regularly used in the classroom? (T2 and T16D)
5. Is there a significant association between the condition of the TV set and the number of program series regularly used? (T8 and T16D)
6. Do teachers who frequently use television attempt to coordinate this resource with other teaching aids? (T6 and T10)
7. Is television used more by teachers in systems where they are involved in the decision to adopt the medium than in those systems where decision is made by administrators alone? (T16D and A1)
8. Is television used more in systems that employ a full time Audio-visual Coordinator than in systems where there is no full time Coordinator? (T16D and A2)
9. Do teachers in public schools use television more than teachers in private schools? (T16D and Chart I, p. 23)

Other questions were asked and reported in terms of percentages of total responses. The following questions are included:

1. What percentage of the total number of teachers has a personal copy of the Teacher Manual? (T9)
2. What percentage of the teachers who have Manuals always or sometimes uses the Manual to prepare for the telelesson? (T9)

3. What percentage of the total number of teachers has used the STS kinescope library? (T12)
4. What percentage of the teachers has used three or more kinescopes from that library since September, 1966? (T12)
5. What percentage of the teachers has used college credit courses offered over Chanel 13? (T13)
6. What percentage of the total number of teachers has viewed lessons from one or more teacher training series on Channel 13 during the current school year? (T14)

Analysis of the responses to the above mentioned questions formed the basis for guidelines in the following ways:

1. From the <u>data</u> supplied by the teachers, the investigator was able to ascertain how much they use STS services.
2. From the <u>comments</u> supplied by the teachers, he was able to determine their feelings toward the services and some of the reasons why they do or do not use those services.
3. That provided bases upon which to recommend that the management of STS add, strengthen, change and/or omit certain services.
4. That also provided bases from which the investigator could make general recommendations for potential use as guidelines by teachers, administrators and ITV management throughout the United States.

In this chapter, the investigator has attempted to define the topic and scope of his problem and outline the steps employed in its solution. The next chapters present his solution to that problem.

CHAPTER II

HISTORICAL BACKGROUND

Research into the effectiveness of instructional television (ITV) is not new. Many studies have attempted to show the benefits a teacher can derive by using ITV, or the effectiveness of utilizing the medium in the classroom. However, very few have been designed to determine the actual use of ITV by the teachers once a school system has adopted the medium. How many teachers use the broadcast programs? Why do some teachers use the services and not others? Do they use the programs in conjunction with other teaching aids?

These questions arose shortly after STS' reorganization in 1965. Prior to that time, STS was the instructional television service for the New York City Board of Education. It was supported by the Board's money and it was staffed to a large extent by Board employees. Only the Manager of STS and program producer/directors were not Board staff members. School systems other than the New York City schools were able to obtain Teacher Manuals by enrolling in STS and paying a membership fee of fifty cents per pupil. In addition to the Teacher Manuals, this membership fee entitled the system to use of kinescope (film) copies of some of the series aired over Channel 13.

Because of its support from the New York City Board of Education, STS was initially able to accomplish a great deal in terms of program production, broadcast and transfer to kinescope. This was in sharp contrast to other WNDT departments which almost did not survive the first lean years.

ETV in New York City Prior to 1962

Although the first ETV station went on the air on May 25, 1953 and had been preceded by years of experimentation in closed circuit educational TV, educational television was late in coming to the New York Metropolitan area. Its development was impeded by a lack of funds and the unavailability of a VHF[1] broadcast channel. Individual educational institutions (New York City Board of Education, New York University, et al,) had vied at various times for the broadcast of ITV programs, but it was not until September 13, 1956 that The New York Times could report that the Metropolitan Educational Television Association, Inc. (META) a cooperative venture of educational and civic institutions and organizations,

> announced that it would build New York City's first educational television production center. This too is an old dream come true. It has been waiting on funds, now available in most encouraging breadth of interest through gifts by the Fund for Adult Education, The Avalon Foundation, The Rockefeller Brothers Fund, The New York Foundation, The Old Dominion Foundation and the Carnegie Endowment for International Peace. The production center will include a fully equipped television studio and facilities for production and recording of programs. It will be housed in the Carnegie Endowment International Center opposite The United Nations.[2]

The production center was a step forward, but the problem of no VHF outlet for its programs plagued META throughout its existence. Because of the "limited horizons of politicians and educators as well,"[3] the FCC had not reserved a VHF channel in New York for educational use. And by 1956 all VHF channels in this area had been activated.

META investigated the possibility of buying some air time from the local commercial stations. Unable to find a satisfactory solution,

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1. VHF (Very High Frequency) channels include channels two (2) through thirteen (13) and are more desirable than UHF (Ultra High Frequency) channels due to broader and clearer reception.

2. The New York Times, September 13, 1956, editorial page.

3. Ibid.

it finally reached a compromise. The New York State Education Department in conjunction with the Board of Regents instructional television project made air time available to META in return for use of its facilities for kinescope recordings and supplementary programing. One French course was presented from 12:30 to 1:00 p.m. Mondays and Tuesdays (repeats Wednesdays and Thursdays) and Fridays starting September 22, 1958.[1]

This venture was doomed to early termination. It was beset by financial problems, union problems, and conflict of interest with the Board of Regents instructional television project. The French series was discontinued on June 30, 1959. All other programing and production activities were suspended, and all but four or five employees were dismissed. The reported intention of these moves was to allow the organization to "focus on the acquisition of a full-time VHF educational TV station for this area."[2]

In the fall of 1959, the META Board of Trustees authorized its vice-chairman and treasurer to petition the New York State Board of Regents to issue an order of dissolution.[3] Formal petition requesting dissolution was made in the fall of 1960.[4] The Board of Trustees felt that the organization could not fulfill its obligations (to put an ETV station on the air), and that a different organization, able to obtain the financial support needed, was called for. Final disposition was completed by May 2, 1961.

In the meantime, the National Educational Television and Radio Center (NETRC) had begun to seek funds for the acquisition of a VHF station

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1. The New York Times, September 19, 1958.
2. The New York Times, May 6, 1959.
3. META Minutes of the Board of Trustees, September 30, 1959.
4. META Minutes of the Board of Trustees, November 4, 1960.

in New York. Late in 1960, John White, president of NETRC persuaded a group of prominent citizens to form a new committee, Educational Television for the Metropolitan Area (ETMA) to negotiate the sale of Channel 13 from the financially troubled NTA. This committee, representing a broader base of community support than METRA, made a bid of 5-1/2 million dollars for the station.

After an FCC investigation, Supreme Court action initiated by the State of New Jersey to keep the station in that state and thousands of spirited letters from the community, the station was sold to ETMA for 6-1/2 million dollars[1] on June 30, 1961. The acts necessary to complete the assignment of the license of Channel 13 to ETMA were completed on December 22, 1961, and title and possession of the station were taken that day thus consummating the purchase.

In early 1961, Samuel Gould had been voted trustee and hired as president. The name of the organization was changed to the Educational Broadcasting Corporation (EBC) in April, 1962, and the station's call letters became WNDT -- New Dimensions in Television.

STS 1962-1965

As the station prepared to make its debut, on September 16, 1962, it was plagued by a union strike (AFTRA) which threatened to prevent that debut and actually succeeded in suspending its instructional programing for 12 days beginning the following day. AFTRA maintained that teachers who planned to appear before the Channel 13 cameras must become members of the union.[2]

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1. Contract of sale of Channel 13, June 30, 1961.

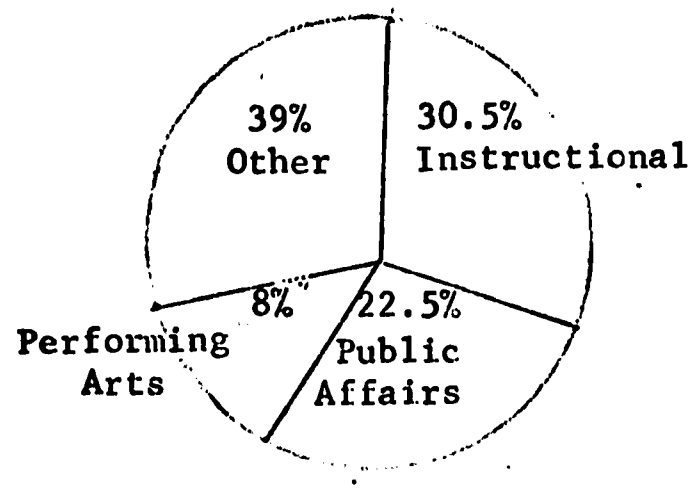
2. Educational Broadcasting Corporation, EBC: A Narrative Report of Operations (July 1, 1962, June 3, 1963), pg. 9.

The strike was settled under a temporary agreement which called for an election after six months to determine if AFTRA should represent non-performers who appeared on camera on Channel 13. (This election resulted favorably for Channel 13.)

Further problems arose when viewer support was not forthcoming at the anticipated level and budgetary cutbacks were ordered. Nevertheless, from September 1962 through June 1963, Channel 13 broadcast 2700 hours of programing. A major portion of that was instructional.[1]

CHART III

Distribution of Channel 13 programming 1962-1963



Although by the end of the 1964-65 school year, ninety-two separate suburban school systems were members,[2] STS continued to serve primarily the New York City school system. However, this period represents a turning point for both STS and Channel 13.

John W. Kiermaier had assumed the presidency of Channel 13 in September, 1964. Faced with several financial problems, he immediately issued a plea for funds from the public and instituted an austerity program, reducing the number of full time employees from almost 200 to slightly over 100.

1. Ibid.

2. Educational Broadcasting Corporation, Annual Report 1964-65, p. 12.

While this was happening, the New York City Board of Education announced plans to activate a UHF Channel (25) for its own use and withdraw its support (approximately $500,000.00 per year) from STS effective 1965-66 fiscal year.

At this time, the management of Channel 13 saw fit to restructure and involve the suburban school districts more intensely in its operation. In order to accomplish this, they hired Richard J. Meyer as Manager of STS in September, 1965.

STS 1965-1966

Some steps had to be taken immediately just to keep STS alive. Local productions (which accounted for 4 series in the previous year) were discontinued and instructional series were leased from other sources (e.g. The Eastern Educational Network, Great Plains Instructional Television Library, National Center for School and College Television, National Educational Television). The membership fee for participating school systems was raised from fifty to seventy-five cents per pupil per year.

Attempts were made to offset the $500,000.00 loss in two ways: (1) some suburban school districts were contacted personally by Meyer and asked to join STS; (2) every effort was made to take advantage of the newly instituted State Aid for the Use of Educational Television in the Schools Program of New York State. (This program itself netted Channel 13 about $40,000.00 during the first year.)

After taking those emergency steps, Meyer proceeded to establish a Curriculum Committee comprised of representatives from each participating school system. The function of this committee was to advise the management of STS in matters pertaining to curriculum development, program selection, and scheduling.

At the same time a Utilization Committee was established. The representatives on this committee were primarily Audiovisual (AV) Coordinators from participating school systems. It was the function of this committee to advise on matters pertaining to more effective utilization of the programs by classroom teachers.

In an attempt to convince non-participating school systems of the benefits of membership in STS, emphasis was placed on: 1) the advantages of a voice in determining the programs; and 2) services other than programing, which included:

a. A comprehensive Teacher Manual for every teacher and administrator. Each teacher could prepare for the telelesson in his own classroom or at home. Each had his own copy of the supplementary materials found in the Manual.

b. Use of the kinescope library. Every teacher had access to the kinescope (film) library. There was no rental fee, only a handling fee of $2.00 per title. Order forms were found in the back of the Teacher Manual.

c. Consultation services. An STS staff member would speak to teachers and/or administrators in participating school systems in an effort to help them make better use of ITV.

d. Use of professional production facilities. If a school system had a need to produce a high quality TV program (or kinescope) the Channel 13 production facilities would be available at cost.

e. Assistance in applying for financial aid for the use of ITV. STS staff members would aid school administrators in seeking federal and state reimbursement for some of the costs involved in introducing ITV to their school systems.[1]

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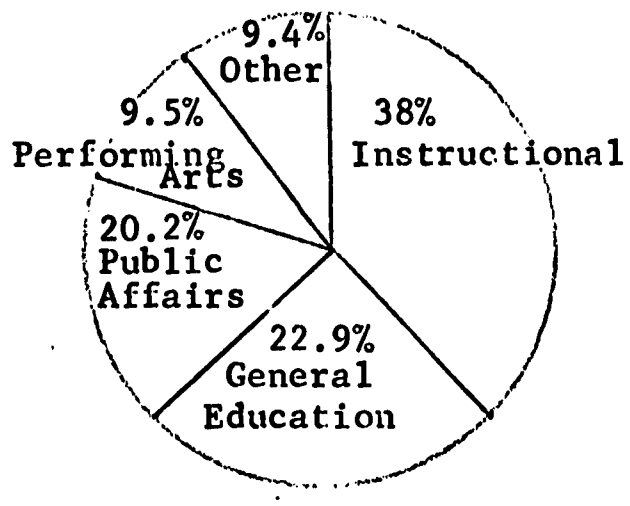
1. The School Television Service: Benefits of Membership. nd. (mimeographed).

