

INSTITUTIONAL AND PERSONAL VARIABLES OF
TEACHERS AS RELATED TO THEIR
UTILIZATION OF TELEVISION
TAPES PRODUCED BY
THE STILLWATER
TELEVISION
CENTER

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

Perhaps one of the best, most flexible tools ever to come to the aid of the educator has been educational television. Television has been acclaimed the most important educational development since the invention of the printing press. Television is providing us with the means to disseminate knowledge, culture, and values at an accelerated rate.

The basic components of closed-circuit television (CCTV) provide educators with a system which is inexpensive yet capable of providing a quality television program for use almost anywhere within the classroom, the teacher's lounge, the superintendent's office, or at local civic group meetings. Here one begins to see the flexibility of such a system in that it may be used as an aid to subject matter instruction, staff in-service, or for information dissemination and public relation programs (Thomas, 1970).

The Stillwater Public School System has developed an instructional television program that compares with the outstanding ones at the national level.

The Educational Support Systems Center (ESSC) and the Stillwater Television Center, located within the Stillwater,

Oklahoma, Public School System and funded under an ESEA Title III grant, are now working in conjunction with 40 participating school districts in Oklahoma Region Five to provide a method of accomplishing communications and in-service training.

The Region Five Educational Support Systems Center located in Stillwater was developed with these ideas as the framework for initiation of the program (Thomas, 1970).

1. Local school districts must obtain the basic CCTV components and become operational in regard to this medium.
2. Existing CCTV centers must be made available for the production, duplication, and distribution of information and in-service video tapes. Local school districts which have access to a video camera are themselves "mini" production centers which can produce local programs for use throughout all participating schools.
3. The CCTV center must develop methods of data in-pu-t regarding local in-service and information needs.

The implementation of the program will be finalized by these processes.

1. The CCTV center will:
 - A. Develop and produce video tapes which are designed to meet local in-service and information needs. Additionally, the center will coordinate the distribution of locally produced video programs.
 - B. Dub (duplicate) copies of each video tape for distribution among the participating schools.
 - C. Develop supportive materials to accompany each video tape.
 - D. Compile a mailing packet, including the video tape, supportive materials, and mailing instructions, and distribute these packets through the participating schools.
2. Participating districts will:
 - A. Receive the mailing packet with information as to the program content of the

- video tape.
- B. Determine the applicability of the particular video program to their local district needs.
 - C. Determine the appropriate school personnel, or others, who might benefit from viewing the video program.
 - D. Arrange for and use the video program (before school, during lunch, or during planning periods, etc.).
 - E. Re-package all materials and send them to another school as indicated in the enclosed mailing instructions.
 - F. As the following district receives the mailing packet they, in turn, will repeat events (2.A through 2.E).

The final destination of each mailing packet is the production center which will then retain one copy of the video program and supportive materials. All other copies will be recycled for a new communications program.

This television service is attempting to provide an effective and efficient means of educational information dissemination. However, no comprehensive studies have been made of this program to ascertain to what extent these television tapes are being utilized. In fact, many questions are presently unanswered in regard to the teacher's reaction to this program.

Statement of Problem and Purpose

Most of the research that has been done has been conducted and reported concerning the value and utilization of educational media including educational television. However, there seems to be lacking in the literature, to a large degree, comprehensive studies of the relationship between teacher characteristics and the utilization of instructional

media, especially educational television. This study is designed to investigate such relationships and attempts to identify and examine the teachers that most often utilize television tapes in their classroom instruction.

The problem then becomes one of answering the question: What characteristics, both personal and institutional, identify the teachers that most often utilize television tapes? To answer the question and provide additional information this study examines the practices of teachers in Oklahoma in Region Five, relative to utilization of educational television tapes.

The investigator has identified several institutional and personal variables of teachers that appear to be related to their utilization of video tapes produced by the Stillwater Television Center, funded by Title III, Elementary and Secondary Education Act.

The purpose to be served by this investigation, which is a descriptive survey type research, is to confirm and extend current knowledge about utilization of educational television, mainly the using of video tapes, and, provide an indepth study of practices used by teachers of Region Five in Oklahoma.

To solve the problem and achieve the purposes of the study, the Stillwater Television Center and the 12 participating school districts of the sample will be examined and those teachers using television tapes in their instruction will provide the data for this study.

Definition of Terms

Utilization: The number of television tapes originating from the Stillwater Television Center, used in the teachers daily teaching assignment.

Television tapes: Video tapes that are used to record sequences for later playback on television.

Mediated instruction: A method of teaching that uses some form of media as a tool during the formal process of instruction.

Film chain: An electromechanical device whereby a film projector is used to project an image from film into a television camera. This image may be (1) broadcast by open circuit, such as commercial television programming, (2) broadcast over closed-circuit, or (3) it may be dubbed or recorded onto video tape. The name comes from the fact that technicians can "chain" any film to the television media by use of the film-chain.

Instructional television: A system should bring about change in the processing of information between faculty and students; it must facilitate any role which the faculty determines it to play in improving instruction; it must have the flexibility to produce short, edited instructional sequences with a minimum of time and effort on the part of the faculty; and it should be cost effective. It can be transmitted both open or closed-circuit.

However, it most often is transmitted by closed-circuit.

Educational television: It includes the entire spectrum of

television, aimed directly or indirectly at informing or educating the viewer. It can be transmitted both open or closed-circuit. However, it most often is transmitted by open-circuit.

Closed-circuit television: A method of transmitting the television image by cable and at times by micro-wave and cable, to a select group.

Open-circuit television: A method of transmitting the television image and requiring a license from the Federal Communications Commission of the station broadcasting the signal. This is generally thought of as commercial television. The viewer is not a select group.

Hypotheses

The first eight hypotheses are concerned with institutional variables and the last five hypotheses are concerned with personal variables. In order to examine the relationship to be derived from the theoretical concepts under investigation, the following hypotheses will be tested:

1. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers located in schools more than 30 miles from the Center and teachers located in schools less than 30 miles from the Center.

2. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in elementary schools,

teachers in junior high schools or middle schools, and teachers in senior high schools.

3. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers in schools with an A.D.A. less than 2000 and teachers in schools with an A.D.A. over 2000.

4. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers in schools that provide all the video equipment that the teachers feel they need and teachers in schools that do not provide all the video equipment that the teachers feel they need.

5. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers who say that a lack of equipment or facilities has prevented them from taking full advantage of the Region Five Center resources and teachers who say that a lack of equipment or facilities has not prevented them from taking full advantages of the Region Five Center resources.

6. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose classroom is on the first floor of the school building, and teachers whose classroom is on the second floor of the school building, and teachers whose classroom is on the third floor of the school

building.

7. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in schools with an enrollment below 350 pupils, teachers in schools with an enrollment of 351-700 pupils, and teachers in schools with an enrollment of over 700 pupils.

8. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in schools whose expenditure per child for net operating expense is less than \$600, teachers in schools whose expenditure per child for net operating expense is \$601-\$699, and teachers in schools whose expenditure per child for net operating expense is \$700 and above.

9. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose experience is 0-5 years, teachers whose experience is 6-10 years, teachers whose experience is 11-15 years, teachers whose experience is 16-20 years, teachers whose experience is 21-25 years, teachers whose experience is 26-30 years, teachers whose experience is 31-35 years, teachers whose experience is 36-40 years, and teachers whose experience is over 40 years.

10. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between male teachers and female

teachers.

11. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose ages are 21-30, teachers whose ages are 31-40, teachers whose ages are 41-50, and teachers whose ages are over 50.

12. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose training includes a Bachelor's Degree, a Bachelor's Degree plus 15 hours, a Bachelor's Degree plus 30 hours, a Master's Degree, a Master's Degree plus 15 hours, and teachers whose training includes a Master's Degree plus 30 hours.

13. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers who have taken part in an in-service program provided by their local school and teachers who have not taken part in an in-service program provided by their local school.

Need for the Study

The Oklahoma Region Five Educational Support System Center located in Stillwater, Oklahoma was brought into being mainly by use of ESEA Title III federal funds. The selling point of the program for gaining the federal funds is outlined below:

The underlying foundation of the proposed project is the development of an efficient and

effective state-wide system of public communication to service the needs of the many public schools to which the state is responsible. The more direct purpose, however, is the establishment of a pilot operation which will demonstrate the feasibility, benefits, and requirements for a coordinated approach to the use of the television medium in the public schools. It is within this framework that the assessment of need and the design for this project have been developed (Beck, 1971, p. 1).

This educational program must have its materials of instruction, or "software", through which the content of its message can be presented to the learner. Thus, this project, centering on the medium of television, must logically prepare its reusable materials in the form of video tape.

Major production has been centralized where studio facilities and capabilities enable the production of quality materials. The project is flexible enough in design, to take advantage of the video tape recorder's strongest point, the ability to create individualized learning materials on the spot without the encumbrance of technical staff or the time lost through laboratory processing.

In line with the benefits which can be derived from educational television, this program can be only as good as the video tapes that are available for use. Moreover, the success of this program can readily be measured by how well the service is being utilized by the teachers.

This investigation is attempting to determine the characteristics of teachers who use this service most often. This information should be helpful to administrators that are thinking about joining the program.

The need for the study is to provide information for administrators so they can make an effective decision about the cost-benefit of the service and help them in determining if their school would, or is, benefiting from this service.

Assumptions and Limitations

It is assumed that mediated instruction is a desired mode of teaching. It is also assumed that the validity of the survey-type questionnaire can be established, at least in part, by a careful examination of each item.

The instrument is a straightforward device for recording the way teachers are willing to describe themselves and their teaching situation. With suitable assurances of confidentiality, it is assumed that most teachers will describe themselves and the situation within which they teach with relative candor.

Since this investigation is interested only in surveying those teachers who utilize the service, the investigator must rely on the honesty of the individuals in charge of the program in their school for determining information regarding how many teachers are indeed using this service.

CHAPTER II

REVIEW OF THE LITERATURE

Implications of Television for Education

Soon after the conclusion of World War II, television began to make great strides toward becoming the giant it is in our present day American society. As early as 1961 nine out of every 10 homes in America had television receivers (NEA, 1961, p. 9). To understand the full educational use of television for the classroom it must be looked upon as a means of communication that has broad effects on nearly all aspects of American life. Television has changed the movie industry beyond belief of many of Hollywood's film stars of times past. Television has pumped millions of dollars into all forms of sports activities. During the fall of each year, America becomes a nation of TV widows because the husbands are "glued" to the tube, rooting for their favorite team. Most Americans come home from work and go-in and watch the evening news so as to stay informed of the happenings of the day. Every morning, and especially on Saturday morning, the children of the family get up so they can watch "cartoons", a happening as American as apple pie. Perhaps more Americans have watched rockets blast-off for the moon, and have seen astronauts walk upon the surface of the moon than

any other event in the history of this nation.

The impact of television is being felt in the educational arena as well (Culver, 1967). Educational television is proving to be a very flexible tool for the educator to make use of in the classroom. More recently with continued improvement in technology the uses of television for educational purposes seem unlimited. Undoubtedly, it is a powerful force for disseminating knowledge, culture, and social values. Each year television is being utilized more and more to help educate the citizens of our society (Gordon, 1970).

Educational Television

Generally speaking educational television (ETV) is non-commercial in nature. It attempts to educate, although at times it can provide entertainment as well, if the viewer enjoys the subject matter. Since commercial television has done so much to change the nature of our present day students, it seems only fitting that television should also be employed to help educate them in the classroom. Benjamin C. Willis, general superintendent of the Chicago Public Schools in 1960 stated:

It is only fitting that education, which creates technological advance, which makes it possible for our engineers, scientists and scholars to invent and create new media--should take advantage of some of its products and attempt to use these new advances in the instructional process (Ford Foundation, 1961, p. 2).

Television can help to stimulate some individuals to learn easier than can many of the traditional methods. An

article by the NEA in 1961 states;

Experimentation has revealed that television can be used to provide a springboard for many worthwhile learning opportunities. Some programs have been designed to open up new areas for exploration; others to create an excitement in that which is to be learned; still others, to build curiosity and wonder, in an area so that the student is encouraged to pursue the subject on his own. Likewise, some programs have been used to provide materials which will stretch the learners mental vision, while others have been designed to build student readiness for an experience which the class is to undergo (NEA, 1961, p. 18).