As a result of these steps, STS was able to survive the year with close to a balanced budget. By leasing programs from other sources, STS was able to provide a full schedule of instructional programing and even continue its domination of overall station program distribution.

CHART IV

Distribution of Channel 13 Programing 1965-1966



Interest in STS among suburban school systems grew rapidly to the point where the staff had to be increased. At that time it was decided that an evaluation should be made of the services provided by STS in terms of their value to the classroom teachers in participating school systems. It was hoped that such an evaluation would provide STS with guides for continuing its services and school administrators with the information they needed in analyzing and evaluating the importance of STS to their classroom teachers. This study will provide that data.

The next chapters present the statistical data gathered and analyses thereof and culminate in general recommendations for potential use by those concerned with improving the usefulness of broadcast instructional television.

CHAPTER III

THE FINDINGS

A total of 752 usable responses were received.[1] That number represents 72.5% of all those distributed. The following pages present a breakdown of those responses. For that purpose the responses to the Teacher Questionnaire are recorded in terms of distribution frequency and percentage of the whole in each category. (The number in parentheses preceding each item refers to the number of the question on the Teacher Questionnaire which yielded the data.)

I. The Population

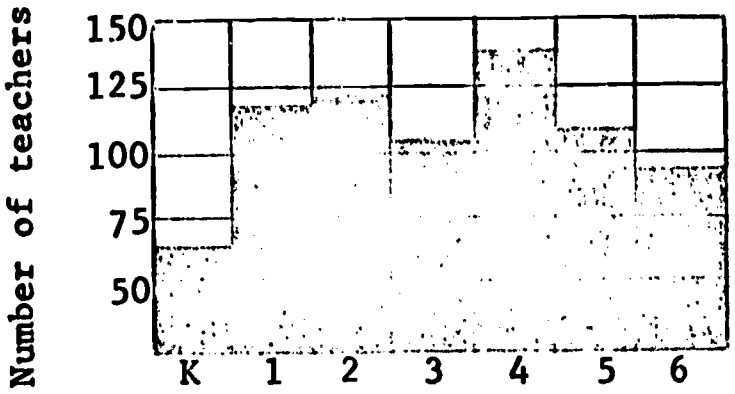
(2) All responding teachers contacted taught in classrooms on the K - 6 level.

Class	Distribution	Percentage of the Whole
K	66	8.8
1	119	15.8
2	122	16.2
3	105	14.0
4	138	18.4
5	108	14.4
6	94	12.5

1. See Chart II, p. 25.

CHART V

Distribution of Respondents by Grade Level

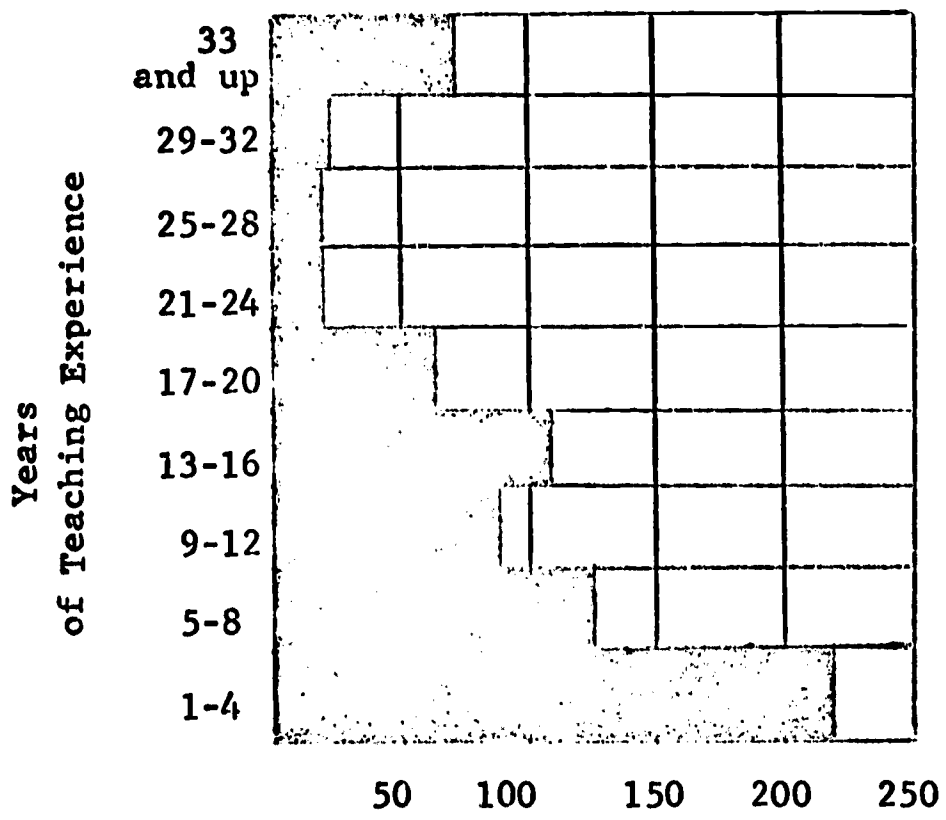


(3) Their teaching experience ranged from one to forty-four years.

Years	Distribution	Percentage of the Whole
1 - 4	220	29.2
5 - 8	127	16.9
9 -12	90	12.0
13 -16	107	14.2
17 -20	65	8.6
21 -24	20	2.7
25 -28	20	2.7
29 -32	23	3.1
33 -more	71	9.4
No Answer	9	1.3

CHART VI

Distribution of Respondents by Teaching Experience

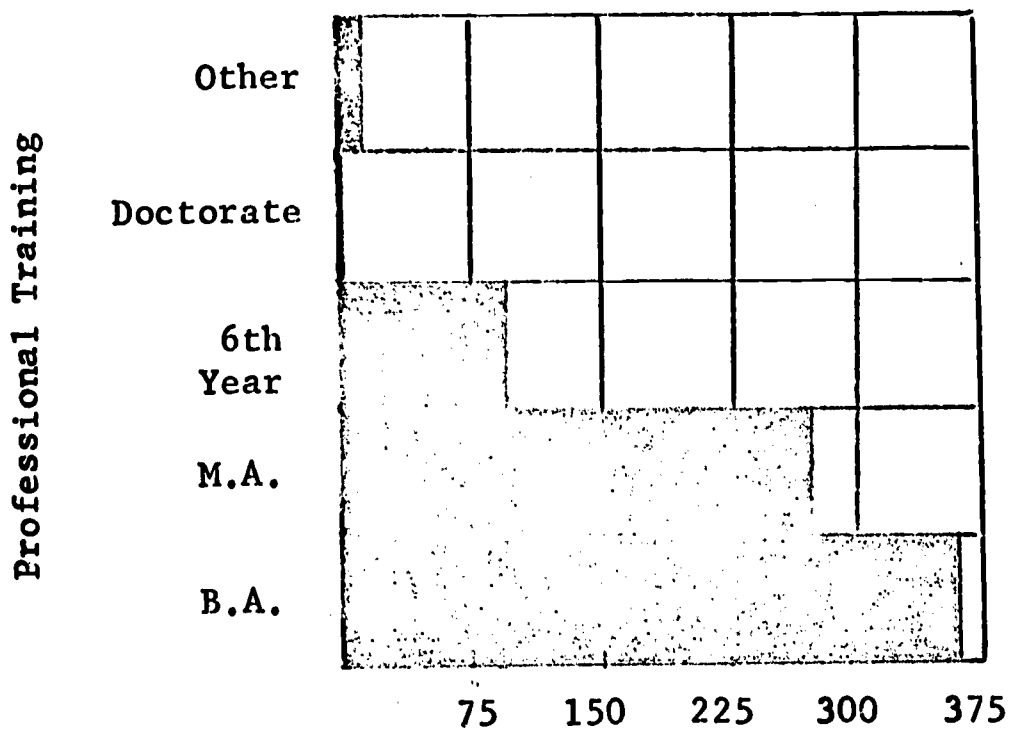


(4) Their professional training ranged from less than a bachelor's degree (other) to a doctoral degree:

Training	Distribution	Percentage of the Whole
Bachelor's Degree	368	48.9
Master's Degree	271	36.0
6th Year Certificate	93	12.4
Doctoral Degree	2	.3
Other	14	1.9
No Answer	4	.5

CHART VII

Distribution of Respondents by Professional Training



(5) Preparation in audiovisual materials or techniques was divided into:

	Distribution	Percentage of the Whole
Those having training	324	43.1
Those not having training	424	56.4
No answer	4	.5

II. Classroom Practices

(6) Reported use of audiovisual devices differed greatly:

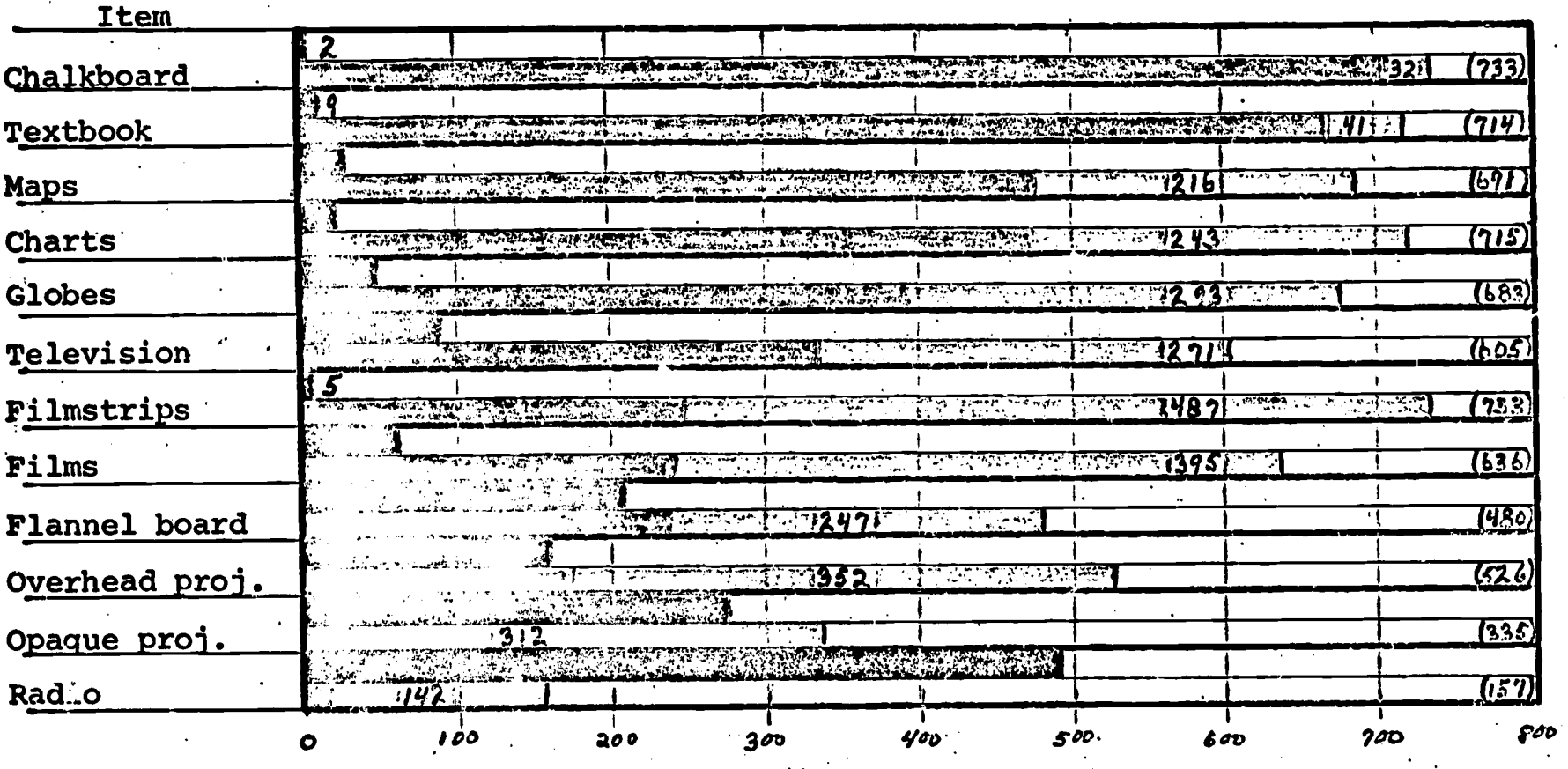
Devices	Frequently[1]	Sometimes[2]	Never	No Answer
Textbook	(673)89.5%	(41) 5.4%	(9) 1.3%	(29) 3.9%
Films	(241)32.1	(395)52.5	(63) 8.4	(53) 7.1
Filmstrips	(246)32.7	(487)64.8	(5) .7	(14) 1.7
Chalkboard	(701)93.3	(32) 4.2	(2) .3	(17) 2.3
Overhead proj.	(174)23.1	(352)46.8	(161)21.4	(65) 8.6
Opaque proj.	(23) 3.1	(312)41.5	(275)36.6	(142)18.9
Flannel board	(233)31.0	(247)32.9	(206)27.4	(66) 8.8
Charts	(472)62.8	(243)32.3	(19) 2.5	(18) 2.5
Maps	(475)63.1	(216)28.7	(27) 3.5	(34) 4.5
Globes	(390)51.9	(293)39.0	(43) 5.7	(26) 3.5
Radio	(15) 2.0	(142)18.9	(491)65.3	(104)13.8
Television	(344)44.4	(271)36.0	(93)12.4	(54) 7.2
Other (eg. tapes, realia, etc.)	(101)13.4	(91)12.1	(17) 2.3	(543)72.2

1. Frequently: at least once a week.

2. Sometimes: less than once a week.

Chart VIII

Reported Use of Audiovisual Devices

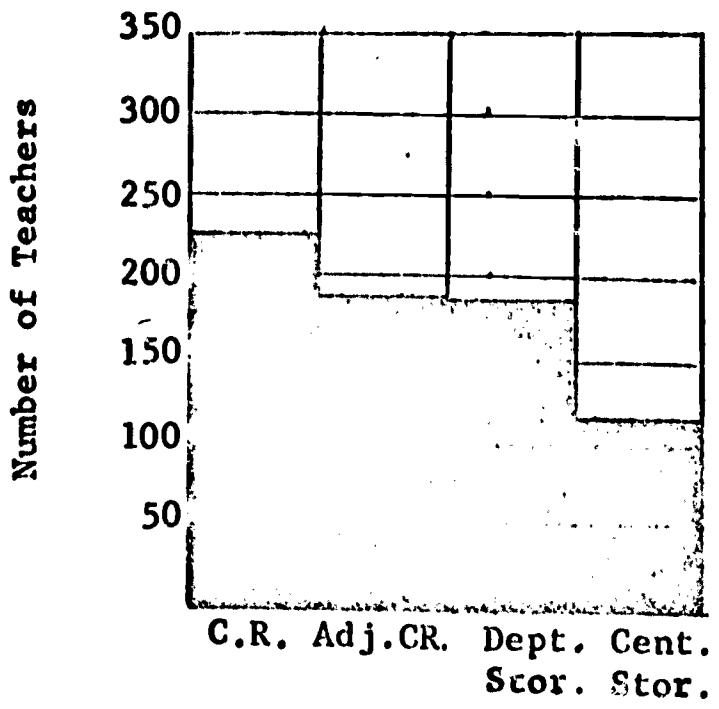


(7) TV sets were found to be evenly distributed throughout the schools:

Location	Distribution	Percentage of the Whole
In your own classroom	226	30.1
In a classroom near you	193	25.7
In a storeage area for your department	190	25.3
In a storage area for the entire school	118	15.7
No Answer	25	3.3

CHART IX

Location of TV Sets

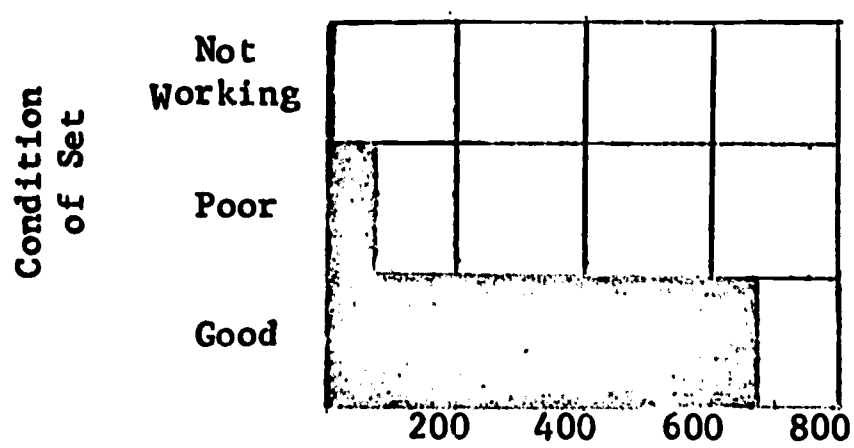


(8) Most TV sets were found to be in good working order:

Condition	Distribution	Percentage of the Whole
Good	662	82.7
Poor	70	9.2
Not Working	3	.4
No Answer	57	7.6

CHART X

Condition of TV Sets



(9) Most respondents had a personal copy of the STS Teacher's Manual:

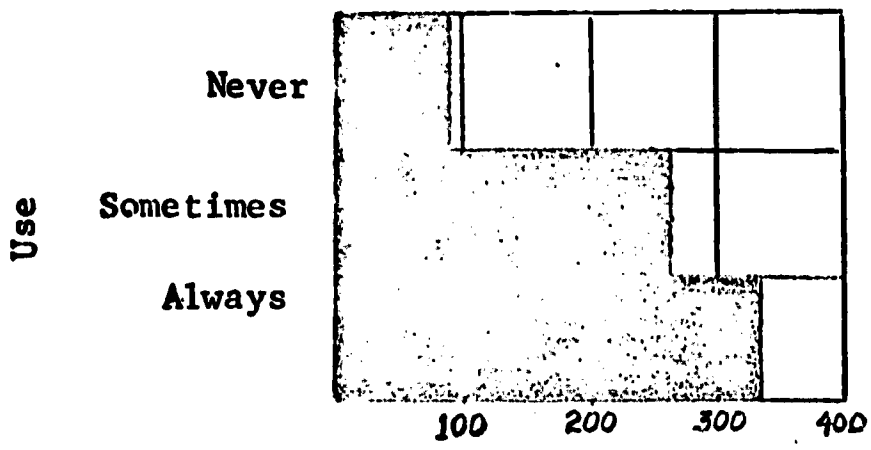
Possession	Distribution	Percentage of the Whole
Yes	692	92.0
No	48	6.4
No Answer	12	1.6

(9) Among respondents who had a copy, use of the Manual varied:

Use	Distribution	Percentage of the Whole
Always	330	47.7
Sometimes	262	37.9
Never	95	13.7
No Answer	5	.7

CHART XI

Reported Use of STS Manual



(10) Many respondents attempt to coordinate television with other teaching aids:

Coordination	Distribution	Percentage of the Whole
Yes	503	66.9
No	193	25.7
No Answer	56	7.5

III. Use and Evaluation of STS Services

(11) Most respondents do not use the Program Evaluation process:

Use	Distribution	Percentage of the Whole
Yes	97	12.9
No	623	82.9
No Answer	32	4.3

(12) Most respondents do not use the kinescope library:

Use	Distribution	Percentage of the Whole
Yes	15	2.0
No	706	93.9
No Answer	31	4.1

(Those teachers who use the library (fifteen (15)) reported using a total of fifty-one (51) titles for an average of 3.4 each).

(13) Very few respondents take full advantage of STS' college credit courses:

Advantage	Distribution	Percentage of the Whole
Yes	2	.3
No	727	96.7
No Answer	23	3.1

(14) Few respondents watch the teacher training programs:

View	Distribution	Percentage of the Whole
Yes	22	2.9
No	730	97.1

(Those respondents watching the training programs reported watching a total of thirty-four (34) series for an average of 1.5 each).

(15) Respondent reaction to STS services was positive:

a. Programing

Excellent..... Poor				
1	2	3	4	5
(103)20.2%	(250)49.0%	(125)24.5%	(16) 3.1%	(16) 3.1%

(510 responses (67.8%) with a mean value of 2.2)

b. Schedule

Excellent..... Poor				
1	2	3	4	5
(63)12.7%	(200)40.2%	(136)27.4%	(61)12.3%	(37) 7.5%

(497 responses (66.1%) with a mean value of 2.7)

c. Manual

Excellent..... Poor				
1	2	3	4	5
(220)45.5%	(176)36.4%	(57)11.8%	(20) 4.1%	(11) 2.3%

(484 responses (64.4%) with a mean value of 1.8)

d. Kinescope Library

Excellent..... Poor				
1	2	3	4	5
(8)18.2%	(11)25.0%	(12)27.3%	(6)13.6%	(7)15.9%

(44 responses (5.6%) with a mean value of 2.8)

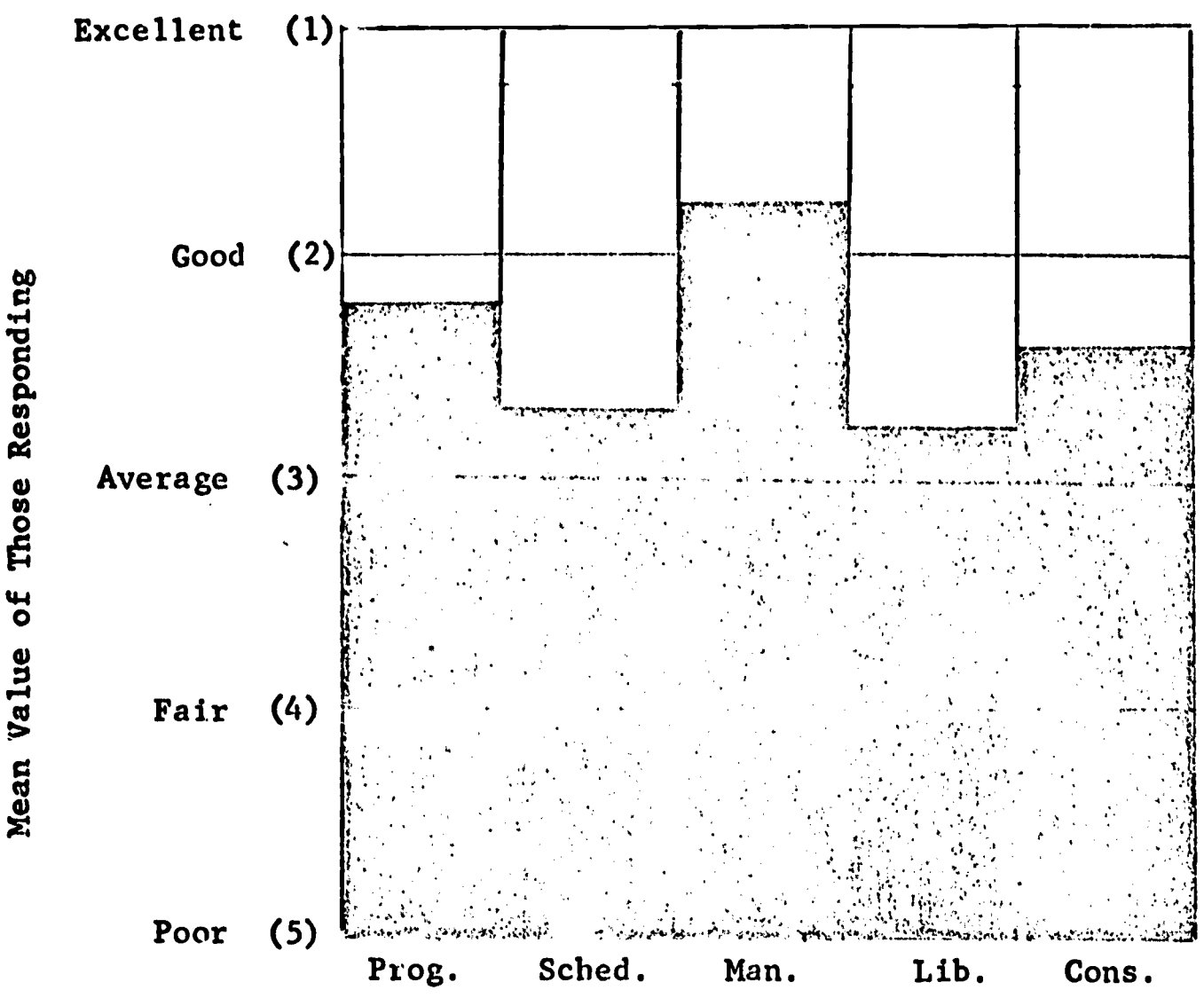
e. Consultation Services

Excellent..... Poor				
1	2	3	4	5
(18)27.7%	(21)32.3%	(17)26.2%	(2) 3.1%	(7)10.8%