Educational Television (ETV) does not modify the recognized goals of education according to the North Central Association; nor does it require the elimination of the classroom, or the elimination of the teacher. It does however, suggest alternate and possibly better techniques for reaching the same goals. Alert educators have always experimented with and learned to use new teaching methods and devices. Television holds promise of improving the effectiveness of the educational process (North Central Association, 1961, p. 8).

With the initial development of video tape recording devices, some 17 years ago, came the real bonanza for the educator. However, this first equipment sold for \$60,000 to \$75,000 per unit for black and white image handling (Lewis, 1967). Today, at least a dozen companies sell portable television recording equipment, much of which handles color as well as black and white. The cheaper units sell for approximately \$1,500. These recording "packages" usually include a portable video tape recorder (VTR) (weighing approximately

50 pounds), lens (preferably zoom), camera, tripod, monitor (ranging in size from a nine-inch to 25-inch screen), microphone and the necessary video and audio cables. Most of the portable VTR's use either one-half or one-inch tape. This tape costs between \$40 and \$75 per reel, depending upon the quality and brand purchased (Johnson, 1970, p. 109).

Much of the literature on the subject of ETV indicates a definite trend toward greater utilization of this medium at all levels of education throughout the United States (Ford Foundation, 1961). From the time that the first ETV station went on the air in May of 1953, facilities grew rapidly so that by the close of 1966 as many as 124 stations were listed in these four categories (Carnegie Commission, 1967, p. 20) of school controlled, university or college controlled, community controlled, and state controlled.

Open-Circuit, Closed-Circuit Programming

Educational television networks are not limited to one type of system but can, and do, include both open and closed circuits, depending upon the needs, interests and capabilities of the responsible agency. Open-circuit educational television is generally controlled by a state agency or authority. According to Dr. Lawrence Frymire, Director of the Illinois Telecommunication Commission and president of the State Educational Television Authority (SETA), forty-two states have educational television authorities, commissions or committees (Beck, 1971, p. 5).

In Oklahoma, leadership in open-circuit production and distribution has been accepted by the Oklahoma Educational Television Authority. Oklahoma presently has three educational television stations that broadcast in the state. They are - Channel 11 in Tulsa, Channel 13 in Oklahoma City, and Channel 25 which is operated by the Oklahoma City Public Schools.

In-school instructional programming is carried by all three stations and is broadcast during the daytime school period, five days a week while school is in session. Many school districts within the broadcast range of channels 11 and 13 utilize their programming while the material presented on channel 25 is primarily intended for the Oklahoma City Schools.

Since this study is interested primarily with the closed-circuit system no further discussion will be directed toward the open-circuit system. This is not to infer or imply that one system has more or less worth than the other. In fact many of the telecasts of the open-circuit television are "dubbed" or reproduced onto video tapes so they can be shown on closed-circuit television.

The nation's first large-scale closed-circuit television network was located in Washington County, Hagerstown, Maryland. This project began in 1956 and expanded until September, 1962, at which time every public school in the county was linked by a closed television circuit. In 1963, this television network reached 20,500 pupils, and contained 130

miles of coaxial cable (Lewis, 1961, p. 11).

To provide for the programming of this system, a television center was built near the board of education building. The facility included five separate studios, with individual control rooms and a film-chain and film-storage section. Video-tape equipment was also included. Through the use of closed-circuit flexibility, it is possible to operate all the studios and electronically distribute six programs (one from the film-chain) on the same cable, since each studio is tuned to a different channel (Lewis, 1961, p. 65).

The Washington County Project was set-up in 1956 as a five-year study. The project was sponsored by the Electronics Industries Association and the Fund for the Advancement of Education of the Ford Foundation, assisted by the Chesapeake and Potomac Telephone Company (Washington County Project, 1964, p. 11).

The Superintendent of Schools, William M. Brish, of Washington County in 1963 made the following statement regarding the project.

Television has been accepted as an important educational resource. Instructional television is a regular part of the school program and is now being used on an even broader scale than during the project. School staffs feel that instruction has been strengthened, pupil educational opportunity broadened, and achievement improved. All this has been accomplished by regular school personnel with a minimum of outside technical assistance. Savings resulting from the redeployment of personnel, equipment, and facilities, rather than additional funds, are being used to meet the costs. We in Washington County are, therefore, convinced that television has a definite place in the program, and, if properly used, can add a new dimension to education

(Lewis, 1961, p. 11).

Closed-circuit television, especially to the administrator of small to medium sized school systems, may appear somewhat out of reach in terms of monetary requirements. Actually, a basic closed-circuit television system is well within the fiscal reach of smaller school systems.

The experiences of many school systems now utilizing closed-circuit television have shown that aside from educational uses, the flexibility and use of this medium in other areas has resulted in budgetary savings which, in some cases, have exceeded the initial equipment cost. Experience has also shown that community fiscal support is readily accessible and enthusiastic if pursued by an energetic administration (Thomas, 1970).

Establishment of the Educational Support
Systems Center in Stillwater, Oklahoma

The Federal Elementary and Secondary Education Act of 1965 signed into law by the late President, Lyndon B. Johnson, opened the door for a very extensive program of federal aid to elementary and secondary schools throughout the nation. Through Title III of the act the opportunity was provided to bring into being a great variety of exemplary and innovative programs. The primary purpose was to translate the most recent knowledge about teaching and learning into widespread educational practice and to create an awareness of new programs and services that can be initiated

or implemented into large numbers of schools. One such program and educational project was the Oklahoma Region Five Television Center located in Stillwater, Oklahoma.

In January of 1971, the Stillwater Public Schools were awarded a grant by the United States Office of Education to develop a Region Five Television Center. The grant was made as a result of a joint request submitted through the Stillwater Public Schools on behalf of educators from 40 school districts that form the backbone of the Oklahoma Region Five District.

The intent of the grant was to provide the funds to buy the equipment to make the center operational. Also provided were funds for studio facilities at the Board of Education Building in Stillwater and salaries for all project personnel.

Region Five ESSC Staff Organization

The following staff titles were selected to implement the proposed program.

Region Five ESSC Executive Committee

This committee was composed initially of seven members from the Region Five area. They included:

1. Dr. C. B. Wright--Stroud
2. Mr. Fred Caudle--Mounds
3. Mr. Codean Holderby--Bristow
4. Mr. Jerry Kashwer--Bristow
5. Mr. Cecil Acuff--Perkins
6. Dr. Wendell Sharpton--Sand Springs

7. Dr. Wesley Beck--Stillwater

Project Director

The job description for the Project Director included the following:

Supervise all project activities.

Administer all budgetary activities.

Provide for two-way communications between all of those involved in the preparation and use of ESSC video programs.

Encourage and arrange the use of the resources of the community, human, material, and cultural, for instructional purposes of this project.

Coordinate the preparation and scheduling of the use of video taped television materials for use by agencies outside the region.

Work closely with the State Department of Education; specifically, the ESEA Title III Advisory Committee, the ESEA Title III Administrator and the On-Site Visitation Committee.

Prepare all status and evaluation reports as required by the State Department of Education (Beck, 1971, p. 62).

The Project Director also had responsibility for community relations. Therefore, he and his staff also:

Arrange and coordinate the use of the production in the Closed-Circuit Television (CCTV) facilities and help personnel for all community groups.

Encourage and arrange visitations of interested persons and patrons of the schools to the CCTV facilities.

Cooperate with other school districts and lay officials in providing information on the CCTV program.

Provide a public information program for interested community groups on the CCTV program (Beck, 1971, p. 63).

Director of Research and Evaluation

He was responsible to the Project Director for all phases of evaluation. He was responsible to develop and coordinate doctoral research, and plan for future evaluation. Dissemination of research findings was a major aspect of this position.

Director of Production, Distribution,
and Dissemination

He was responsible to the Project Director for the supervision of all ESEA III studio personnel. All requisitions for purchase of materials or equipment went through this office.

Two-Man Team: Director-Production
Consultant

This team was composed of one CCTV director and a production consultant who also developed script materials. Their responsibility was to develop video tapes for local educational agencies, title programs, and other educational agencies. Both members were directly responsible to the Director of Production, Distribution, and Dissemination.

CCTV Engineer

He was responsible to the Director of Production, Distribution, and Dissemination for the planning, development, and operation of the Stillwater Television Center. He was

responsible for the technical quality of all video tapes produced.

Technician-Dubber

He was responsible to the Project Director and worked closely with the Director of Production, Distribution, and Dissemination. The Technician-Dubber duties included:

Make copies of all requested video tapes.

Perform maintenance on dubbing center equipment.

Maintain order forms and ensure that all requested tapes are dubbed and accounted for.

Maintain quality control over dubbing center products.

Perform other functions which are approved through the Project Director.

Responsible for the proper storage of all master video tapes and for the care and upkeep of all equipment located in the Dubbing Center (Beck, 1971, p. 68).

Technical Specialist

He was responsible to the Director of Production and acted as a trouble-shooter within the Region Five. He worked closely, on-site, with all participating districts. He worked with districts on minor equipment problems such as correctly connecting connectors for CCTV systems. He also performed minor maintenance and made recommendations for service beyond his capability. He provided technical expertise for all educational agencies participating in the Region Five effort.

Director of In-service Development and
Training

This person was responsible to the Project Director and he had to determine in-service needs of the Region Five schools. He developed video formats (abstracts of the prospective in-service programs), for the respective tapes.

The entire ESSC Organizational Chart is shown in Figure 1., on page 24.

Regional Centers

In recent years, particularly since Title III, Public Law 89-10 was passed, there has been a renewed interest in regional centers. Through Title III funds several states have developed regional centers that operate as service centers to provide the leadership necessary in motivating local school districts to approach common problems in a cooperative manner. Many school districts today find it impossible, due to increasing school costs, to provide certain instructional materials and services necessary for the emerging curricula. However, the regional center can provide these materials and services on an efficient and economical basis. Many educational writers today agree with Ruark, who said,

Few school districts except the largest, can go it alone in a truly modern instructional media program of broad scope and impact, making available to teachers and learners the widening range and the multiplying depths and breadths of materials and devices demanded for modern instruction.