(65 responses (8.6%) with a mean value of 2.4)

CHART XII

Respondents' Value of STS Services



(16) A majority of the respondents claim to use at least one program regularly:

CHART XIII

Reported Use of STS Programs

Reported Use During Questionnaire Week (Column A)			Reported Use Regularly (Column D)	
Number of Teachers	Percentage of the Whole	Number of Programs	Number of Teachers	Percentage of the Whole
269	35.8	0	317	42.2
101	13.4	1	119	15.8
99	13.2	2	73	9.7
90	12.0	3	85	11.3
89	11.9	4	69	9.2
45	6.0	5	37	4.9
22	2.9	6	17	2.3
17	2.3	7	4	.5
10	1.3	8	14	1.9
10	1.3	9	17	2.3
	1571 Programs	Total Uses	1376 Programs	
	2.1 per teacher	Mean Uses	1.8 per teacher	

IV Creative Use of ITV

(17) A total of forty-one (41) respondents (5.5 per cent) answered this, the only truly open ended question on the Questionnaire. Their responses indicate that they made conscientious but not necessarily creative use of ITV. This information is discussed more fully in the next Chapter,[1] and proved helpful in preparing the recommendations in Chapter V.

In this Chapter the investigator has presented a summary of the responses to the Teacher Questionnaire. In the next Chapter he analyzes and discusses those responses as bases for the recommendations made in Chapter V.

1. See pp. 51-80.

CHAPTER IV

ANALYSIS AND DISCUSSION OF THE FINDINGS

The data bank listed in the preceding Chapter yields a great deal of information in raw form. In terms of the population, it would seem from the distributions shown in Charts V, VI and VII[1] that the sample was representative of the nationwide population of teachers.[2] All grade levels are well represented. Teaching experience varies greatly but there are more "professionally young" teachers than there are old. Forty-six per cent have been teaching fewer than nine years, seventy per cent fewer than seventeen years. The largest percentage of teachers holds bachelor degrees but many have earned higher degrees. More than half indicate that they have had no formal training in the use of audio-visual materials.

The raw data also yield useful information in terms of the teachers' use of television. Of the twelve media presented to the teachers, television ranks sixth in terms of frequent use, eighth in terms of overall use.[3] Most teachers[4] (66.9 per cent) attempt to coordinate television with other classroom media. This is a strong indication that, while television has not modified the structure of our schools, many teachers at

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1. See pp. 37, 38, 39.

2. These data have been compared with national figures found in the Digest of Educational Statistics, 1966. In all cases the distribution curve for the present sample is similar to that for the national population.

3. See Chart VIII, p. 41.

4. See p. 45.

least claim to include it among their regular teaching strategies.

Further examination of the raw data indicated that the most negative responses came in the portion of the questionnaire dealing with other STS services.[1] Most teachers (82.9 per cent) do not participate in the Program Evaluation process. And even fewer use the Kinescope Library (2.0 per cent), or the college credit courses (.3 per cent), or the teacher training programs (2.9 per cent).

Most respondents placed values on the Programing, Scheduling and Teacher Manual services that fell above the middle point of the scale.[2] The number of respondents who evaluated the Kinescope Library and Consultation services was small (44 and 65 respectively) but their evaluations were favorable. The structured interview[3] showed the investigator that most teachers who did not respond to those questions were not familiar with the services.

Finally, the raw data indicate that over half (57.9 per cent) of the respondents use at least one program in their classrooms regularly. Some use as many as nine programs each week, but the mean use (including those who do not use the medium at all) is 1.8 programs per teacher per week.

Nine Major Questions

In an effort to obtain sound bases for his recommendations, the investigator sought to use the data to further advantage by examining the relationships that existed among several variables. These relationships were stated as nine specific questions and subjected to more stringent

1. See p. 45.
2. See Chart XII, p. 48.
3. See p. 24.

statistical analysis. The results follow.

1. Is there a significant association between the location of the TV in their classrooms?[1]

This question deals with two variables--the location of the TV set and the number of programs used by the teacher. (Questions 7 and 16D on the Teacher Questionnaire.) In order to answer it, the null hypothesis was posed--there is no association between the location of the TV set and the number of programs used. If this is true, the use of TV should be constant among the four set locations:

a. in the classroom

b. in a nearby classroom

c. in a departmental storage area

d. in a central storage area

By sorting the IBM cards, the respondents were divided into four groups according to the storage location of their TV sets. The number of program series used regularly during the semester was used as the score for each respondent (dependent variable). The F test was used to analyze the variation among the groups.

$$F = \frac{\text{between gp variation}}{\text{within gp variation}}$$

Results

From the figures below it can be seen that the statistics do not support the null hypothesis. Variation among the groups far outweighs that within the groups and cannot be accounted for by chance alone.

source	ss	df	ms	F
betw. gp.	285.49	3	95.16	20.20
within gp.	3,394.54	721	4.71	

$p < .01$

1. See p. 26 for original statement of this question.

Discussion

From this statistical analysis it can be seen that there is an association between the location of the TV set and the number of program series used by the teacher. The statistical instrument used in this analysis (F test) does not warrant any more directional statement than to say there is an association. However, a close look at the correctional value $C=\frac{(\Sigma X)^2}{N}$ for each group would seem to indicate that the location of the TV set in the classroom accounts for a major portion of the variation between the groups.

a. in the classroom C= 1750.62

b. in adjacent classroom C= 560.83

c. in departmental storage C= 432.58

d. in central storage C= 145.43

Further studies are needed to substantiate this hypothesis. However, school administrators should keep its likelihood in mind when planning to purchase and place TV sets.

As a tentative explanation of this finding, the investigator suggests that when the TV set is readily available, the teacher will be more inclined to use it. He has many other resources available to him and if others are more readily available to him than TV, the latter will suffer.

2. Is there a significant association between the amount of professional preparation a teacher has and the number of program series he uses in the classroom?[1]

Once again, there are two variables involved in this question--the amount of professional preparation a teacher has and the number of program series he uses. (Questions 4 and 16D on the Teacher Questionnaire.) In order to answer the question, the null hypothesis was posed--there is no association between the amount of professional preparation a teacher

1. See p. 26 for initial statement of this question.

has and the number of program series he uses. If this is true, the use of TV should be constant among the four categories of professional preparation:

a. Bachelor's degree

b. Master's degree

c. 6th Year Certificate

d. Other (including Doctoral Degree)

By resorting the IBM cards, the respondents were divided into four groups based on their professional preparation. The number of program series used regularly during the semester served as each respondent's score. The F test was used to analyze the variation among the groups.

$$F = \frac{\text{between gp variation}}{\text{within gp variation}}$$

Results

From the figures below, it can be seen that the statistics do not support the null hypothesis. Variation among the groups cannot be accounted for by chance alone.

source	ss	df	ms	F
betw. gp.	62.34	3	20.78	4.19
within gp.	3,699.16	746	4.96	

$p < .01$

Discussion

There is a significant statistical association between a teacher's professional preparation and his use of TV in the classroom. While no causal relationship can be established by the statistical analysis performed on the data, examination of the correction value $C = \frac{(\Sigma X)^2}{N}$ for

each category indicates that the less professional preparation a teacher has, the more likely he is to use television in his classroom.

a. Bachelor's Degree C = 1619.52

b. Master's Degree C = 697.12

c. 6th Year Certificate C = 190.20

d. Other (including Doctoral Degree) C = 98.00

Further studies are required to substantiate this hypothesis, but the investigator offers two reasons why it might be true:

i. The teacher with less preparation feels more of a need for teaching aids;

ii. The teacher with the greater preparation (more than Bachelor's Degree) received his basic "methods" instruction before television was introduced as a basic teaching aid--therefore, the younger teachers (Bachelor's Degree) feel more at ease using this relatively new medium.

However, the second explanation must be discarded in view of another finding of this study, that there is no statistical association between teaching experience and frequency of use of ITV.[1]

Further study of this question is indicated. In the meantime, however, school administrators and the management of STS could cooperate in explaining to those with advanced degrees the role and use of ITV.

3. Is there a significant association between teaching experience and the number of program series a teacher uses regularly?[2]

This question deals with two variables--a teacher's experience and

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1. See pp. 57, 58.

2. See p. 26 for initial statement of this question.

the number of program series he uses in his classroom. (Questions 3 and 16D on the Teacher Questionnaire.) The null hypothesis was used--there is no association between the length of a teacher's teaching experience and the number of program series he regularly uses in his classroom.

By resorting the cards, the teachers were divided into seven groups[1] according to the length of their teaching experience:

a. 1 - 4 years

b. 5 - 8 years

c. 9 -12 years

d. 13 -16 years

e. 17 -20 years

f. 21 -32 years

g. 33 -more years

The number of program series used regularly in the classroom served as each respondent's score. The F test was used to determine variation among the seven groups.

$$F = \frac{\text{between gp variation}}{\text{within gp variation}}$$

Results

From the results listed below it can be seen that the statistics support the null hypothesis. While there is evidence of variation among the groups, it is made insignificant by the variation within the groups.

source	ss	df	ms	F
betw. gp.	57.23	6	9.54	1.83
within gp.	3,315.39	736	5.21	

$p > .05$
(no significant difference)

1. The categories that covered 21 - 24 years, 25 - 28 years and 29 - 32 years were combined due to the small number of teachers falling into each of those categories.

Discussion

It might be assumed that inexperienced teachers tend to lean on television as a crutch and therefore use it more than experienced teachers or vice versa. The data compiled in this study do not substantiate that assumption. While there was some variation in use among the different groups of teachers (when grouped according to teaching experience), the variation is not satistically significant at the .05 level. Therefore, it would seem that the frequency of the use of television in classroom is more related to other factors.

4. Is there a significant association between grade level and the number of program series regularly used in the classroom?[1]

This question also deals with two variables--the grade level taught by a teacher and the number of program series he uses in the classroom. (Questions 2 and 16D on the Teacher Questionnaire.) In order to answer the question, the null hypothesis was posed--there is no significant association between grade level and the number of program series used in the classroom. The teachers were divided into seven categories according to the grade level at which they taught.

a. Kindergarten

b. First

c. Second

d. Third

e. Fourth

f. Fifth

g. Sixth

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1. See p. 26 for initial statement of this question.

The number of programs series regularly used was again employed as each teacher's score. The F test was used to analyze the variation among the groups.

$$F = \frac{\text{between gp. variation}}{\text{within gp. variation}}$$

Results

As the results listed below indicate, the null hypothesis is defeated. Chance alone does not explain the degree of variation among the groups.

source	ss	df	ms	F
betw. gp.	245.12	6	40.85	8.64
within gp.	3,516.38	743	4.73	

$p < .01$

Discussion

The grade level at which a teacher teaches is statistically related to his use of television. Since the null hypothesis was posed when structuring the solution to this question, it is not possible to establish a causal relationship. However, examination of the correctional values, $C=\frac{(\Sigma X)^2}{N}$, for each of the grade levels indicates that grades 1 and 2 account for the major portion of the variation among the categories.

a. Kindergarten C=123.77

b. First Grade C=855.13

c. Second Grade C=803.02

d. Third Grade C=222.94

e. Fourth Grade C=202.09

f. Fifth Grade C=363.00

g. Sixth Grade C=199.67

Further studies are necessary to establish or disprove this relationship. The investigator postulates the following conditions which may

contribute to an explanation of this relationship if it is found to exist.

i. Younger children are accustomed to watching TV and learning from it. As they come to school it is only natural for them to continue that custom.

ii. Teachers of the younger children realize that they are accustomed to watching TV and that they do learn from it. It makes sense that they use it for instruction.

iii. The longer a child is in school, the less television he watches. Perhaps the students in upper grades are less sensitized to the medium and their teachers not as impressed with its instructional power. Perhaps they understand the contribution that television can make to instruction less well than teachers on the lower grade levels.

iv. It is this investigator's impression that there are proportionately fewer "talking face" programs on the lower level than on upper levels. Perhaps the programs designed for the young utilize television's unique characteristics more than those on upper grade levels.

v. Because of multiple sessions and abbreviated days, Kindergarten does not lend itself to extensive use of ITV.

Each of these postulates should be studied carefully in an effort to determine why the medium is used more extensively on certain grade levels.

5. Is there a significant association between the condition of the TV set and the number of program series regularly used?[1]

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1. See p. 26 for initial statement of this question.

This question deals with two variables--the condition of the TV set and the number of program series a teacher regularly uses in his classroom. (Questions 8 and 16D on the Teacher Questionnaire.) In order to answer the question, the null hypothesis was posed--there is no significant association between the two variables.

Groups were constructed by resorting the IBM cards, according to the reported condition of the TV set:

a. Good

b. Poor

c. Not working

The number of program series regularly used in the classroom was used as the score or dependent variable. The data were subjected to the F test for analysis of variation.

$$F = \frac{\text{between gp variation}}{\text{within gp variation}}$$

Results

From the results below it can be seen that the data defeated the null hypothesis. Teachers who reported their TV sets as "not working" used significantly fewer program series than those in the other two categories.

source	ss	df	ms	F
betw. gp.	184.49	2	94.75	19.82
within gp.	3,568.64	746	4.78	

$p < .01$

Since a set in "not working" condition can hardly be used for classroom instruction, there is internal bias in this finding. Therefore, the investigator eliminated the "not working" category from the data and re-administered the F test to the remaining data. In this instance the null hypothesis was upheld. Teachers in both categories (those with TV sets in

"good" condition and those with TV sets in "poor" condition) regularly use the same number of program series in their classrooms:

source	ss	df	ms	F
betw. gp.	.53	1	.53	.102
within gp.	3,551.79	689	5.16	

$p > .05$
(no significant difference)

Discussion

Of all the findings of this study, this most puzzled the investigator. He had expected that teachers whose TV sets were in poor condition would use significantly fewer program series than those whose TV sets were in good condition. Such was not the case. Consequent discussions with classroom teachers and school administrators disclosed a possible explanation. Teachers are accustomed to working under less than ideal conditions to provide worthwhile resources to their students. In view of the high rating given to STS programing and the Teacher Manual, it is reasonable to conclude that some teachers value these resources so highly that they use them even under adverse conditions.

6. Do teachers who frequently use television attempt to coordinate this resource with other teaching aids?[1]

This question involves two variables--the amount of television use and its integration with other instructional resources. (Questions 6 and 10 on the Teacher Questionnaire.) Due to the nature of the variables, the investigator sought only to establish a trend rather than a statistically significant association. Therefore, the IBM cards were resorted in a 6-way split allowing for all possible answers.

1. This question is first posed on p. 26.

Results

By nature, the results of this analysis are not statistically significant. However, it can readily be seen that there is a tendency for teachers who use television frequently to coordinate it with other teaching aids more than teachers who use it sometimes.

Do You Use TV?

Do You Coordinate It With Other Media?	Frequently*	Sometimes**	Never
Yes	299 90.61%	173 66.80%	0
No	31 9.39%	86 33.20%	61
	100.00%	100.00%	

*Frequently = at least once a week

**Sometimes = less than once a week

Discussion

Teachers who use television "frequently" tend to coordinate it with other teaching aids more than those who use it "sometimes." Further studies are needed to explore more fully this tendency. Is there a causal relationship? Does coordination flow from frequent use or vice versa? Nevertheless, it is encouraging to know that a substantial number of teachers use television frequently and attempt to coordinate it with other teaching aids. Those in this category could provide valuable information and models for other teachers who may wish to make television an integral part of their teaching resources.

7. Is television used more by teachers in systems where they are

involved in the decision to adopt the medium than in those systems where the decision is made by administrators alone?[1]

This question involves two variables--the teachers' use of television and the process for deciding to adopt the medium. (Question 16D on the Teacher Questionnaire and question 1 on the Administrator Survey Instrument.) In order to answer the question, the null hypothesis was posed--there should be no difference in the frequency of use between two types of districts.

a. Those which adopt the medium based on an Administrative decision;

b. Those which adopt the medium based on a Cooperative decision.

The IBM cards were sorted into two groups and the number of program series used by the teachers in each group acted as the scores. The data were subjected to the t test for variance.

$$t = \frac{\bar{X} - \bar{Y}}{SE_{\bar{x} - \bar{y}}}$$

Results

Based on the statistical analysis, the null hypothesis must be upheld. Teachers' use of television in the classroom is not significantly affected by their involvement in the decision to adopt the medium.

N_x	=	681	N_y	=	71
$\leqslant X$	=	1,224	$\leqslant Y$	=	152
$\leqslant X^2$	=	5,646	$\leqslant Y^2$	=	640
$(\leqslant X)^2$	=	1,498,176	$(\leqslant Y)^2$	=	23,104

$$t = \frac{-.35}{.279}$$

$$= -1.25$$

$p > .05$
(no significant difference)

1. This question is first posed on p. 26.

Discussion

It has long been said that a person's interest is strongest in those projects which he helps formulate. From this it follows that TV should be used more extensively in those school systems where the teachers are involved in the process of deciding to introduce the medium to the school system. This was not the case. Teachers in school systems where administrators alone made the decision used television as frequently as teachers in school systems where the decision was a cooperative effort between teachers and administrators. Frequency of use seems to be more related to factors other than the decision-making process by which television is introduced into the school system.

8. Is television used more in systems that employ a full time Audiovisual Coordinator than in systems where there is no full time Coordinator?[1]

This question deals with two variables--the extent to which teachers use television and the presence of a full time Audiovisual Coordinator. (Question 16D on the Teacher Questionnaire and question 2 on the Administrator Survey Instrument.) In order to answer the question, the null hypothesis was posed--that there would be no significant difference in use between the two groups of teachers:

a. Those in systems where there is a full time AV Coordinator

b. Those in systems where there is no full time AV Coordinator

The IBM cards were sorted into two groups and the number of program series regularly used by the teachers was used for the scores. The t test for variance was used.

$$t = \frac{\bar{X} - \bar{Y}}{SE_{\bar{x} - \bar{y}}}$$

1. This question is first posed on p. 26.

Results

The null hypothesis is supported by the analysis. Any variation between the two sets of scores can be attributed to chance. The presence of a full time audiovisual director does not, of itself, increase the use of ITV.

N_x	= 614	N_y	= 138
ΣX	= 1,080	ΣY	= 296
ΣX^2	= 4,984	ΣY^2	= 1,032
$(\Sigma X)^2$	= 1,666,400	$(\Sigma Y)^2$	= 87,616

$$t = \frac{-.39}{.21}$$

$$= -1.86$$

$p > .05$
(no significant difference)

Discussion

It is sometimes assumed that a full time AV Coordinator will contribute to increased use of media. The findings of this study indicate that this is not always true in the case of television. Further discussions with full time AV Coordinators indicated that conditions beyond their control often outweigh their efforts. Those conditions include: teachers claim that state-wide syllabi do not exactly coincide with the curriculum of the television series; district-wide curriculum programs differ from the television series in objectives or content; district-wide schedules (especially bus schedules that interfere with programs shown early and late in the school day); building schedules and departmentalization. In addition, the role of the AV Coordinator is still being debated. Whether his is a faculty or administrative position and whether he should deal with hardware or software (including curriculum planning) are questions which have not been answered.

9. Do teachers in public schools use television more than teachers in private schools?[1]

This question deals with two variables--the type of school and the number of programs series used by teachers. (Chart I[2] and question 16D on the Teacher Questionnaires.) In order to answer this question, the null hypothesis was posed--teachers in each type of school use television to the same degree. The IBM cards were divided into:

a. public schools

b. private schools

The number of program series used by the teachers was used as the scores. The t test for variance was used.

$$t = \frac{\bar{X} - \bar{Y}}{SE_{\bar{x} - \bar{y}}}$$

Results

Analysis of the data supports the null hypothesis. Teachers in each type of school use television equally.

N_x	=	726	N_y	=	26
$\leqslant X$	=	1,314	$\leqslant Y$	=	62
$\leqslant X^2$	=	6,030	$\leqslant Y^2$	=	256
$(\leqslant X)^2$	=	1,726,596	$(\leqslant Y)^2$	=	3,844

$$t = \frac{-.57}{.477}$$

$$= -1.25$$

$p > .05$
(no significant difference)

Discussion

Public school teachers use TV in their classroom as much as those in private schools. Frequency of use is not statistically related to

1. This question is first posed on p. 26.

2. See Chart I, p. 23.

the type of school in which a teacher works. It has been this investigator's experience that when a school system starts to use broadcast ITV, there is about the same commitment of facilities and interest regardless of the type of school.

Other Questions

The following questions were able to be answered without submitting the data to as stringent analysis as the above questions.

1. What percentage of the total number of respondents has a personal copy of the Teacher Manual?[1]

Almost all (92 per cent) respondents had a copy of the Teacher Manual.[2] This finding is a vote of confidence in the structure STS currently uses for distributing its materials, i.e. have one person in each school system appointed as STS liaison with responsibility for distributing materials and providing feedback to STS.

2. What percentage of the respondents who have Manuals always or sometimes uses the Manual to prepare for the Telelesson?[1]

Most (86 per cent) respondents use the Teacher Manual to prepare for the telelessons.[3] While the frequency of this use varies, between "always" and "sometimes", the percentage of users is very high. This, coupled with the high evaluation (1.8 on a 1 (high) to 5 (low) scale)[4] which the teachers gave to the Manual speaks highly of its usefulness as a teaching resource. The other 14 per cent of the respondents who never use the Manual should be encouraged to do so.

3. What percentage of the total number of respondents has used the STS Kinescope Library?[1]

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1. See pp. 26, 27 for original statement of these questions.
2. See p. 44.
3. See p. 44.
4. See p. 47.

Few respondents (2 per cent) use the Kinescope Library.[1] Yet, it was given an above average rating (2.8 on a 1 (high) to 5 (low) scale)[2] by those teachers who evaluated it. From the open ended responses and the structured interview, the investigator learned that the reason given by most teachers for not having used the library was that they were unaware of its existence. There is a great need to publicize the existence of the library if its resources are to be used.

4. What percentage of the respondents has used three or more kinescopes from that library since September, 1966?[3]

Fifteen (15) respondents (2.00 per cent) reported use of fifty-one (51) kinescopes during the specified time period for an average of 3.4 each.[4] However, only seven (1.00 per cent) reported using three or more.

5. What percentage of the respondents has used college credit courses offered over Channel 13?[3]

6. What percentage of the total number of respondents has viewed lessons from one or more teacher training series on Channel 13 during the current school year?[3]

Few respondents took advantage of the college credit course (.3 per cent) or the teacher training series (2.9 per cent).[5] Teachers are not accustomed to turning to television for their own instruction. Most have never had a course or major portion of a course by television. They are in the habit of physically taking themselves to a campus to further their training and competencies. If television is expected to bring the campus

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1. See p. 45.
2. See p. 47.
3. See p. 27 for original statement of these questions.
4. See p. 45.
5. See p. 46.

to the teacher, it must be administratively recognized as a valid source of instruction. Advancement pay must be granted for courses completed by using TV. Furthermore, teachers must be made more aware that the resources exist and that television is available for their consumption as well as a classroom resource. The open ended question and structured interview disclosed the teachers' ignorance of its applications for them.