Reflecting a strong trend toward regionalization

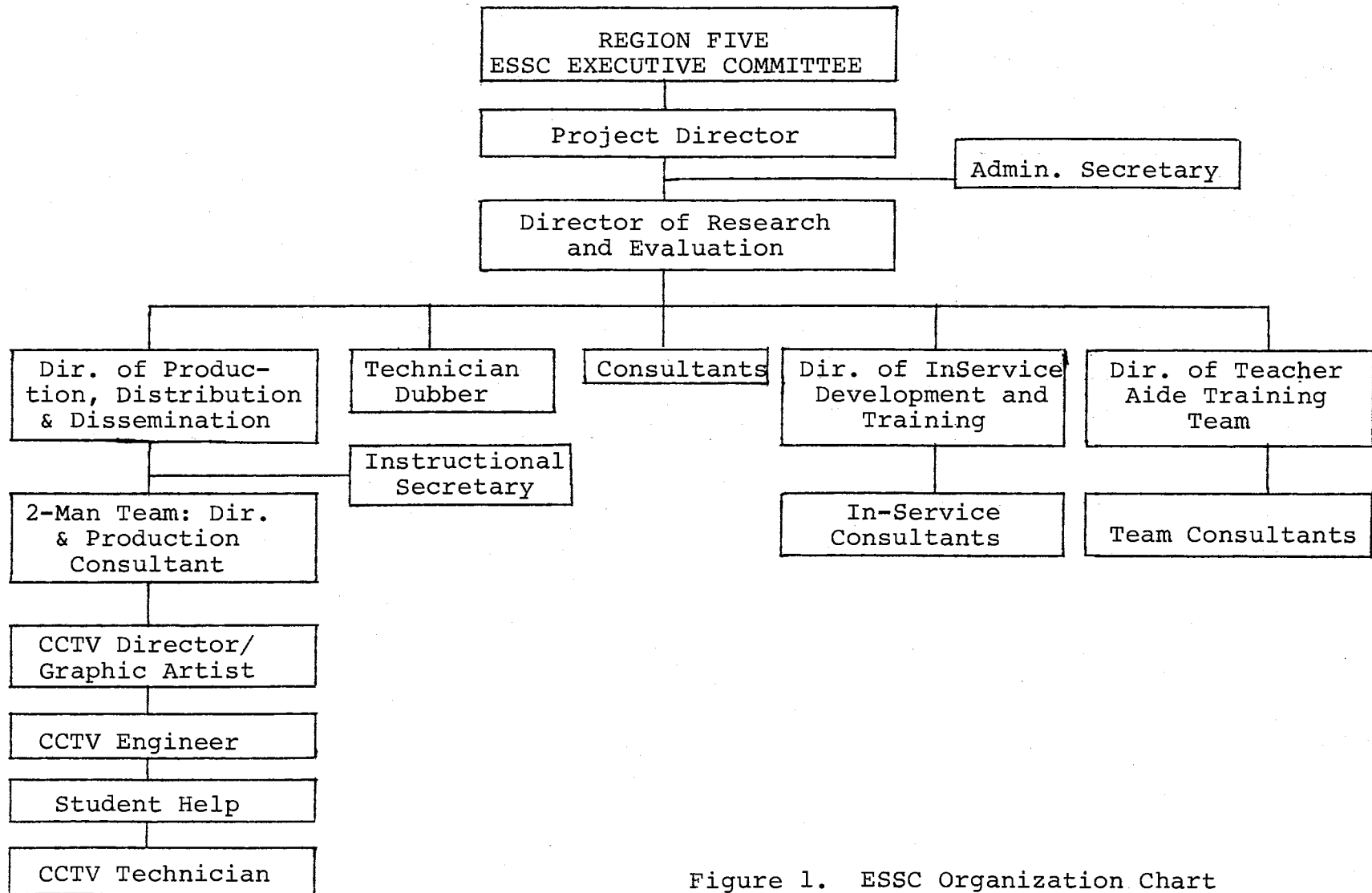


Figure 1. ESSC Organization Chart

of many professional services for education, the regional instructional materials center (IMC) offers a foundation and framework for further development, with the modern media for communication and learning as a fundamental element in every program.

The day is not far removed when we must provide central storage and retrieval of vastly larger quantities and broadened types and kinds of materials, probably by electronic techniques which, costly and exotic today, will be commonplace and routine tomorrow--as commonplace and routine as satellite communication has already become (Ruark, 1965, p. 171).

Regional centers can provide for educational improvement in individuals by giving them an opportunity to realize their maximum educational potential. This philosophy of Title III programs has stimulated the development of many state plans to make use of regional centers (Estes, 1967).

By 1967, Texas had established 20 regional centers covering the entire state by utilizing ESEA, Title III funds (Cutter, 1967, p. 42). Other states such as California, New York, Oregon, and Pennsylvania (Konick and Jenkins, 1966, p. 554) also make extensive use of Title III regional centers. Oklahoma presently has six regional centers in operation and many other states are beginning to make use of regional centers.

Educational Television in Teacher Education

One of the main advantages of the regional centers is the ease it presents to the teachers in utilizing the services provided by them. But what has encouraged and stimulated this growing interest on the part of the teachers to use this television media? Perhaps as much as anything to

bring about the experimentation and utilization of educational television tapes, has been the extensive utilization of closed-circuit television by teacher training institutions. Most colleges and universities presently make use of educational television in their teacher education programs. For example, video taping equipment has been used on the campus of Oklahoma State University for approximately eight years. The office of Education Television Services lists those departments actively involved with video tape recording equipment as:

1. The College of Education. It was the first division on campus to use the equipment. Instructors video tape student teachers during their methods courses on campus and in their student teaching centers for purposes of self-evaluation.

2. The Mechanical Engineering and Computer Science Departments. Faculty members here use video tapes of lectures and demonstrations to supplement the course content as well as provide additional information to the students through video tapes that can be checked out in the library and viewed on equipment in the library.

3. The Department of Athletics. This department uses tapes to film practice sessions so they can go over and over the plays to pick out weak points and correct errors in their practices.

4. The Department of Home Economics Education. Video equipment is used in the techniques and materials class for

the purpose of recording 10-15 minute presentations and demonstrations for student teacher self-evaluation.

5. The Department of Agricultural Education. Instructors use video tapes in the methods courses for student teachers prior to the time student teaching begins. This department uses video tape to record role playing situations for later playback to supplement the lesson being taught.

6. The Department of Speech. This department video tapes diagnostic and therapy sessions between the speech therapist and the patient for later critiquing by the supervisor. The department also prepares demonstration tapes for use in the speech classes.

7. The Southwest Center for Safety Education and Research. It uses video tapes in driver education in the training of student drivers and in the preparation of high school and college driver education teachers.

With the frequent mention of video tape recordings in the literature of teacher educators, it is important to realize that this equipment does constitute a potentially valuable, flexible new educational tool. Like all other educational tools, it will be valuable only to the extent that educators creatively put it to use. Preliminary indications strongly suggest that video taping equipment holds great potential for the improvement of teacher education (Johnson, 1970, p. 110).

The use of VTR's has allowed teacher educators to have samples of teaching-learning situations for purposes of

analysis to:

Develop teachers' insights into classroom behaviors.

Effect changes in teaching strategies.

Gather data in retrievable form for the development of sound programs in teacher education.

Move toward a workable theory of instruction (Morrison, 1969, p. 43).

The research literature of video tape recordings related to teacher education is continuing to increase, and reports of practice are relatively common. A thorough analysis of current uses shows that video tape recordings are used to provide:

Observation material for a class or for an individual student.

Immediate private feedback for a student teacher or counsellor trainee concerning his performance.

Evaluation of performance by a supervisor, or a supervisor and a trainee.

Specific preplanned recorded lessons as a basis for methods course instruction.

Situational materials to be used with simulation procedures or case study analysis.

Feedback and supervisory analysis prior to immediate replication of performance.

Both demonstration and feedback in developing specific teaching behaviors.

Evaluation of teaching performance on a before-and-after or time lapse basis.

Research analysis of teacher behavior, pupil behavior, or teacher-pupil interaction.

Instructor-prepared materials for use with CCTV, dial access or film loop independent study activity (Cyphert, 1967).

It has been stressed in the literature that studying teaching styles in the classroom by video tape is distinctly different from studying the teaching style of a teacher on educational television who is trying to teach children through the medium of television. The two situations should not be confused (Burleigh, 1967).

Teachers and Methods of Instruction

The value of mediated instruction in the classroom has been discussed with vocal advocates both for and against this type of instruction. However, it is not the intent of this study to resolve the argument. In fact, it is a premise of this study that mediated instruction is a desired mode of teaching. The assumption on which the Stillwater Television Center was established is that various educational objectives represent different kinds of learning and suggest different types of instructional strategies. As Briggs stated in an article on instructional media:

These kinds of learning in turn, are established by different sets of conditions. The sets of conditions of learning in their turn are made possible by the manipulation of instructional events. The way of providing or producing these instructional events is to apply appropriate stimuli. The sensory mode to be stimulated, and the detailed characteristics of the needed stimuli, together are considered in order to select the mechanisms or media to be employed to present the stimuli. Media are thus vehicles for stimulus presentation (Briggs, 1967).

Instructional films, including television video tapes, are one type of vehicle for stimulus presentation that has

constantly gained in acceptance by teachers. In a 1967 report by the National Education Association Research Division, 74.3 per cent of the teachers indicated they used films as an instructional resource to some unidentified degree (NEA, 1967).

Administrators look with favor on teachers who use tapes and other audio-visual materials. One study, done at the University of Missouri with the University's Audio-Visual Department, found that administrators consider audio-visual teaching materials as desirable instructional tools (Ballew, 1970).

A research study by VanderMeer is very interesting in that it analyzed the extent to which motion pictures can be substituted for teachers. In this research he compared the relative effectiveness of instruction of ninth grade general science students for an entire semester by (a) film alone, (b) film plus study guides, and (c) conventional classroom methods without films (VanderMeer, 1969). With the two film methods, 44 films were shown twice and the teacher merely took roll and maintained order. Method A consumed only about 80 per cent of the time used by the other two methods; yet all three methods were of equal effectiveness in teaching the factual information. The only difference seemed to favor Method C, only because it was less expensive due to the fact no films were used at all.

During the past few years, research on the value of media has diminished with the direction being transferred to

research on multi-media design. The present concern seems to be focused on how media can be incorporated into the instructional process to promote the highest degree of learning. Accepting the assumption that media are valuable and can be used efficiently in the learning process, brings another problem to light.

Value, in itself, will not necessarily insure that media utilization will be implemented as an instructional strategy by teachers. Certain personal factors of teachers, and certain institutional forces affecting media utilization, may provide barriers that need to be overcome. The purpose of this study is to examine and analyze the relationships between some of these personal and institutional variables and the utilization of television video tapes.

Personal Variables of Teachers

Studies by (Graves, 1965), (Streeter, 1967), and (Cresser, 1969), indicated that sex, age, and teaching experience are not related to the utilization of films. In contrast, however, a significant study by (Kelley, 1960), tended to dispute those findings. Whereas, Kelley included many of the same variables as those in the research reported in this thesis, he studied them only in relationship to the teachers' attitudes toward audio-visual materials. However, in the analysis of the data, he did find a significant relationship at the .01 level between attitudes and frequency of use. He also found relationships between sex, age and

training and the attitude toward audio-visual materials. The present study extends Kelley's work to investigate the relationship between utilization and each of the identified variables listed in the hypotheses of this study.

Institutional Variables of Teachers

Since teachers generally perform their duties within the confines of a school environment, it follows that the elements within the institutional environment may affect the degree to which television tapes and other resources are used. The institution, as defined for this study, consists of the actual physical plant and resources available to the plant, and to the teachers. The Stillwater Television Center with all its resources is an extension of each of the schools participating in its services. For teachers to use television tapes and other media, adequate facilities and equipment must be available.

In a study comparing and contrasting media centers that exist within individual schools and within a school system, (Hall, 1964) found that ready accessibility, short distance from the center, adequate time in the teaching day, and trained media personnel to provide assistance, were important factors in achieving maximum use of the media centers by teachers. Ballew concluded, in his study of the audio-visual department of the University of Missouri, that schools using the services of the department are limited by the lack of audio-visual equipment and the level of expenditure per pupil

for audio-visual education. In addition Ballew found that teachers in the subject areas of mathematics, foreign languages, art, music, and language arts need to be encouraged to make wider use of audio-visual materials, and that teachers in the elementary schools and smaller high schools need similar motivation. These and other kinds of institutional variables, such as the nature of the school and school setting, are investigated and analyzed in this study.

Summary

The implications of television for educational purposes are numerous; it appears to hold promise of improving the effectiveness of the educational process. Much of the literature on the subject of educational television indicates a definite trend toward greater utilization of this medium at all levels of education throughout the United States.

Open-circuit educational television is generally controlled by a state agency or authority. In Oklahoma there are three stations that broadcast in the state. They are Channel 11 in Tulsa, Channel 13 in Oklahoma City and Channel 25, which is operated by the Oklahoma City Public Schools.

Closed-circuit educational television was reviewed, including the Washington County, Hagerstown, Maryland project that started in 1956. Also reviewed was the Region Five Television Center located in Stillwater, Oklahoma. Included

in this examination was an investigation of the Region Five ESSC Staff Organization.

Next, the concept of the regional centers was examined. It was noted that the Title III program has stimulated the development of many state plans to make use of regional centers.

Educational television is being utilized in many different ways on the campuses of colleges and universities all across the country. The main users of educational television are found in departments of teacher training institutions. It was noted that seven departments on the campus of Oklahoma State University utilize video tapes in teacher training.

Teachers and their methods of instruction, in regard to video tape utilization, show various educational objectives, represent different kinds of learning, and suggest different types of instructional strategies.

Several studies were examined in an effort to locate research related to teacher characteristics and especially to certain personal and institutional variables of teachers because the main thrust of this study is aimed toward this area.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

After several years of research into educational television by teachers and administrators, one conclusion is clear. Television is a means by which good teaching can be spread to more people than ever before, probably at less cost per student than present instruction.

In addition to reaching larger groups of students, educational television offers unique advantages as a medium of instruction. A report from the Ford Foundation states these advantages as:

First, television can vastly extend the reach of the nation's best teachers; and second, television can bring to students educational experiences that are quite beyond the potential of conventional means of instruction (Ford Foundation, 1961, p. 4).

Tarbet states that most teachers are eager to obtain any help available in order to make their teaching more effective. Specialists may be brought into the classroom by educational television to discuss topics or bring exhibits of materials which might not otherwise be available to the students (Tarbet, 1961, p. 17).

Educational television must, however, be seen in its true light by educators. That is, it is supportive of the

teacher, and likewise, totally dependent upon the teacher for maximum usage. In school systems that have provided the equipment for educational television, the classroom teacher is the person in the position most likely to spell success or failure for the program. Since the classroom teachers play such an important role in the ultimate success of the Oklahoma Region Five Television Center, it is only proper that the teacher be the focus point of this in-depth study. The results of all studies conducted in relation to this project will be presented to the State ESEA III Advisory Committee, all Oklahoma ESEA III project directors, the Department of Vocational and Technical Education, the State Department of Education, and the Oklahoma Television Authority. The rationale of the study is to provide information to both the center and to school administrators about teachers utilization of television tapes in the classroom.

Scope of Study

Population

The population of this study was all 40 school districts (See Table I) in the Oklahoma Region Five Educational Support Systems Center. The population included all teachers K-12 that used at least one television tape produced at the Stillwater Center during the 1972-73 school year. This study is only interested in the teachers that have used the television tapes; all other, including non-teaching administrators, school nurses, and non-certified personnel,

will not be included in the investigation.

Sample

For reasons of cost and feasibility, the decision was made to use a random sample of the 40 cooperating school districts. The first step in obtaining the random sample was the coding or assigning of a number to each of the 40 school districts composing the Oklahoma Region Five of the Educational Support Systems Center. The researcher made every effort to insure complete random sampling as outlined by Guilford.

To satisfy the conditions of random sampling in a strictly mathematical sense, we should replace each member drawn, after noting its value, before drawing the next member. Each individual should have an equal opportunity of being selected in every drawing. Having lost one member, the population is different from what it was originally (Guilford, 1965, p. 142).

Twelve numbers were drawn one by one from a small box and the numbers were written down for coding purposes. On three occasions numbers that had been previously drawn were pulled from the box. When this happened the numbers were simply replaced in the box without recording them on the list. The twelve schools that were drawn are listed in Table II.

Only the 210 teachers that had used at least one video tape during the 1972-73 school year produced in the Stillwater Center were asked to fill out the questionnaire. Reported in Table II are the numbers of teachers from the random selected sample that used the video tapes and the per cent of the total number of teachers in each school making use of the service.

TABLE I
PARTICIPATING SCHOOLS OF THE OKLAHOMA
REGION FIVE DISTRICT

School	School District No.	No. of Teachers
Agra	134	11
Allen-Bowden	35	10
Berryhill	10	33
Bixby	4	80
Bristow	2	75
Broken Arrow	3	219
Chandler	1	45
Cushing	67	106
Davenport	3	20
Depew	21	19
Drumright	39	44
Glencoe	101	17
Glenpool	13	16
Gypsy	12	5
Jenks	5	106
Kellyville	31	29
Keystone	15	12
Kiefer	18	18
Leonard	18	5
Liberty Mounds	14	21
Lone Star	8	18
Mannford	3	38
Meeker	95	32
Milfay	1	5
Mounds	5	25
Oak Grove	104	5
Oilton	20	16
Olive	17	22
Perkins	56	39
Pleasant View	17	3
Prague	103	40
Pretty Water	34	4
Ripley	3	18
Sand Springs	2	229
Sapulpa	33	175
Shamrock	56	3
Stillwater	16	212
Stroud	54	54
Wellston	4	26
Yale	103	34

TABLE II
SCHOOLS SELECTED BY RANDOM SAMPLE

School	No. of Teachers	No. of Teachers Using Video Tapes	Per Cent of Total
Broken Arrow	219	10	4.6
Cushing	106	12	11.3
Davenport	20	5	25.0
Glenpool	16	5	31.2
Liberty Mounds	21	3	14.3
Mounds	25	5	20.0
Olive	22	9	40.9
Perkins	39	8	20.5
Ripley	18	16	88.8
Sand Springs	229	12	5.2
Stillwater	212	111	52.3
Yale	34	14	41.1
Total	961	210	21.8

The twelve districts vary somewhat in wealth. In the following table (Table III), the assessed valuation per student, and the annual expenditure per student for the 1972-73 fiscal year are shown.

TABLE III

THE ANNUAL EXPENDITURE PER STUDENT AND THE ASSESSED
VALUATION PER STUDENT FOR DISTRICTS IN THE
SAMPLE FOR THE 1972-73 SCHOOL YEAR

School	Annual Expenditure Per Student	Assessed Valuation Per Student
Broken Arrow	570.18	5,221.
Cushing	687.38	7,515.
Davenport	585.96	6,265.
Glenpool	523.27	4,271.
Liberty Mounds	600.33	3,624.
Mounds	545.90	2,351.
Olive	607.73	3,957.
Perkins	702.20	5,750.
Ripley	643.82	5,450.
Sand Springs	623.05	4,676.
Stillwater	727.21	6,651.
Yale	693.60	6,523.

The twelve districts ranged in wealth from an assessed valuation per pupil of \$2,351 to an assessed valuation per pupil of \$7,515.

The per pupil expenditures of the twelve districts ranged from a low of \$523.27 to a high of \$727.21. The mean expenditure per child among the districts is \$625.89, and

the mean assessed valuation per student is \$5,188.

The twelve districts vary in student population. In the following table, (Table IV) the student population for each of the districts used in the study is presented.

TABLE IV
THE AVERAGE DAILY ATTENDANCE PER DISTRICT

District	Average Daily Attendance
Broken Arrow	4,556
Cushing	1,757
Davenport	388
Glenpool	326
Liberty Mounds	378
Mounds	460
Olive	387
Perkins	693
Ripley	372
Sand Springs	4,635
Stillwater	4,244
Yale	532

The twelve districts which were used in the study ranged

in Average Daily Attendance from a low of 326 in Glenpool to a high of 4,635 in Sand Springs.

Development of the Questionnaire

The basic purpose of this study was to confirm and extend current knowledge about utilization of video tapes by teachers in Oklahoma in Region Five. To accomplish this purpose, a questionnaire was constructed. The Region Five Television Tape Utilization Questionnaire, Form A, was developed by the researcher and Dr. Larry Thomas of the Stillwater Television Center. Since it is a survey type questionnaire, its validity was determined through a careful examination of each item.

Part I of the Questionnaire

The first section, which provides demographic data about the teachers in the sample, contains nine categories as follows: sex, age, education, years of experience, name of institution where last degree was received, subject area of major teaching assignment, grade level of teaching assignment, floor level of classroom, and school identification.

Part II of the Questionnaire

This section contained 15 questions to which the teachers could most often answer either "yes" or "no". In addition, for question number one, the teacher was asked for the total number of television tapes used from all sources

during the 1972-73 school year and also for the number that came from the Stillwater Television Center. Question number two asks the respondent, to the best of your knowledge: To how many of your classes did you show the video tape? How many of your students viewed the tape? How many additional teachers in your school used the same video tape? To how many classes did these additional teachers show the video tape? Total number of students that viewed the film shown by these additional teachers.

Cover Letter

A short cover letter was attached to the questionnaire for the purpose of instructing the teacher to return it to the school principal or person in charge of the audio visual program when completed. Due to the simplicity of the questionnaire it was felt no lengthy cover letter was needed.

Analyses of Data

The study consisted of the independent variables of two types, called personal and institutional. The independent variables that are personal related include: (1) sex, (2) age, (3) education, (4) years of teaching experience, and (5) media training. The independent variables that are institutional related included: (1) distance from Stillwater, (2) grade level, (3) size of school, (4) schools that provide media assistants, (5) floor level of classroom, (6) size of town and (7) expenditure per child. The dependent

variable in each case is the total number of television tapes utilized by teachers during the 1972-73 school year that were produced in the Stillwater Television Center.

The investigation is to determine if there is a relationship between the independent and dependent variables. Thus an appropriate statistical test was needed.

The Statistic

When selecting a statistical test the researcher must consider the way the sample scores were drawn, the nature of the population from which the samples were drawn, and the type of measurement or scaling which was employed in the scores (Siegel, 1956, p. 18).

Whenever statistical tests, parametric or nonparametric, are used, certain assumptions are made. Nonparametric statistical tests are hemmed in by fewer and less stringent assumptions than parametric tests. They are particularly free of assumptions about the characteristics or the form of the distributions of the populations of research samples. Thus they are also called distribution-free tests. As Siegel puts it, "A non parametric statistical test is a test whose model does not specify conditions about the parameters of the population from which the sample was drawn (Siegel, 1956, p. 31).

Since the population could not be assumed to be a normal distribution and the data was nominal in nature, a nonparametric test was selected.

Frequency data can be divided into various categories, and the difference between the frequencies within the categories can be analyzed. One statistical technique appropriate for examining frequency data is chi square (χ^2). The chi square test may be used to determine the significance between two or more independent groups (Siegel, 1956, p. 104).

The hypothesis, when using the chi square test, is usually that two groups differ with respect to the relative frequency with which group members fall in several categories.

The principle characteristics of chi square are that it applies easily to any sample size and it utilizes nominal data (Guilford, 1956). The data are generally presented in a contingency table which shows the observed frequencies.

According to Siegel there are three requirements for chi square. (1) That as many categories as possible will be used in order to make the test more sensitive, (2) no more than twenty per cent of the cells will have an expected frequency less than 5 and none will have an expected frequency less than one, and (3) all observations can be considered as independent. (Siegel, 1956, p. 179).

Collection of Data

This study was directed only to the teachers who used television tapes during the 1972-73 school year. The person

in charge of the media service in each school was asked to assist in the data collection. In the larger schools this person was generally the media director or audio-visual director, in the smaller schools this person most often was the school principal. Each school in the sample was visited twice in person by the investigator, first to deliver the questionnaires and next to collect the completed forms.

The persons in charge of the program for each school were first asked for the approximate number of teachers that had utilized television tapes during the past school year. Secondly, they were asked to hand out and collect all completed questionnaires from the teachers that were utilizing the tapes. It was hoped that this method would insure a greater number of returns from each school. The investigator returned in one week and picked up the completed questionnaires.

Since this study was interested only in the teachers that utilized the service it soon became apparent that the larger systems, with the exception of Stillwater, were not using the service as extensively as the smaller schools.

Treatment of Data

Tabulation of the Instruments

Responses to the Region Five Television Tape Utilization Questionnaire, Form A, were hand scored by the writer. These scores, along with the information from the demographic questionnaire were transferred to frequency sheets. This

condensed the material to a more workable size for applying the statistical treatment. The chi square test was applied to the data by the researcher and the results were listed in contingency tables for critical observation.

Responses of Teachers by Sex

One can see from looking at Table V, of the 210 teachers of the sample, that female teachers use the television tapes more than the male teachers. Olive is the only school that has more male teachers than female using the television tapes. In Cushing the male and female teachers were tied at six each. In all other schools the female teachers were, from a high ratio of 9 to 1 in Broken Arrow to a low ratio of 3 to 2 in Mounds, using more of the tapes than the male teachers. The total of 159 to 51 is more than 3 to 1 in favor of the women teachers. The reader must be cautioned however, that this is of little significance without knowing the percentage of male and female teachers employed in each school.

Responses of Teachers by Age

Most of the 210 teachers in the sample (47%) using television tapes were in the 21-30 year age category. The number of responses for each of the age categories is shown in Table VI. Broken Arrow had 80% of the responses in the 21-30 year age bracket. Liberty Mounds has 100% of the responses in the 21-30 year age bracket. Perkins had the lowest percentage in this age bracket with 38%, followed by

Stillwater with 39%, both Davenport and Glenpool had 40% and Cushing and Sand Springs had 50%.