Other Data

Other data gathered during the course of this study form the bases for some of the recommendations presented in Chapter V and for that reason merit mention here.

1. Television has assumed a more important role than other "newer" media in terms of its use in the classroom. The teachers were asked (Question 6) which of twelve media they used "frequently," "sometimes" or "never." Of the twelve, television ranked 6th of those used "frequently."[1] A closer look at the responses shows that it ranks 1st among the "newer" media in the "frequently" used column. Perhaps this is due to the fact that of all the newer media, the television set is more likely to be located in the classroom than the necessary hardware for the other media. In overall use ("frequently" and "sometimes" used) TV ranks eighth among all the media, falling behind films and filmstrips of the "newer" media variety. This indicates that the "sometimes" user who must go out of his way to obtain equipment is more likely to use film and filmstrips than TV.
2. Most respondents (91 per cent) were unaware of STS' consultation services. They did not realize that they could receive direct assistance in trying to use television in their classroom. Those

1. See Chart VIII, p. 41.

who had attended an STS workshop or felt they were familiar with the consultation services in other ways gave it a value of 2.4 on a 1 (high) to 5 (low) scale.[1]

3. Few respondents (13 per cent) use the Program Evaluation Form.[2] This should be an area of concern for school administrators and the management of STS alike. If teachers do not participate in the evaluation and selection of programs they are relegating the responsibility to someone who is at least one step removed from the classroom. Although all the professional members of the STS staff have teaching experience, they have been directly removed from the classroom for several years. Their memories of their classroom experiences should not be the basis for determining STS programing. That should be done by those who are going to use it--the current classroom teachers. Therefore, a system must be devised that will encourage increased teacher participation in program evaluation and selection.

4. There is little creativity in the classroom utilization of ITV. When a new resource is introduced to the education market, the teacher is told what it can do and how to use it. He generally follows those directions without much variation, thereby using the resource conscientiously, but not necessarily creatively. This is partly true with television. The Teacher Manual tells the teacher what a program will do and suggests how he might use it. However, educators are still unsure of the full potential of television in the classroom. To this date, there is no bank of "rights" and "wrongs." The classroom teacher must still explore new horizons with this medium. Unfortunately, such is not often the case.

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1. See p. 47.

2. See p. 45.

The only truly open ended question on the Teacher Questionnaire (17) sought to uncover innovative and creative uses of television in the classroom. The response (or lack of response) to this question seems to support the contention of the Fund for the Advancement of Education. "The need for imagination, ingenuity, and innovation in the whole process of education has been forcefully demonstrated."[1]

A total of forty-one (5.45 per cent) respondents answered the question.[2] Their responses indicated that they had at least made conscientious use of the medium. In all, they mentioned seventeen separate program series by name.

In general, the descriptions were brief and indicated that the teachers responding to this question made conscientious but not necessarily creative use of instructional television. For the most part the replies described pre-telecast and post-telecast activities suggested in the Teacher Manual. (Numbers 1,2,4,5 below). To this extent the uses were considered to be conscientious.

Others went beyond this point to specify attempts to vary activities in other ways: (Numbers 6,7,9) some outdoor, others indoor; some group, others individual; some using other media, others consisting of review and discussion; some being short, one-step activities, others consisting of extended work or unit plans. In the author's viewpoint, the greatest encouragement came from teachers who indicated that they had used specific lessons in an interdisciplinary approach (Numbers 3,8,9) or for cross media comparisons (Number 8).

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1. The Fund For The Advancement of Education, Learning by Television, p. 6.

2. See p. 50.

None of the 711 remaining teachers replied to this question. While it is not legitimate to assume that none of them has made creative use of the medium, based on the structured interview,[1] the investigator feels safe in saying that none thought his use unique enough to take the time and effort to describe it.

The following are edited versions of some of the responses obtained:

Teacher 1: Grade level, 6; Series used, Space Age Science.

"After viewing several programs of Space Age Science, I had my students write creative compositions about life on other planets. We then made a display table for pictures and pamphlets on the Apollo and Gemini programs. We tried to tie these projects in with other work we were doing in the class."

Teacher 2: Grade level, 3; Series used, Scienceland.

"The class conducted the experiments that were suggested in the Manual after each week's program. Then each child compiled a dictionary of new terms used over the semester's time. The Manual was very helpful in allowing me to prepare the class ahead of time with the necessary terms needed to understand the lesson."

Teacher 3: Grade level, 3; Series used, Exploring Nature.

"I found Exploring Nature an excellent science series. The Teacher Manual for it is top-notch.

"I often involved the art teacher in the follow up activities. For instance, after learning about animals' tools and weapons, the class conducted outdoor investigations of camouflage techniques and reported on them in pictures.

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1. See p. 24 for description of the structured interview.

"I also used the lesson on Reproduction for a basic introduction to Sex Education on the 3rd Grade Level.

"We also were prompted to conduct microscopic studies of fungus and molds."

Teacher 4: Grade level, 4; Series used, Exploring Nature.

"The sequence of lessons is good. I was able to follow up the lessons using the AAAS processes of collecting, classifying, and experimenting."

Teacher 5: Grade level, 6; Series used, Exploring Mathematics.

"The follow up (of the TV lesson) gives the children security in it. We made calendars in bases different for each month."

Teacher 6: Grade level, Special Education (6); Series used, Window on the World.

"When the program was over we discussed the current events. Once we made a movie on the current events in our school and sent it to Mrs. Lapp (the TV teacher). This made the children more aware of their immediate environment and showed them how they could express themselves in another medium."

Teacher 7: Grade level, 2; Series used, Window on the World.

"We have a bulletin board on current events each week as a result of Window on the World. We even did our own "Window on the World" show which was televised for the whole school. The idea of current events for primary grades was very good."

Teacher 8: Grade level, 2; Series used, Tell Me a Story.

"There is always a great anxiety to choose the stories they hear on TV. The children paraphrase the story and write it in ITA. They also

draw pictures of it and act. For example, after the unit on Noah's Ark, each child pretended that he was an animal. He drew his own picture and gave the reasons why he made the journey with Noah. Also, we often compared stories that are the same but presented in different ways, i.e. "Snow White" on Tell Me a Story vs. "Snow White" as presented by Walt Disney.

Teacher 9: Grade level, Special Education (2); Series used, Sing, Children, Sing.

"My boys and girls find verbal expression very difficult. Sing, Children, Sing allows them an avenue of non-verbal expression. Along with singing the songs, I find that dance interpretation is very helpful since physical movement seems easier for them than verbal communication of their emotions. This has been so successful that the children have even taught younger brothers and sisters songs they have learned."

Teacher 10: Grade level, 5; Series used, Cover to Cover.

"I used Cover to Cover to increase the amount of independent study in my room. The series itself increased the desire to read the books covered in the program. The children stormed the library for the books presented. We used the idea of the program's illustrations to accompany other book reviews to the class. It also spurred our Scott Foresman & Company Personal Reading Program to greater selectivity. The two programs co-existing in our classroom worked very well."

Summation

The total number of usable responses was 752 (72.5 per cent of all those distributed).[1] The majority of the respondents (57.9 per cent) uses STS program series regularly (i.e. at least several times a semester).[2]

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1. See p. 36.

2. See p. 49.

The programs and their broadcast schedule are rather highly valued by the classroom teacher (ratings of 2.2 and 2.7 respectively on a 1 (high) to 5 (low) scale).[1] The average regular use of the program series is 1.8 program series per teacher.[2]

Three of the elements studied are statistically associated with the number of program series a teacher uses. They are:

a. the location of the TV set;[3]

b. the teacher's professional preparation;[4]

c. the grade level at which the teacher teaches.[5]

Other elements were examined and found to have no statistical association with the number of program series a teacher uses. They are:

a. the teacher's teaching experience;[6]

b. the condition of the TV set (excluding those that do not work at all);[7]

c. the decision-making process upon which TV was introduced to the school system;[8]

d. the presence of a full time Audiovisual Coordinator;[9]

e. the type of school (public or private).[10]

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1. See p. 47.
2. See p. 49.
3. See pp. 53, 54.
4. See pp. 54-56.
5. See pp. 58-60.
6. See pp. 56-58.
7. See pp. 60-62.
8. See pp. 63-65.
9. See pp. 65, 66.
10. See pp. 67, 68.

This study also uncovered additional information which helps to round out what was learned about the place of STS services in a school system.

a. Television has assumed a more important role than other media in terms of use. Of all the media rated by the teachers (twelve) it ranks sixth in terms of frequent use, eighth in overall use.[1]

b. Teachers who use television frequently (once a week) tend to coordinate it with other teaching aids more than teachers who use it only sometimes;[2]

c. Almost all teachers (92 per cent) had a personal copy of the Teacher Manual;[3]

d. Most (86 per cent) use the Teacher Manual to prepare for the telelessons;[4]

e. Most teachers place a high value (1.8 on a 5 point scale where 1 is the high score) on their Teacher Manual;[5]

f. Few teachers (2.0 per cent) use kinescopes from the STS kinescope library;[6]

g. The few teachers who evaluated the kinescope library (6 per cent) gave it a value of 2.8 on a 5 point scale where 1 is the high score.[7]

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1. See p. 70.
2. See pp. 62, 63.
3. See p. 44.
4. See p. 44.
5. See p. 47.
6. See p. 45.
7. See p. 47.

h. Few teachers (.3 per cent) took advantage of the college credit courses broadcast by STS;[1]

i. Few teachers (2.9 per cent) viewed the teacher training series broadcast by STS;[2]

j. Few teachers (8.6 per cent) knew of the STS consultation services;[3]

k. The few teachers who evaluated the consultation services gave them a value of 2.4 on a 5 point scale where 1 is the high score.[4]

l. Few teachers (13 per cent) use the Program Evaluation Form;[5]

m. There is little creativity in the classroom utilization of ITV.[6]

From the preceding summary it can be seen that the basic hypotheses of this study[7] were proved incorrect.

1. The majority (57.9 per cent) of the teachers in STS member school systems do utilize the program series in their classrooms regularly. Within the scope of this study, this is a major finding. The investigator did not seek to determine the quality or effectiveness of classroom utilization. This finding indicates that

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1. See p. 46.
2. See p. 46.
3. See p. 70.
4. See p. 47.
5. See p. 45.
6. See p. 50.
7. See p. 3.

classroom teachers are widely utilizing one of the services for which the school system is paying, viz. the broadcasts of program series.

2. a. Many (85.6 per cent) of the teachers who utilize the programming do regularly refer to their Teacher Manual in preparation for the telelessons. This indicates to the investigator that most teachers attempt to make conscientious use of television. The fact that their conscientiousness results in such little creativity (as evidenced by the few teachers who responded to question 17 and the quality of their responses) is a matter of attention for those at STS and in the school systems who are responsible for improving classroom use of ITV.

In stating the original hypotheses of this study[1] the investigator implied that a teacher who does not regularly refer to the Teacher Manual is using the programs haphazardly. He has subsequently come to realize that:

--there may be occasions when a teacher may wish to use a telelesson without any preparation prior to the broadcast either on his part or the students'. In the hands of a competent teacher, such a use of the medium could be just as valid and more creative than more traditional uses.

--use of the Teacher Manual does not necessarily promote creativity. This is not to say that it inhibits creativity, but an insecure reliance on the Manual may discourage attempts at creativity.

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1. See p. 3

b. Two out of three teachers (67 per cent) attempt to coordinate television with other teaching aids. This is an indication that they are attempting to make this medium an integral part of their teaching strategies. They view it as a valuable resource and are striving to discover the contributions it can make in their classrooms.

It must be concluded, therefore, that the basic services offered by STS (i.e. programing and Teacher Manuals) are used and valued by the classroom teacher. However, as noted above,[1] there are some STS services, especially the kinescope library and consultation services which most (more than 50 per cent) teachers do not use even though they are valued by those teachers who do use them.

In this chapter, the investigator has analyzed, discussed and summarized the findings of the present study. In Chapter V he presents ITV management, school administrators and classroom teachers with recommendations for their potential use in attempting to make broadcast ITV a more useful classroom resource.