TABLE V
RESPONSES OF TEACHERS BY SEX

School	Male	Female
Broken Arrow	1	9
Cushing	6	6
Davenport	1	4
Glenpool	1	4
Liberty Mounds	0	3
Mounds	2	3
Olive	5	4
Perkins	2	6
Ripley	7	9
Sand Springs	4	8
Stillwater	20	91
Yale	2	12
Total	51	159
N=210		

TABLE VI
RESPONSES OF TEACHERS BY AGE

School	21-30	31-40	41-50	Over 50
Broken Arrow	8	2	0	0
Cushing	6	3	3	0
Davenport	2	3	0	0
Glenpool	2	0	3	0
Liberty Mounds	3	0	0	0
Mounds	3	2	0	0
Olive	5	2	2	0
Perkins	3	1	3	1
Ripley	7	5	0	4
Sand Springs	6	2	2	2
Stillwater	43	29	16	23
Yale	10	2	2	0
Total	98	51	31	30

N=210

At the other end of the age categories, Ripley had 25% in the over 50 age bracket followed by Stillwater with 21%; Sand Springs had 17% and Perkins had 13%. None of the other schools using television tapes, had teachers in this age bracket.

Responses of Teachers by Educational Level Attained

Sixty per cent of the teachers using the television tapes in Broken Arrow, Davenport, and Mounds had a B. S. Degree. Seventy-one per cent of the respondents in Yale had a B. S. Degree, followed by Liberty Mounds with 67% and Olive with 56%. Examination of Table VII shows the 210 responses by educational level attained. Thirty-six per cent of the respondents had a B. S. Degree, 21% had a M. S. Degree, and 4% had a M. S. Degree plus 30 hours.

Responses of Teachers by Years of Experience

One can see from examining Table VIII that 50% of the 210 respondents had from 0-5 years of experience. Twenty-three per cent had 6-10 years of experience. Ten per cent had 11-15 years of experience. Five per cent had 16-20 years of experience and four per cent had 21-25 years of experience. The three categories 31-35, 36-40 and over 40, each contained one per cent of the respondents using television tapes that were produced in the Stillwater Television Center.

TABLE VII
 RESPONSES OF TEACHERS BY EDUCATIONAL LEVEL ATTAINED

School	BS	BS+15	BS+30	MS	MS+15	MS+30
Broken Arrow	6	2	0	2	0	0
Cushing	3	0	0	3	6	0
Davenport	3	0	1	1	0	0
Glenpool	2	2	0	1	0	0
Liberty Mounds	2	0	0	1	0	0
Mounds	3	0	0	2	0	0
Olive	5	1	0	2	1	0
Perkins	4	0	1	2	1	0
Ripley	5	4	2	3	2	0
Sand Springs	4	1	2	2	1	2
Stillwater	29	17	16	23	19	7
Yale	10	2	0	2	0	0
Total	76	29	22	44	30	9
N=210						

TABLE VIII
 RESPONSES OF TEACHERS BY YEARS OF EXPERIENCE

School	0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	Over 40
Broken Arrow	8	1	1	0	0	0	0	0	0
Cushing	4	5	3	0	0	0	0	0	0
Davenport	3	1	1	0	0	0	0	0	0
Glenpool	3	0	0	2	0	0	0	0	0
Liberty Mounds	3	0	0	0	0	0	0	0	0
Mounds	3	2	0	0	0	0	0	0	0
Olive	7	0	2	0	0	0	0	0	0
Perkins	4	2	0	0	1	0	0	0	1
Ripley	7	3	2	0	0	4	0	0	0
Sand Springs	7	2	0	1	0	0	1	0	1
Stillwater	46	29	11	8	8	6	1	2	0
Yale	10	4	0	0	0	0	0	0	0
Total	105	49	20	11	9	10	2	2	2

N=210

Summary

Teachers from a randomly selected sample of the 40 schools composing the Oklahoma Region Five District were given questionnaires in an attempt to investigate utilization of the television tapes produced by the Stillwater Television Center. It was hoped by the writer to identify certain personal and institutional variables that were related to use of television tapes in classroom teaching.

Rationale was given for choosing the statistic chi square for the testing of the hypotheses. The principal characteristics of chi square were identified as (1) it applies easily to any sample size and (2) it utilizes nominal data.

The study was directed only to the 210 teachers in the sample that used television tapes during the 1972-73 school year.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Presented in this chapter are the statistical analyses of the hypotheses which guided the investigation. Also presented is an analysis of the demographic data. These statistics were checked for significance at the .05 level.

Hypotheses

The hypotheses concerned with the institutional variables will be presented first.

- H. 1. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers located in schools more than 30 miles from the Center and teachers located in schools less than 30 miles from the Center.

To test this hypothesis, the schools less than 30 miles from Stillwater were scored in one group and found to have a mean utilization of 8.45. The schools more than 30 miles from Stillwater were scored in the other group and found to have a mean utilization of 7.06. The relevant data appears in Table IX.

TABLE IX

MEAN UTILIZATION OF TELEVISION TAPES BETWEEN SCHOOLS
 LESS THAN 30 MILES FROM STILLWATER AND SCHOOLS
 FARTHER THAN 30 MILES FROM STILLWATER

School	Mean Utilization of Television Tapes
Less than 30 miles from Stillwater	8.45
More than 30 miles from Stillwater	7.06
$\chi^2 = .19$	$df = 1$
	$p \geq 0.05$
$\chi^2 .05; 1 = 3.84$	

The chi square value for testing the hypothesis was .19. With one degree of freedom, Yates's correction for continuity was applied (Guilford, 1956). The value was not significant at the 0.05 level. The hypothesis was accepted.

An examination of the schools of the group that were less than 30 miles from Stillwater was made. Yale had a mean utilization of 4.25 followed by Stillwater with a mean utilization of 9.46 and Ripley had the highest mean utilization at 10.75. The relevant data appears in Table X.

TABLE X
 MEAN UTILIZATION OF TELEVISION TAPES AMONG SCHOOLS
 LESS THAN 30 MILES FROM STILLWATER

School	Mean Utilization of Television Tapes
Cushing	5.00
Perkins	4.25
Ripley	10.75
Stillwater	9.46
Yale	3.21
$\chi^2 = 6.88$ $df = 4$ $p > 0.05$	
$\chi^2 .05; 4 = 9.49$	

The chi square value for testing the data was 6.88. With four degrees of freedom, the value was not significant at the 0.05 level.

The schools of the group that were more than 30 miles from Stillwater are examined in Table XI.

The chi square value for testing the data was 18.52. With six degrees of freedom, the value was significant at the 0.05 level. It should be noted that the Broken Arrow school had a very large mean utilization due to the fact that one of the teachers there reported a very large usage of television tapes. This may be the reason for the relationship.

TABLE XI
 MEAN UTILIZATION OF TELEVISION TAPES AMONG SCHOOLS
 MORE THAN 30 MILES FROM STILLWATER

School	Mean Utilization of Television Tapes
Broken Arrow	17.20
Davenport	5.40
Glenpool	3.60
Liberty Mounds	4.66
Mounds	5.40
Olive	7.11
Sand Springs	5.33
$\chi^2 = 18.52$	$df = 6$
	$p < 0.05$

$\chi^2 .05; 6 = 12.59$

A breakdown of the data that was used in the investigation of Hypothesis Number 1 can be found in Table XII. The Stillwater School System had the greatest utilization of television tapes by the largest number of teachers. Also 78% of the tapes were used by the schools less than 30 miles from Stillwater, while only 22% of the films were used by schools more than 30 miles from Stillwater.

It should be noted that the Stillwater School System used 60% of the total tapes utilized in this study.

TABLE XII
 NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED
 BY SCHOOLS IN RELATION TO THEIR DISTANCE
 FROM STILLWATER

School	No. of Tapes Used	No. of Teachers
<u>Less than 30 miles:</u>		
Cushing	60	12
Perkins	34	8
Ripley	172	16
Stillwater	1050	111
Yale	45	14
Total	1361	161
<u>More than 30 miles:</u>		
Broken Arrow	172	10
Davenport	27	5
Glenpool	18	5
Liberty Mounds	14	3
Mounds	27	5
Olive	64	9
Sand Springs	64	12
Total	386	49

H. 2. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in elementary schools, teachers in junior high schools or middle schools, and teachers in senior high schools.

To test this hypothesis, the schools were arranged into three groups according to the grade level of the teachers responding to the questionnaire. The relevant data appears in Table XIII.

TABLE XIII

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
OF ELEMENTARY SCHOOLS, JUNIOR HIGH OR MIDDLE
SCHOOLS, AND HIGH SCHOOLS

Grade Level	Mean Utilization of Television Tapes
Elementary	9.65
Junior High or Middle School	7.08
High School	6.96
$x^2 = 1.33$ $df = 2$ $p > 0.05$	
$x^2 .05; 2 = 5.99$	

The chi square value for testing the hypothesis was 1.33. With two degrees of freedom, the value was not significant at the 0.05 level. The hypothesis was accepted.

A breakdown of the data that was used in the investigation of Hypothesis Number 2 is found in Table XIV.

TABLE XIV
NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED
BY SCHOOLS IN RELATION TO THEIR GRADE LEVEL

Grade Level	No. of Tapes Used	No. of Teachers
Elementary	1013	105
Junior High or Middle School	241	34
High School	493	71
Total	1747	210

Revealed in Table XIV is the fact that 1013, or 58% of the tapes were used at the elementary level by 105, or 50% of the teachers in the sample. At the junior high level 14% of the tapes were used by 16% of the teachers, and at the high school level, 494 tapes or 28% were used by 71 or 34% of the teachers.

H. 3. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers in schools with an A.D.A. less than 2,000 and teachers in schools with an A.D.A. over 2,000

To test this hypothesis, the schools were arranged into two groups according to the A.D.A. of the schools. The relevant data appears in Table XV.

TABLE XV

MEAN UTILIZATION OF TELEVISION TAPES BETWEEN TEACHERS
IN SCHOOLS WITH AN A.D.A. UNDER 2000 AND TEACHERS
IN SCHOOLS WITH AN A.D.A. OVER 2000

School	Mean Utilization of Television Tapes
Under 2000	5.99
Over 2000	9.67
$\chi^2 = .91$	$df = 1$
	$p > 0.05$
$\chi^2 .05; 1 = 3.84$	

The chi square value for testing the hypothesis was .91. With one degree of freedom, Yates's correction for continuity

was applied. The value was not significant. The hypothesis was accepted.

An examination of the schools that have an A.D.A. of less than 2,000 was made. The relevant data appears in Table XVI.

TABLE XVI

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
IN SCHOOLS WITH AN A.D.A. UNDER 2000

School	Mean Utilization of Television Tapes
Cushing	5.00
Davenport	5.40
Glenpool	3.60
Liberty Mounds	4.66
Mounds	5.40
Olive	7.11
Perkins	4.25
Ripley	10.75
Yale	3.21
$\chi^2 = 7.58$	$df = 8$
	$p > 0.05$

$\chi^2 .05; 8 = 15.51$

The chi square value for testing the data was 7.58.

With eight degrees of freedom, the value of 7.58 was not significant at the 0.05 level.

The data relevant to the schools with an A.D.A. over 2,000 is contained in Table XVII.

TABLE XVII

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
IN SCHOOLS WITH AN A.D.A. OVER 2000

School	Mean Utilization of Television Tapes
Broken Arrow	17.20
Stillwater	9.46
Sand Springs	5.33
$\chi^2 = 6.80$	$df = 2$
	$p < 0.05$

$\chi^2 .05; 2 = 5.99$

The chi square value for testing the data was 6.80. With two degrees of freedom, the value is significant at the 0.05 level.

A breakdown of the data that was used in the investigation of Hypothesis Number 3 is found in Table XVIII.

Twenty-six per cent of the tapes were used in schools with an A.D.A. under 2,000 by 37% of the teachers in the sample. The schools with an A.D.A. over 2,000 used 74% of the tapes with Stillwater using 60% of them.

TABLE XVIII
 NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
 SCHOOLS IN RELATION TO A.D.A. UNDER 2000 AND
 A.D.A. OVER 2000

School	No. of Tapes Used	No. of Teachers
<u>A.D.A. under 2000:</u>		
Cushing	60	12
Davenport	27	5
Glenpool	18	5
Liberty Mounds	14	3
Mounds	27	5
Olive	64	9
Perkins	34	8
Ripley	172	16
Yale	45	14
Total	461	77
<u>A.D.A. over 2000:</u>		
Broken Arrow	172	10
Sand Springs	64	12
Stillwater	1050	111
Total	1286	133

H. 4. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers in schools that provide all the video equipment that the teachers feel they need and teachers in schools that do not provide all the video equipment that the teachers feel they need.

To test this hypothesis, the schools were grouped into two groups depending on how the teachers responded to the appropriate question on the questionnaire. The relevant data appears in Table XIX.

TABLE XIX

MEAN UTILIZATION OF TELEVISION TAPES BETWEEN SCHOOLS THAT PROVIDE ALL THE VIDEO EQUIPMENT NEEDED AND SCHOOLS THAT DO NOT PROVIDE ALL THE VIDEO EQUIPMENT NEEDED

School	Mean Utilization of Television Tapes
Provides all equipment needed	7.84
Do not provide all equipment needed	9.30
$\chi^2 = .18$	df = 1
p > 0.05	

$\chi^2 .05; 1 = 3.84$

The chi square value for testing the hypothesis was .18. The value of .18 was not significant at the 0.05 level. The hypothesis was accepted.

An examination of the data in the group that had all the video equipment needed was made and appears in Table XX.

TABLE XX

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS IN SCHOOLS THAT PROVIDE ALL THE VIDEO EQUIPMENT NEEDED

School	Mean Utilization of Television Tapes
Broken Arrow	8.00
Cushing	5.66
Davenport	5.40
Glenpool	3.60
Liberty Mounds	4.66
Mounds	5.40
Olive	9.00
Perkins	4.25
Ripley	11.66
Sand Springs	6.00
Stillwater	9.22
Yale	3.66
$\chi^2 = 11.02$	$df = 11$
	$p = 0.05$

$\chi^2 .05; 11 = 19.68$

The chi square value for testing the data was 11.02. With eleven degrees of freedom, the value of 11.02 was not significant at the 0.05 level.

The group that did not have all the video equipment it needed is examined in Table XXI.

TABLE XXI

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS IN SCHOOLS THAT DO NOT PROVIDE ALL THE VIDEO EQUIPMENT NEEDED

School	Mean Utilization of Television Tapes
Broken Arrow	18.00
Cushing	6.00
Olive	4.75
Ripley	10.20
Sand Springs	4.00
Stillwater	10.00
Yale	2.87
$\chi^2 = 20.76$	$df = 6$
	$p < 0.05$

$\chi^2 .05; 6 = 12.59$

The chi square value for testing the data was 20.76. With six degrees of freedom, the value of 20.76 was significant at the 0.05 level.

A breakdown of the data that was used in the investigation of Hypothesis Number 4 is found in Table XXII.

TABLE XXII

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY SCHOOLS
IN RELATION TO AMOUNT OF EQUIPMENT PROVIDED

School	Do Provide		No Not Provide	
	No. of Tapes Used	No. of Teachers	No. of Tapes Used	No. of Teachers
Broken Arrow	56	77	116	3
Cushing	34	6	26	6
Davenport	27	5	0	0
Glenpool	18	5	0	0
Liberty Mounds	14	3	0	0
Mounds	27	5	0	0
Olive	45	5	19	4
Perkins	34	8	0	0
Ripley	70	6	102	10
Sand Springs	48	8	16	4
Stillwater	710	77	340	34
Yale	22	6	23	8
Total	1105	141	642	69

Sixty-nine or 33% of the teachers feel their school does not provide all the video equipment needed. These teachers however, used 642 or 37% of the tapes used in the sample.

Sixty-seven per cent of the teachers in this study feel their school is providing all the video equipment needed and they used 63% of the tapes.

H. 5. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers who say that a lack of equipment or facilities has prevented them from taking full advantage of the Region Five Center resources and teachers who say that a lack of equipment or facilities has not prevented them from taking full advantage of the Region Five Center resources.

To test this hypothesis, the schools were grouped into two groups depending on how the teachers responded to the appropriate question on the questionnaire. The relevant data appears in Table XXIII.

TABLE XXIII

MEAN UTILIZATION OF TELEVISION TAPES BETWEEN TEACHERS THAT
LACK EQUIPMENT OR FACILITIES AND TEACHERS THAT DO NOT
LACK EQUIPMENT OR FACILITIES

School	Mean Utilization of Television Tapes
Lack equipment or facilities	7.31
Do not lack equipment or facilities	9.01
$\chi^2 = .23$	$df = 1$
	$p > 0.05$
$\chi^2 .05; 1 = 3.84$	

The chi square value for testing the hypothesis was .23. With one degree of freedom, Yates's correction for continuity was applied. The value of .23 was not significant at the 0.05 level. The hypothesis was accepted.

An examination of the data in the group that lacked facilities or equipment was made. This data appears in Table XXIV.

The chi square value for testing the data was 18.25. With nine degrees of freedom, the value of 18.25 was significant at the 0.05 level.

TABLE XXIV
 MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
 IN SCHOOLS THAT LACK FACILITIES OR EQUIPMENT

School	Mean Utilization of Television Tapes
Broken Arrow	10.00
Cushing	5.00
Davenport	5.25
Mounds	5.25
Olive	5.66
Perkins	3.50
Ripley	14.85
Sand Springs	4.00
Stillwater	8.70
Yale	3.14
$\chi^2 = 18.25$	$df = 9$
	$p < 0.05$
$\chi^2 .05; 9 = 16.92$	

The group that did not lack facilities or equipment is examined in Table XXV.

The chi square value for testing the data was 24.44. With ten degrees of freedom, the value of 24.44 was significant at the 0.05 level.

TABLE XXV

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS IN
SCHOOLS THAT DO NOT LACK FACILITIES OR EQUIPMENT

School	Mean Utilization of Television Tapes	
Broken Arrow	18.00	
Davenport	6.00	
Glenpool	3.60	
Liberty Mounds	4.66	
Mounds	6.00	
Olive	10.00	
Perkins	4.50	
Ripley	7.55	
Sand Springs	6.28	
Stillwater	9.83	
Yale	3.28	
$\chi^2 = 24.44$	$df = 10$	$p < 0.05$
$\chi^2 .05; 10 = 18.31$		

A breakdown of the data that was used in the investigation of Hypothesis Number 5 is found in Table XXVI.

Six hundred and twenty-two tapes or 36% were used by teachers that felt they lacked facilities and equipment. Sixty-four per cent or 125 teachers felt they did not lack facilities and equipment. They used 1126 or 64% of the tapes in the sample.

TABLE XXVI

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
SCHOOLS IN RELATION TO FACILITIES AND EQUIPMENT

School	Lack Facilities		Do Not Lack Facilities	
	No. of Tapes Used	No. of Teachers	No. of Tapes Used	No. of Teachers
Broken Arrow	10	1	162	9
Cushing	60	12	0	0
Davenport	21	4	6	1
Glenpool	0	0	18	5
Liberty Mounds	0	0	14	3
Mounds	21	4	6	1
Olive	34	6	30	3
Perkins	7	2	27	6
Ripley	104	7	68	9
Sand Springs	20	5	44	7
Stillwater	322	37	728	74
Yale	22	7	23	7
Total	621	85	1126	125

H. 6. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose classroom is

on the first floor of the school building, teachers whose classroom is on the second floor of the school building, and teachers whose classroom is on the third floor of the school building.

To test this hypothesis, the responses were divided into the appropriate group. The relevant data appears in Table XXVII.

TABLE XXVII

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS WHOSE CLASSROOMS ARE ON THE FIRST, SECOND AND THIRD FLOORS

School	Mean Utilization of Television Tapes
First floor	8.44
Second floor	8.13
Third floor	2.67
$\chi^2 = 3.28$	$df = 2$
	$p > 0.05$

$\chi^2 .05; 2 = 5.99$

The chi square value for testing the hypothesis was 3.28. With two degrees of freedom, the value of 3.28 was not significant at the 0.05 level. The hypothesis was accepted.

An examination of the three groups to see if there was

any significance of the within groups was made. The data for examining the data within the first floor group is presented in Table XXVIII.

TABLE XXVIII
MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WHOSE CLASSROOMS ARE ON THE FIRST FLOOR

School	Mean Utilization of Television Tapes
Broken Arrow	17.20
Cushing	5.85
Davenport	5.40
Glenpool	3.60
Liberty Mounds	5.00
Mounds	5.40
Olive	7.11
Perkins	4.25
Ripley	10.14
Sand Springs	5.33
Stillwater	9.55
Yale	3.00
$\chi^2 = 24.62$	$df = 11$
	$p < 0.05$

$\chi^2 .05; 11 = 19.68$

The chi square value for this data was 24.62. With eleven degrees of freedom, the value of 24.62 was significant at the 0.05 level.

The data for examining the data within the second floor group is presented in Table XXIX.

TABLE XXIX
MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WHOSE CLASSROOMS ARE ON THE SECOND FLOOR

School	Mean Utilization of Television Tapes
Cushing	3.80
Liberty Mounds	5.00
Ripley	15.00
Stillwater	9.92
Yale	4.00
$x^2 = 12.49$	$df = 4$
	$p < 0.05$

$x^2 .05; 4 = 9.49$

The chi square value for this data was 12.49. With four degrees of freedom, the value of 12.49 was significant at the 0.05 level.

There was insufficient data to run a chi square test on group three.

A breakdown of the data that was used in the investigation of Hypothesis Number 6 is found in Table XXX.

Only one percent of the teachers in the sample had classrooms on the third floor. Eleven per cent of the teachers had classrooms on the second floor. Eighty-seven per cent of the teachers in the sample had classrooms on the first floor and they used 88% of the television tapes.

H. 7. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in schools with an enrollment below 350 pupils, teachers in schools with an enrollment of 351-700 pupils, and teachers in schools with an enrollment of over 700 pupils.

To test this hypothesis, the schools were divided into three groups according to their Average Daily Attendance (A.D.A.). The relevant data appears in Table XXXI.

The chi square value for testing the hypothesis was 2.51. With two degrees of freedom, the value of 2.51 was not significant at the 0.05 level. The hypothesis was accepted.

TABLE XXX

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED AS RELATED
TO THE FLOOR LEVEL OF THE TEACHER'S CLASSROOM

School	<u>First Floor</u>		<u>Second Floor</u>		<u>Third Floor</u>	
	No. of Tapes Used	No. of Teachers	No. of Tapes Used	No. of Teachers	No. of Tapes Used	No. of Teachers
Broken Arrow	172	10	00	0	0	0
Cushing	41	7	19	5	0	0
Davenport	27	5	0	0	0	0
Glenpool	18	5	0	0	0	0
Liberty Mounds	5	1	5	1	4	1
Mounds	27	5	0	0	0	0
Olive	64	9	0	0	0	0
Perkins	34	8	0	0	0	0
Ripley	142	14	30	2	0	0
Sand Springs	64	12	0	0	0	0
Stillwater	917	96	129	13	4	2
Yale	33	11	12	3	0	0
Total	1544	183	195	24	8	3

TABLE XXXI

MEAN UTILIZATION OF TELEVISION TAPES BY ENROLLMENT OF
SCHOOLS BELOW 350, 351-700, AND OVER 700 PUPILS

School	Mean Utilization of Television Tapes
Below 350	3.60
351-700	6.38
Over 700	9.28
$\chi^2 = 2.51$	$df = 2$
$\chi^2 .05; 2 = 5.99$	$p > 0.05$

An examination of the three groups to see if there was any significance within groups was made.

In the group below 350, there was insufficient data to run a chi square test so this group will not be examined.