1. See pp. 70, 71.

CHAPTER V

RECOMMENDATIONS FOR POTENTIAL USE BY CLASSROOM TEACHERS, SCHOOL ADMINISTRATORS AND ITV AGENCIES

The matter under consideration in this study provides information relative to the usefulness of services provided by the School Television Service of Channel 13/WNDT, as typical of many broadcast ITV agencies in this country.[1] From the statistics gathered by the Teacher Questionnaire, certain things are known about the frequency with which teachers use the major STS services. From the comments made in response to some of the questions, teachers' attitudes and feelings toward the services as well as their reasons for using some and not others were determined. Based on those findings, the investigator offers the following recommendations for the consideration of classroom teachers, school administrators and the management of ITV agencies who desire to improve the use and usefulness of such services. They are intended as recommendations for universal application and must be adjusted to local conditions such as types of ITV services, size of school systems, wealth of school systems and the initiative of all parties involved.

I. Recommendations for Classroom Teachers

By defeating the basic hypotheses of this study, the classroom teachers surveyed have in effect given a vote of confidence to STS and other ITV agencies and their services. However, there are several steps teachers may take to improve the usefulness of those services.

1. Become familiar with the full range of ITV services. Most ITV

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1. See pp. 1, 2.

agencies offer services other than program broadcast and Teacher Manuals which are of value to the classroom teacher.

2. Use the services that seem most valuable. All major STS services were given ratings above the middle point on the 1-5 scale. The Teacher Manual seems to be especially helpful.
3. Work with your administrators to determine how best to structure your school and classroom so that television can be most useful to you and your students.
4. Participate in ITV deliberations where possible. Use the Program Evaluation process to express your opinions. Write letters or make phone calls to provide additional feedback.
5. Attempt to modify services which are not useful. Through your school system's representative, bring problem matters to the attention of the entire STS membership.
6. Try new uses of television in your classroom. The Teacher Manual suggests some ways of using the telecasts. Consult it but do not feel restricted to it. Ask yourself, "What can ITV do for me?" Then develop a project to test that use of the medium. Send a description of the project to the ITV agency for broader implementation or dissemination to other teachers.

II. Recommendations for School Administrators

The following recommendations are made for the consideration of school administrators who are committed to providing broadcast ITV in their systems.

1. Recognize the priority that teachers give to television among all the "newer" media. Of the "newer" media, television is most likely to be used frequently.
2. Strive to reach quickly the goal of putting at least one TV

receiver in each classroom.

3. In terms of budgetary defense, realize that teachers use, on the average, almost two (1.8) program series each per week.

4. Expect frequency of use to vary from teacher to teacher and grade level to grade level. Given the present state of programing, the lower levels (especially grades one and two) will probably use more program series than the upper levels. Also, teachers with advanced degrees will probably use fewer series than those with bachelor degrees.

5. Encourage regular use of the medium. This will probably increase the frequency with which television is coordinated with other resources.

6. Of all the major services provided by STS, teachers gave the lowest rating to the broadcast schedule. Strive to make the programs available on a more flexible basis by making them available on videotape or kinescope. Publicize the benefits the teacher derives from that flexibility in terms of control of the time element.

7. Cooperate with the ITV agency in securing a large response to its Program Evaluation studies.

8. Encourage creative use of the medium. Devise systems for rewarding and disseminating information about such uses.

9. Cooperate with the ITV agency in studies to determine why the presence of a full time AV Coordinator does not have a significant effect on the use of TV.

10. Cooperate with the ITV agency in developing and conducting workshops for teachers and administrators in order to improve utilization.

11. Encourage experimentation (by teachers and building principals) with school schedules and classroom management techniques which may lead to improved use of television in the classroom.
12. Provide a systemwide structure for the dissemination of information from the ITV agency which is not contained in the Teacher Manual.

III. Recommendation for ITV Agencies

It is apparent to the investigator that a majority of the teachers surveyed use STS' programing and Teacher Manuals and value them highly. The management of ITV agencies may be somewhat comforted by this vote of confidence. However, present services must be strengthened and new directions forged in order for ITV to make even greater contributions to classroom instruction. The following recommendations are offered as means of strengthening broadcast ITV.

1. Seek to select the best programing available with the aid of Curriculum representatives from participating school systems.
2. With school personnel, study the unique characteristics of television. Then take maximum advantage of those characteristics in determining the types of program series to be produced and the production techniques to be used. Do not be afraid to use production techniques commonly used in commercial TV. Discard the traditional "talking face" production except on rare occasions.
3. Strive to make Teacher Manuals that are even more useful to the teacher. Include materials that encourage teachers to integrate the telelessons with other classroom activities. Worksheets and overhead transparency originals could be included at little additional expense and would invite additional classroom activities based on the telelessons. For some series, multi-media materials

kits could provide additional resources for classroom or individual use.

4. Publicize the Teacher Manual and correlated materials so that all teachers are aware of them and seek them out.

5. It is the opinion of this investigator that future productions should be made available on kinescope, videotape, EVR or some other means of duplicate distribution. Studies should be conducted to confirm or dispute this opinion. The final decision will depend on the availability of playback equipment in the school systems and whether or not the problem of incompatability of equipment can be satisfactorily resolved. Certainly the flexibility offered by videotaped materials is a desirable asset for the ITV agency.

6. As other means are adopted for the distribution of classroom telelessons, the actual broadcasting of the telelessons will become secondary to their production. At that time, the broadcast schedule should reflect the change. Therefore, it is necessary to study other types of programing that require the broadcast medium and other means of supporting all types of production and distribution.

7. Develop more efficient systems for program evaluation. The investigator suggests an IBM punch-out system. Most of the information obtained by current evaluation efforts can be reduced to a series of questions requiring a value answer. These values can be reduced to a common scale (1 to 5) and pre-punched on IBM cards. There are several advantages to such a system:

   a. It is simple for the teacher. All he has to do is read the questions and punch-out a value for each.

b. It reduces the time required to complete the questionnaire. This should encourage more teachers to cooperate.

c. It becomes simple to statistically analyze the teachers' evaluations.

d. It is a more reliable means of determining teacher evaluation of programs and other services.

8. Use "spot announcements" between programs to encourage teacher participation in the evaluation system.

9. Develop "consultation services" that meet the needs of all the users of ITV services. Classroom visitations and administrative and technical assistance in planning for and establishing television in a school system must be complemented with "Utilization Workshops" which are extremely valuable for teachers and administrators. The following steps should increase the value of the Workshops.

a. Prepare the Utilization Workshops well in advance.

b. Tailor-make a Workshop to meet the needs of a system.

c. Develop multi-media modules which can be plugged together as needed in constructing the Workshop.

d. Where possible, arrange to conduct the Workshop at teacher conferences, at faculty luncheon meetings or on days when school is dismissed early for teacher meetings.

e. Otherwise, limit the Workshop to sixty (60) or seventy-five (75) minutes after school, starting as soon as possible after dismissal.

f. Develop models of creative uses of telelessons. Since teachers who use television frequently are more likely to coordinate it with other teaching aids than those who use it

sometimes, those teachers are a likely source of such models. Establish a system for encouraging and discovering those models. Once located, they can be shared with other teachers at Workshops or by "spot announcements."

10. The respondents in this study do not use the college courses which are broadcast. Perhaps this is due to the quality of the courses or the abundance of colleges within commuting distance of the respondents. Further study is required to determine if there are other bodies of viewers for these courses or whether they should be discontinued and the air time used to better advantage.

11. Likewise, too few respondents use the teacher training series. Since these series are intended for the audience represented by the respondents, it is advised that:

    a. Those series be discontinued, or,

    b. Their quality be improved so as to make them more attractive to teachers, and,

    c. An effort be made to coordinate their use in school systems and/or colleges.

CHAPTER VI

RECOMMENDATIONS FOR FURTHER STUDY

In designing a study such as that encompassed by the present investigation, there are limitations to what is accomplished. This study was no exception. The investigator would indicate here areas for further examination and research.

It will be noted that the present study was limited to grades K-6. This is not to imply that the use of broadcast ITV services on higher grade levels is not worthy of study. A future study might seek to identify utilization problems unique to upper grades and determine their influence on the actual use of broadcast ITV services at that level.

Another study might consider the use of broadcast ITV services outside the school structure. The recent children's series, Sesame Street, provides high quality programing and offers an excellent opportunity for examining alternative settings for using broadcast ITV and the effectiveness of various types of programing within those settings.

The present study was limited to data concerning the extent of the use of services rendered by an ITV agency. Additional studies might be conducted to determine the quality of such use.

Research did not reveal any national standards for evaluating the quality of televised instruction. Therefore, it is recommended that a national educational association (e.g. the Department of Audiovisual Instruction or the National Association of Educational Broadcasters)

undertake the task of establishing such norms.

Finally, since the present study is based on data included in the period ending in 1967, its findings are limited to the analyses as of that date. It is recommended that these findings be re-examined periodically in light of developments that take place in the industry. It would seem probable that some of the services offered by broadcast ITV agencies may change substantially and thus merit new studies.

The investigator recommends that studies be conducted pursuant to some of the findings and recommendations disclosed in the previous chapters. Studies should be conducted which posit directional hypotheses relevant to the three elements in this study which were found to be statistically related to teachers' use of ITV programs, viz. the location of the TV set, the teacher's professional preparation and the grade level at which the teacher teaches.

Certainly, the failure to appoint full time audiovisual coordinators and the impact of this on the efficacy of a school's TV program merits additional attention.

If any of the recommendations offered in the preceding chapter are adopted, they should be scrutinized carefully to determine their effectiveness and impact on the full spectrum of services offered by the ITV agency.

Another aspect of broadcast ITV utilization which must be given serious consideration is that of school building design. The concept of what constitutes adequate school plants and buildings is changing. Patterns for curriculum planning and techniques of teaching are also changing. All of this has an impact on the role of broadcast ITV within schools. Broadcasters must be ready to contend with the new demands brought about by these changes.

Potentially there will be a wider variety of "users" of broadcast ITV. Community development agencies, industry and other training agencies may want to use some of the services provided by ITV. Adequate provision must be made to involve the new "users" in planning the services. New types of services may be required for their needs. In the end, this broader case of utilization and support will be a great advantage for ITV.

Then too, the broadcast schedule may become less and less important. "Broadcast" will become a means of distribution to the local campus or training site (except in the case of programing for the homebound). At that point, the ITV agencies may derive their support and justify their continued existence by serving as production agencies for local distribution systems. The latter would then arrange their own programing by drawing on a variety of production sources.

This may happen as an increasing number of "users" obtain videotape and local distribution equipment. Therefore, production contracts must be written to allow the "users" to tape off air for the purpose of viewing the program according to their schedule needs. Provision must be made for the establishment of duplicating services that will allow "users" to build local libraries of recorded instruction.

As these changes take place, they must be studied in their appropriate environments. Schools must study ITV in a variety of settings (large group instruction, small group instruction, instruction at home) and for a variety of purposes (total teaching, modular teaching, research). It is recommended that some studies probe the integration of television offerings with standard library information services while others examine the feasibility of constructing a school schedule around a broadcast TV schedule. New means of distributing, storing and

retrieving televised information must be studied to determine how this information can be supplied to meet the unscheduled needs of the learner.

As answers to these and other questions become known, research and recommendations made in this study may encourage teachers to think of the medium in new ways.

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APPENDIX A

Request to Serve on "Instrument" Panel

March 8, 1967

Dr. Berj. Harootunian
Director of Research
University of Delaware
Newark, Delaware

Dear Dr. Harootunian:

Enclosed please find copies of the questionnaires I propose to use in my research project. I will determine the extent to which teachers in member school districts of the School Television Service utilize the programs and supplementary materials of that organization, and why or why not. The questionnaires will be mailed to a representative number of teachers in participating school districts.

Would you please examine them and comment on their suitability as research instruments. Are the questions well phrased? In the case of "closed questions," do the categories afford a sufficient range of choice to the respondent? Would you suggest any omissions or additions? Do the instruments adhere to the Guidelines for Internal Validity as specified by Good and Scates (copy enclosed)?

Thanking you in advnace for your cooperation, I am,

Very truly yours,

Peter J. Dirr
Area Consultant
School Television Service

PJD/cjn

Encls. 2

GUIDELINES FOR INTERNAL VALIDITY

(Good & Scates)

1. Is the question on the subject? Is the question saturated with the elements of the subject? Does it, when taken together with other questions, cover the many facets or aspects of the subject? Does it effectively exclude irrelevant factors from the response--those which are not desired? Does the question (or the response) contribute something which is unique--so that the individual item is not duplicating other items?