The data for examining the data within the group with enrollment of 351-700 pupils is presented in Table XXXII.

The chi square value for this data was 6.31. With six degrees of freedom, the value of 6.31 was not significant at the 0.05 level.

TABLE XXXII

MEAN UTILIZATION OF TELEVISION TAPES AMONG SCHOOLS
WITH ENROLLMENT OF 351-700 PUPILS

School	Mean Utilization of Television Tapes
Davenport	5.40
Liberty Mounds	4.66
Mounds	5.40
Olive	7.11
Perkins	4.25
Ripley	10.75
Yale	3.21
$\chi^2 = 6.31$	$df = 6$
	$p > 0.05$

$\chi^2 .05; 6 = 12.59$

The data for examining the data within the group with enrollment over 700 pupils is presented in Table XXXIII.

The chi square value for this data was 10.45. With three degrees of freedom, the value of 10.45 was significant at the 0.05 level.

TABLE XXXIII
 MEAN UTILIZATION OF TELEVISION TAPES AMONG SCHOOLS
 WITH ENROLLMENT OVER 700 PUPILS

School	Mean Utilization of Television Tapes	
Broken Arrow	17.20	
Cushing	5.00	
Sand Springs	5.33	
Stillwater	9.46	
$\chi^2 = 10.45$	$df = 3$	$p < 0.05$
$\chi^2 .05; 3 = 7.82$		

A breakdown of the data that was used in the investigation of Hypothesis Number 7 is found in Table XXXIV.

Sixty-nine per cent of the teachers were in schools with enrollments over 700 pupils. Twenty-nine per cent of the teachers were in schools with enrollment of 351 to 700 pupils. Only two per cent of the teachers were in schools with enrollment below 350 pupils. Seventy-seven per cent of the television tapes were used in schools with enrollment over 700 pupils.

TABLE XXXIV

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED AS
RELATED TO THE ENROLLMENT OF THE SCHOOL

School	No. of Tapes Used	No. of Teachers
<u>Below 350:</u>		
Glenpool	18	5
Total	18	5
<u>351-700:</u>		
Davenport	27	5
Liberty Mounds	14	3
Mounds	27	5
Olive	64	9
Perkins	34	8
Ripley	172	16
Yale	45	14
Total	383	60
<u>Over 700:</u>		
Broken Arrow	172	10
Cushing	60	12
Sand Springs	64	12
Stillwater	1050	111
Total	1346	145

H. 8. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in schools whose expenditure per child for net operating expense is less than \$600, teachers in schools whose expenditure per child for net operating expense is \$601-\$699, and teachers in schools whose expenditure per child for net operating expense is \$700 and above.

To test this hypothesis, the schools were divided into the appropriate groups. The relevant data appears in Table XXXV.

TABLE XXXV

MEAN UTILIZATION OF TELEVISION TAPES BY OPERATING EXPENSES OF SCHOOLS LESS THAN \$600., \$601 - \$699., AND OVER \$700.

School	Mean Utilization of Television Tapes
Less than \$600.	9.76
\$601. - \$699.	6.35
Over \$700.	9.10
$\chi^2 = 6.55$	$df = 2$
$\chi^2 .05; 2 = 5.99$	$p < 0.05$

The chi square value for testing the hypothesis was 6.55. With two degrees of freedom, the value of 6.55 was significant at the 0.05 level. The hypothesis was rejected.

An examination of the three groups independently of each other was made. The group with operating expenses less than \$600. per pupil is examined in Table XXXVI.

TABLE XXXVI
MEAN UTILIZATION OF TELEVISION TAPES BY OPERATING
EXPENSES OF SCHOOLS LESS THAN \$600.

School	Mean Utilization of Television Tapes
Broken Arrow	17.20
Davenport	5.40
Glenpool	3.60
Mounds	5.40
$\chi^2 = 14.86$	$df = 3$
	$p < 0.05$

$$\chi^2 .05; 3 = 7.82$$

The chi square value for testing the data was 14.86. With three degrees of freedom, the value of 14.86 was significant at the 0.05 level.

The data for the group with operating expenses of \$601 to \$699. per pupil is found in Table XXXVII.

TABLE XXXVII

MEAN UTILIZATION OF TELEVISION TAPES BY OPERATING
EXPENSES OF SCHOOLS OF \$601. - \$699.

School	Mean Utilization of Television Tapes
Cushing	5.00
Liberty Mounds	4.66
Olive	7.11
Ripley	10.75
Sand Springs	5.33
Yale	3.21
$\chi^2 = 5.78$	$df = 5$
	$p > 0.05$

$\chi^2 .05; 5 = 11.07$

The chi square value for testing the data was 5.78. With five degrees of freedom, the value of 5.78 was not significant at the 0.05 level.

The data for the group with operating expenses of over \$700. per student is found in Table XXXVIII.

The chi square value for testing the data was 2.04. With one degree of freedom Yates's correction for continuity was applied. The value of 2.04 was not significant at the 0.05 level.

TABLE XXXVIII
 MEAN UTILIZATION OF TELEVISION TAPES BY OPERATING
 EXPENSES OF SCHOOLS OVER \$700.

School	Mean Utilization of Television Tapes	
Perkins	4.25	
Stillwater	9.45	
$\chi^2 = 2.04$	$df = 1$	$p > 0.05$
$\chi^2 .05; 1 = 3.84$		

A breakdown of the data that was used in the investigation of Hypothesis Number 8 is found in Table XXXIX.

Fifty-seven per cent of the teachers were in schools that spent over \$700. per pupil and they used 62% of the television tapes. Thirty-one per cent of the teachers were in schools that spent between \$601. to \$699. per pupil and they used 24% of the television tapes. There were only 12% or 25 teachers in schools that spent less than \$600. per pupil, and they used only 14% or 244 television tapes.

TABLE XXXIX

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
SCHOOLS AS RELATED TO OPERATING EXPENSES

School	No. of Tapes Used	No. of Teachers
<u>Less than \$600:</u>		
Broken Arrow	172	10
Davenport	27	5
Glenpool	18	5
Mounds	27	5
Total	244	25
<u>\$601. - \$699:</u>		
Cushing	60	12
Liberty Mounds	14	3
Olive	64	9
Ripley	172	16
Sand Springs	64	12
Yale	45	14
Total	419	66
<u>Over \$700:</u>		
Perkins	34	8
Stillwater	1050	111
Total	1084	119

The five remaining hypotheses are concerned with the personal variables. They will be treated the same as the nine institutional variables just examined.

H. 9. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose experience is 0-5 years, teachers whose experience is 6-10 years, teachers whose experience is 11-15 years, teachers whose experience is 16-20 years, teachers whose experience is 21-25 years, teachers whose experience is 26-30 years, teachers whose experience is 31-35 years, teachers whose experience is 36-40 years, and teachers whose experience is over 40 years.

To test this hypothesis, the responses were divided into nine groups according to the years of experience of each teacher. The relevant data appears in Table XL.

The chi square value for testing the hypothesis was 4.28. With eight degrees of freedom, the value of 4.28 was not significant at the 0.05 level. The hypothesis was accepted. It may be somewhat surprising to find in Table XL that the teachers with 26 years of experience and above had such large mean utilization of the television tapes. It appears that after close examination of Table XL that there is a positive correlation between the years of experience and

the mean utilization of these nine groups. A Spearman Rho was run to ascertain if there was a correlation between the two. The value obtained for the Rank-Difference Coefficient of Correlation was .53. With an N of nine, the value of .53 was not significant at the 0.05 level.

TABLE XL

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
IN RELATION TO YEARS OF EXPERIENCE

Years of Experience	Mean Utilization of Television Tapes
0 - 5	8.13
6 - 10	7.97
11 - 15	8.47
16 - 20	8.09
21 - 25	8.33
26 - 30	10.70
31 - 35	6.00
36 - 40	12.50
Over 40	12.50
$\chi^2 = 4.28$	$df = 8$
	$p > 0.05$

$\chi^2 .05; 8 = 15.51$

An examination of each of the nine groups so as to

better understand the data was made.

The data relevant to the teachers with 0 to 5 years of experience is presented in Table XLI.

TABLE XLI
MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WITH 0 - 5 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes	
Broken Arrow	19.25	
Cushing	3.00	
Davenport	5.66	
Glenpool	4.00	
Liberty Mounds	4.66	
Mounds	5.66	
Olive	5.14	
Perkins	4.00	
Ripley	14.85	
Sand Springs	4.14	
Stillwater	9.00	
Yale	2.30	
$\chi^2 = 42.81$	$df = 11$	$p < 0.05$

$\chi^2 .05; 11 = 19.68$

The chi square value for testing the data was 42.81. With eleven degrees of freedom, the value of 42.81 appears to be significant at the 0.05 level.

The number of teachers in the sample with 0 to 5 years of experience from each school and how many television tapes they used during the school year is shown in Table XLII.

TABLE XLII

NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF TEACHERS WITH 0 - 5 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Broken Arrow	154	8
Cushing	9	3
Davenport	17	3
Glenpool	12	3
Liberty Mounds	14	3
Mounds	17	3
Olive	36	7
Perkins	16	4
Ripley	104	7
Sand Springs	29	7
Stillwater	414	46
Yale	23	10
Total	845	104

This group contains 50% of the teachers of the sample, and they used 48% of the tapes.

The data relevant to the teachers with 6 to 10 years of experience is contained in Table XLIII.

TABLE XLIII
MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WITH 6 - 10 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes
Broken Arrow	8.00
Cushing	6.00
Davenport	7.00
Mounds	7.00
Perkins	3.50
Ripley	10.00
Sand Springs	7.00
Stillwater	8.96
Yale	5.50
$\chi^2 = 4.17$	$df = 8$
	$p > 0.05$

$\chi^2 .05; 8 = 15.51$

The chi square value for testing the data was 4.17. With eight degrees of freedom, the value of 4.17 was not

significant at the 0.05 level.

The number of teachers in the sample with 6 to 10 years of experience from each school and how many television tapes they used during the school year is shown in Table XLIV. This group contains 23% of the teachers of the sample, and they used 22% of the tapes.

TABLE XLIV
NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF
TEACHERS WITH 6 - 10 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Broken Arrow	8	1
Cushing	36	6
Davenport	7	1
Mounds	7	1
Perkins	7	2
Ripley	30	3
Sand Springs	14	2
Stillwater	260	29
Yale	22	4
Total	391	49

The data relevant to the teachers with 11 to 15 years of experience is contained in Table XLV.

TABLE XLV
MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WITH 11 - 15 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes
Broken Arrow	10.00
Cushing	5.00
Davenport	3.00
Mounds	3.00
Olive	14.00
Ripley	10.00
Stillwater	9.00
$\chi^2 = 13.39$	$df = 6$
	$p < 0.05$
$\chi^2 .05; 6 = 12.59$	

The chi square for testing the data was 13.39. With six degrees of freedom, the value of 13.39 was significant at the 0.05 level.

The number of teachers in the sample with 11 to 15 years of experience from each school and how many television tapes

they used during the school year is shown in Table XLVI. This group contains 10% of the teachers of the sample, and they used 10% of the tapes.

TABLE XLVI

NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF
TEACHERS WITH 11 - 15 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Broken Arrow	10	1
Cushing	15	3
Davenport	3	1
Mounds	3	1
Olive	28	2
Ripley	20	2
Stillwater	99	11
Total	178	21

The data relevant to the teachers with 16 to 20 years of experience is contained in Table XLVII.

TABLE XLVII

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WITH 16 - 20 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes
Glenpool	3.00
Sand Springs	1.00
Stillwater	10.25
$\chi^2 = 9.89$	$df = 2$
$\chi^2 .05; 2 = 5.99$	$p < 0.05$

The chi square value for testing the data was 9.89. With two degrees of freedom, the value of 9.89 was significant at the 0.05 level.

The number of teachers in the sample with 16 to 20 years of experience from each school and how many television tapes they used during the school year is shown in Table XLVIII. This group contains 5% of the teachers of the sample, and they used 5% of the tapes.