2. Is the question perfectly clear and unambiguous to the respondents? Are its implications clearly understood? Is the general frame of reference from which it is asked and from which the answers should be given clear? This aspect is a major one in reliability (which is an aspect of validity). It can be checked on through trying out the instrument in advance and following each trial by interviews to get at the structure of thought lying behind the responses which were given.

3. Does the question get at something stable, something relatively deep seated, well considered, non-superficial, and not ephemeral, but something which is typical of the individual or of the situation? This is a second large aspect of reliability. The evidence for it can come in part from preliminary evaluation and tryout, but it must in the main come from research and study extending over a long period. The answer will depend on the entire questionnaire and its administration.

4. Does the question pull? That is, will it be responded to by a large enough proportion of employees to permit it to have validity? Does it seem to be engaging enough to get responses with some depth and reality to them? The criterion is particularly important in the negative sense;

if persons do not respond the item cannot be valid.

5. Do the responses show a reasonable range of variation? Sometimes this range will not be as large as expected, sometimes it will be larger, but certainly if there is no range of response where there should be, the question cannot be valid. In judging this aspect one will have to rely upon his general knowledge of the population, and this may be supplemented by other evidence with which a particular item should be correlated. However, if there is no variation, there cannot be any correlation.

6. Is the information obtained consistent? Does it agree with what is known? Does it agree with expectancy--or if not, does its departure from what is expected seem to be valid? Does it fit in with the general pattern of information which is obtained, or does it seem to controvert other information? Does it form part of a pattern which is reasonable and logical?

7. Is the item sufficiently inclusive? That is, are the full scope and intent of the question so clearly indicated that the respondent will not omit parts of the response through lack of certainty as to what the question desired? For example, in a question on the educational history of the individual, he may wonder whether certain courses taken during service in the Armed Forces should be included, whether night school and correspondence courses are desired, etc.

8. Is there a possibility of using an external criterion to evaluate the questionnaire? In some cases it can be obtained.

APPENDIX B

PILOT

TEACHER QUESTIONNAIRE

1. Name _____

2. School _____

3. Grade Level _____

4. How many years have you been teaching?_____

5. What professional training have you completed? (Check One)
_____Bachelor's Degree_____Masters Degree_____6th Year Certificate
_____Doctoral Degree_____Other_____
(specify)

6. Have you taken any courses, seminars, or workshops for college credit that dealt with audiovisual materials or techniques?
Yes_____ No_____.
If yes, please indicate:

Name of Course	Year Attended

7. Which audiovisual devices do you use in the classroom?
(Frequently=at least once a week
Sometimes=less than once each week)

	Frequently	Sometimes	Never
a. Textbook	_____	_____	_____
b. Films	_____	_____	_____
c. Filmstrips	_____	_____	_____
d. Chalkboard	_____	_____	_____
e. Overhead Projector	_____	_____	_____
f. Opaque Projector	_____	_____	_____
g. Flannel Board	_____	_____	_____
h. Charts	_____	_____	_____
i. Maps	_____	_____	_____
j. Globes	_____	_____	_____
k. Radio	_____	_____	_____

1. Television _____ _____ _____

m. Other _____ _____ _____

8. Is the TV set you use located:
   a. _____in your own classroom
   b. _____in a central storage area for your department
   c. _____in a central storage area for the entire school

9. Please indicate the working condition of the set you use:
   a. _____Good condition
   b. _____Poor condition
   c. _____Not working

10. Do you have a personal copy of the School Television Service Teacher's Manual? Yes_____. No_____.

    If yes, do you use it to prepare for the telelessons?
    _____Always _____Sometimes _____Never

11. In preparing your lessons, do you attempt to coordinate the telelesson with other teaching aids? Yes_____. No_____.

    If yes, how?_____

    _____

12. Since September, 1966, have you used a Program Evaluation Form located in the back of your Teacher's Manual?
    Yes_____. No_____.

13. Are you familiar with the School Television Service Kinescope library? Yes_____. No_____.

    If yes, how many kinescopes have you used from that library since September, 1966?_____

14. Are you aware that you can receive college credit from the State University of New York by taking college courses over Channel 13? Yes_____. No_____. If yes, are you taking advantage of this opportunity? Yes_____. No_____.

15. During the current school year, what teacher training programs have you watched on Channel 13?

Name of Program	Number of Lessons Viewed

16. Please evaluate the following services and comment on any of them you might wish:

Service	Excellent _ _ Poor
a. Television Programing	1 2 3 4 5
Comments _____	
b. Time Schedule	1 2 3 4 5
Comments _____	
c. Teacher's Manual	1 2 3 4 5
Comments _____	
d. Kinescope Library	1 2 3 4 5
Comments _____	
e. Consultation Services	1 2 3 4 5
Comments _____	

17. Please fill out this page during the week of May 1, indicating which programs you view with your class during that week.

	A Did your class view it?	B	C How many in your class?	D Check here if you have viewed this with your class other times this semester
All About you	Yes____	No____	_____	_____
Roundabout	Yes____	No____	_____	_____
Pocketful of Fun	Yes____	No____	_____	_____
Places in the News	Yes____	No____	_____	_____
People and Their World	Yes____	No____	_____	_____
American Historic Shrines	Yes____	No____	_____	_____
Children of Other Lands	Yes____	No____	_____	_____
Tell Me A Story	Yes____	No____	_____	_____
Exploring Our Language	Yes____	No____	_____	_____
The Magic of Words	Yes____	No____	_____	_____
Once upon a Day	Yes____	No____	_____	_____
Music: U.S.A.	Yes____	No____	_____	_____
Alive and About	Yes____	No____	_____	_____
Scienceland	Yes____	No____	_____	_____
Understanding Science	Yes____	No____	_____	_____
Exploring Nature	Yes____	No____	_____	_____
Exploring Science	Yes____	No____	_____	_____
Working with Science	Yes____	No____	_____	_____
Parlons Francais I	Yes____	No____	_____	_____
Parlons Francais II	Yes____	No____	_____	_____
Parlons Francais III	Yes____	No____	_____	_____
Exploring Mathematics	Yes____	No____	_____	_____

18. If there has been one occasion when you have made very unique use of TV in your classroom, please elaborate below.

APPENDIX C

Administrator Survey Instrument

Date_____

District_____

Contact_____ Position_____

1. Was the decision to join the School Television Service made by administrators alone or by administrators and teachers together?

   Administrative_____ Cooperative_____

2. Is there a full time or part time audiovisual director in your district?

   Full time_____ Part time_____

3. What is the ratio of classrooms to sets in your district?

   _____ classroom(s) for each set.

APPENDIX D

FINAL

TEACHER QUESTIONNAIRE

1. School _____

2. Grade level_____

3. How many years have you been teaching?_____

4. What professional training have you completed? (Check one)
_____Bachelor's Degree _____Master's Degree_____6th Year Certificate
_____Doctoral Degree _____Other _____
(specify)

5. Have you taken any courses, seminars, or workshops for college credit that dealt with audiovisual materials or techniques? ____Yes ____No
If yes, please indicate:

Name of Course	Year Attended

6. Which audiovisual devices do you use in the classroom?
(Frequently=at least once a week
Sometimes=less than once each week)

	Frequently	Sometimes	Never
a. Textbook	_____	_____	_____
b. Films	_____	_____	_____
c. Filmstrips	_____	_____	_____
d. Chalkboard	_____	_____	_____
e. Overhead projector	_____	_____	_____
f. Opaque projector	_____	_____	_____
g. Flannel board	_____	_____	_____
h. Charts	_____	_____	_____
i. Maps	_____	_____	_____
j. Globes	_____	_____	_____
k. Radio	_____	_____	_____

1. Television _____ _____ _____

m. Other _____ _____ _____

7. Is the TV set you use located:
   a._____in your own classroom
   b._____in another classroom near you
   c._____in a central storage area for your department
   d._____in a central storage area for the entire school

8. Please indicate the working condition of the set you use:
   a._____Good condition
   b._____Poor condition
   c._____Not working

9. Do you have a personal copy of the School Television Service Teacher's Manual? Yes_____ No_____
   If yes, do you use it to prepare for the telelessons?
   _____Always _____Sometimes _____Never

10. In preparing your lessons, do you attempt to coordinate the television with other teaching aids? Yes_____ No_____

    If yes, how?_____

    _____

11. Since September 1966, have you used a Program Evaluation Form located in the back of your Teacher's Manual? Yes_____ No_____

12. Do you use the School Television Service kinescope library? Yes___No___

    a. If yes, how many kinescopes have you used from that library since September, 1966? _____

    b. If no, why do you not use the library?_____

    _____

13. Are you taking advantage of the opportunity to receive college credit for courses offered over Channel 13? Yes_____ No_____

    Why?_____

    _____

14. During the current school year, what teacher training programs have you watched on Channel 13?

Name of Program	Number of Lesson Viewed

(If you do not use TV in your classroom, please omit the following questions.)

15. Please evaluate the following services and comment on any of them you might wish:

	Service	Excellent				Poor
a.	Television Programing	1	2	3	4	5

Comments: _____

_____

_____

b.	Time schedule	1	2	3	4	5

Comments: _____

_____

_____

c.	Teacher's Manual	1	2	3	4	5

Comments: _____

_____

_____

d.	Kinescope library	1	2	3	4	5

Comments: _____

_____

_____

e.	Consultation services	1	2	3	4	5

Comments: _____

_____

_____

16. Please fill out the following information this week, indicating which programs you have viewed with your class during the week.

	A B Did your class view it?	C How many in your class?	D Check here if you have viewed this with your class other times this semester.
One-Two-Three	Yes____No____	____	____
Roundabout	Yes____No____	____	____
Window on the World	Yes____No____	____	____
People and Their World	Yes____No____	____	____
Americans All	Yes____No____	____	____
Geography	Yes____No____	____	____
Tell Me A Story	Yes____No____	____	____
The Magic of Words	Yes____No____	____	____
Sounds to Say, Letters to Learn	Yes____No____	____	____
Exploring Our Language	Yes____No____	____	____
Cover to Cover	Yes____No____	____	____
Sing, Children, Sing	Yes____No____	____	____
Once Upon a Day With Charity Bailey	Yes____No____	____	____
Adventures in the Arts	Yes____No____	____	____
Meet the Arts	Yes____No____	____	____
You and Eye	Yes____No____	____	____
All About You	Yes____No____	____	____
Alive and About	Yes____No____	____	____
Scienceland	Yes____No____	____	____
Exploring Nature	Yes____No____	____	____
Space Age Science	Yes____No____	____	____
World of Change	Yes____No____	____	____
Science Room	Yes____No____	____	____
Exploring Mathematics	Yes____No____	____	____

	A	B	C	D
Parlons Francais II	Yes____No____		_____	_____
Parlons Francais III	Yes____No____		_____	_____
Hablo Espanol	Yes____No____		_____	_____

17. If there have been any occasions when you have made very unique use of TV in your classroom, please describe them below:

APPENDIX E

Request to Serve on the "Sample" Panel

March 6, 1967

Sister Margaret, O.P.
Archdiocese of Newark
St. Mary's Convent
1447 Esterbrook Avenue
Rahway, New Jersey

Dear Sister Margaret:

The topic of my doctoral dissertation will concern the extent to which teachers use the School Television Service programs. In order to obtain a reasonable and representative sampling of teachers in our member school districts, I have chosen five criteria that should afford such a sample. They are: size (small - under 500 students; medium - 1500 to 2000 students; large - over 2000 students), affiliation (public, private, parochial), location (New York, New Jersey, Connecticut), length of membership in the School Television Service, and wealth (number of students who qualify for aid under Title I, ESEA 1965).

Based on your knowledge of the School Television Service, member school districts, and the communities of the Metropolitan New York Area, would you please comment on the list I have chosen. If, in your opinion, it is not representative of all the member districts, please indicate your reasons and any changes you would make.

Thanking you in advance for your cooperation, I remain,

Very truly yours,

Peter J. Dirr
Area Consultant
School Television Service

PJD/cjn

encl.