TABLE XLVIII

NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF
TEACHERS WITH 16 - 20 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Glenpool	6	2
Sand Springs	1	1
Stillwater	82	8
Total	89	11

The data relevant to the teachers with 21 to 25 years of experience is contained in Table XLIX.

TABLE XLIX

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WITH 21 - 25 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes
Perkins	4.00
Stillwater	9.00
$x^2 = 1.99$	$df = 1$
	$p > 0.05$

$x^2 .05; 1 = 3.84$

The chi square value for testing the data was 1.99. With one degree of freedom, Yates's correction for continuity was applied. The value of 1.99 was not significant at the 0.05 level.

The number of teachers in the sample with 21 to 25 years of experience from each school and how many television tapes they used during the school year is shown in Table L. This group contains 4% of the teachers of the sample, and they used 4% of the tapes.

TABLE L
NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF
TEACHERS WITH 21 - 25 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Perkins	4	1
Stillwater	71	8
Total	75	9

The data relevant to the teachers with 26 to 30 years of experience is contained in Table LI.

TABLE LI
 MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
 WITH 26 - 30 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes
Ripley	4.5
Stillwater	14.8
$\chi^2 = 5.54$ $df = 1$ $p < 0.05$	
$\chi^2 .05; 1 = 3.84$	

The chi square value for testing the data was 5.54. With one degree of freedom, Yates's correction for continuity was applied. The value of 5.54 was significant at the 0.05 level.

The number of teachers in the sample with 26 to 30 years of experience from each school and how many television tapes they used during the school year is shown in Table LII. This group contains 5% of the teachers of the sample, and they used 6% of the tapes.

TABLE LII

NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF
TEACHERS WITH 26 - 30 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Ripley	18	4
Stillwater	89	6
Total	107	10

The data relevant to the teachers with 31 to 35 years of experience is contained in Table LIII.

TABLE LIII

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
WITH 31 - 35 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes
Sand Springs	2.00
Stillwater	10.00
$\chi^2 = 5.41$	$df = 1$
$\chi^2 .05; 1 = 3.84$	$p < 0.05$

The chi square value for testing the data was 5.41. With one degree of freedom, Yates's correction for continuity was applied. The value of 5.41 was significant at the 0.05 level.

The number of teachers in the sample with 31 to 35 years of experience from each school and how many television tapes they used during the school year is shown in Table LIV. This group contains 1% of the teachers in the sample, and they used 1% of the tapes.

TABLE LIV
NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF
TEACHERS WITH 31 - 35 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Sand Springs	2	1
Stillwater	10	1
Total	12	2

The data relevant to the teachers with over 40 years of experience is contained in Table LV.

TABLE LV
 MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
 WITH OVER 40 YEARS OF EXPERIENCE

School	Mean Utilization of Television Tapes
Perkins	7.00
Stillwater	18.00
$\chi^2 = 4.88$ $df = 1$ $p < 0.05$	
$\chi^2 .05; 1 = 3.84$	

The chi square value for testing the data was 4.88. With one degree of freedom, Yates's correction for continuity was applied. The value of 4.88 was significant at the 0.05 level.

The number of teachers in the sample with over 40 years of experience from each school and how many television tapes they used during the school year is shown in Table LVI. This group contains 1% of the teachers of the sample, and they used 1% of the tapes.

TABLE LVI
 NUMBER OF TELEVISION TAPES UTILIZED AND NUMBER OF
 TEACHERS WITH OVER 40 YEARS OF EXPERIENCE

School	No. of Tapes Used	No. of Teachers
Perkins	7	1
Stillwater	18	1
Total	25	2

H. 10. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between male teachers and female teachers.

To test this hypothesis, the responses were divided into two groups according to the sex of the respondent. The relevant data appears in Table LVII.

The chi square value for testing the hypothesis was .07. With one degree of freedom Yates's correction for continuity was applied. The hypothesis was accepted.

It can be seen that 75% of the teachers are women and that they used 74% of the tapes. Liberty Mounds was the only school not to report teachers of both sexes in the sample.

TABLE LVII
 MEAN UTILIZATION OF TELEVISION TAPES BY SEX

School	No. of Tapes		No. of Teachers	
	Male	Female	Male	Female
Broken Arrow	96	76	1	9
Cushing	25	35	6	6
Davenport	6	21	1	4
Glenpool	4	14	1	4
Liberty Mounds	0	14	0	3
Mounds	6	21	1	4
Olive	36	28	5	4
Perkins	2	32	1	7
Ripley	98	74	9	7
Sand Springs	40	24	5	7
Stillwater	124	926	20	91
Yale	10	35	2	12
Total	447	1300	52	158

Mean Male 8.59

Mean Female 8.22

$$\chi^2 = .07$$

$$df = 1$$

$$p > 0.05$$

$$\chi^2 .05; 1 = 3.84$$

H. 11. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose ages are 21-30, teachers whose ages are 31-40, teachers whose ages are 41-50, and teachers whose ages are over 50.

To test this hypothesis the responses were divided into four groups according to the age of the respondents. The relevant data appears in Table LVIII.

TABLE LVIII
MEAN UTILIZATION OF TELEVISION TAPES BY AGE

Age	Mean Utilization of Television Tapes
21 - 30	8.09
31 - 40	8.03
41 - 50	8.00
Over 50	9.40
$\chi^2 = .19$	$df = 3$ $p > 0.05$

$\chi^2 .05; 3 = 7.82$

The chi square value for testing the hypothesis was .19.

With three degrees of freedom, the value of .19 was not significant at the 0.05 level. The hypothesis was accepted.

An examination of the four groups independently of each other was made. The group of teachers that were 21-30 years of age is examined in Table LIX.

TABLE LIX

MEAN UTILIZATION OF TELEVISION TAPES BY SCHOOLS
AMONG TEACHERS 21 - 30 YEARS OF AGE

Schools	Mean Utilization of Television Tapes
Broken Arrow	19.25
Cushing	4.66
Davenport	6.50
Glenpool	4.00
Liberty Mounds	4.66
Mounds	6.50
Olive	5.80
Perkins	4.66
Ripley	14.85
Sand Springs	5.33
Stillwater	8.11
Yale	2.70
$\chi^2 = 35.91$	$df = 11$
	$p < 0.05$

$\chi^2 .05; 11 = 19.86$

The chi square value for testing the data was 35.91. With eleven degrees of freedom, the value of 35.91 was significant at the 0.05 level.

The number of teachers in the sample, 21 to 30 years of age from each school and how many television tapes they used during the school year is shown in Table LX.

TABLE LX
NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS 21 - 30 YEARS OF AGE

School	No. of Tapes Used	No. of Teachers
Broken Arrow	154	8
Cushing	28	6
Davenport	13	2
Glenpool	8	2
Liberty Mounds	14	3
Mounds	13	2
Olive	29	5
Perkins	14	3
Ripley	104	7
Sand Springs	32	6
Stillwater	349	43
Yale	27	10
Total	785	97

This group contains most of the teachers (46%) of the sample, and they used 45% of the tapes.

The data relevant to the teachers 31 to 40 years of age is contained in Table LXI.

TABLE LXI
MEAN UTILIZATION OF TELEVISION TAPES BY SCHOOLS
AMONG TEACHERS 31 - 40 YEARS OF AGE

School	Mean Utilization of Television Tapes
Broken Arrow	9.00
Cushing	5.00
Davenport	4.66
Mounds	4.66
Olive	14.00
Perkins	2.00
Ripley	10.00
Sand Springs	1.50
Stillwater	9.58
Yale	5.00
$\chi^2 = 21.49$	$df = 9$
	$p < 0.05$

$\chi^2 .05; 9 = 16.92$

The chi square value for testing the data was 21.49.

With nine degrees of freedom, the value of 21.49 was significant at the 0.05 level.

The number of teachers in the sample 31 to 40 years of age from each school and how many television tapes they used during the school year is shown in Table LXII.

TABLE LXII
NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS 31 - 40 YEARS OF AGE

School	No. of Tapes Used	No. of Teachers
Broken Arrow	18	2
Cushing	15	3
Davenport	14	3
Mounds	14	3
Olive	28	2
Perkins	2	1
Ripley	50	5
Sand Springs	3	2
Stillwater	278	29
Yale	10	2
Total	432	52

This group contains 25% of the teachers of the sample, and they used 25% of the tapes.

The data relevant to the teachers 41 to 50 years of age is contained in Table LXIII.

TABLE LXIII
MEAN UTILIZATION OF TELEVISION TAPES BY SCHOOLS
AMONG TEACHERS 41 - 50 YEARS OF AGE

School	Mean Utilization of Television Tapes
Cushing	5.66
Glenpool	3.33
Olive	3.50
Perkins	3.66
Sand Springs	4.50
Stillwater	11.62
Yale	4.00
$\chi^2 = 10.03$	$df = 6$ $p > 0.05$

$\chi^2 .05; 6 = 12.59$

The chi square value for testing the data was 10.03. With six degrees of freedom, the value of 10.03 was not significant at the 0.05 level.

The number of teachers in the sample 41 to 50 years of

age from each school and how many television tapes they used during the school year is shown in Table LXIV. This group contains 15% of the teachers of the sample, and they used 14% of the tapes.

TABLE LXIV

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS 41 - 50 YEARS OF AGE

School	No. of Tapes Used	No. of Teachers
Cushing	17	3
Glenpool	10	3
Olive	7	2
Perkins	11	3
Sand Springs	9	2
Stillwater	186	16
Yale	8	2
Total	248	31

The data relevant to the teachers over 50 years of age is contained in Table LXV.

TABLE LXV
 MEAN UTILIZATION OF TELEVISION TAPES BY SCHOOLS
 AMONG TEACHERS OVER 50 YEARS OF AGE

School	Mean Utilization of Television Tapes
Perkins	7.00
Ripley	4.50
Sand Springs	10.00
Stillwater	10.30
$\chi^2 = 2.81$	$df = 3$
$p > 0.05$	
$\chi^2 .05; 3 = 7.82$	

The chi square value for testing the data was 2.81. With three degrees of freedom, the value of 2.81 was not significant at the 0.05 level.

The number of teachers in the sample over 50 years of age from each school and how many television tapes they used during the school year is shown in Table LXVI.

This group contains 14% of the teachers of the sample and they used 16% of the tapes.

TABLE LXVI
 NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
 TEACHERS OVER 50 YEARS OF AGE

School	No. of Tapes Used	No. of Teachers
Perkins	7	1
Ripley	18	4
Sand Springs	20	2
Stillwater	237	23
Total	282	30

H. 12. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose training includes a Bachelor's Degree, a Bachelor's Degree plus 15 hours, a Bachelor's Degree plus 30 hours, a Master's Degree, a Master's Degree plus 15 hours, and a Master's Degree plus 30 hours.

To test this hypothesis the responses were divided into six groups according to the educational level of the teachers of each school. The relevant data appears in Table LXVII.

TABLE LXVII
MEAN UTILIZATION OF TELEVISION TAPES BY EDUCATIONAL LEVEL

Educational Level	Mean Utilization of Television Tapes
B.S.	7.74
B.S. + 15	9.77
B.S. + 30	7.04
M.S.	8.59
M.S. + 15	8.61
M.S. + 30	9.00
$\chi^2 = .53$	$df = 5$
	$p > 0.05$

$\chi^2 .05; 5 = 11.07$

The chi square value for testing the hypothesis was .53. With five degrees of freedom, the value of .53 was not significant at the 0.05 level. The hypothesis was accepted.

An examination of the six groups independently of each other was made. The group of teachers that hold a B. S. Degree is examined in Table LXVIII.

TABLE LXVIII
 MEAN UTILIZATION OF TELEVISION TAPES BY TEACHERS
 WITH A B.S. DEGREE

School	Mean Utilization of Television Tapes
Broken Arrow	22.83
Cushing	3.00
Davenport	5.66
Glenpool	4.00
Liberty Mounds	5.00
Mounds	5.66
Olive	5.80
Perkins	3.00
Ripley	14.80
Sand Springs	2.66
Stillwater	7.89
Yale	2.70
$\chi^2 = 57.74$ $df = 11$ $p < 0.05$	

$\chi^2 .05; 11 = 19.68$

The chi square value for testing the data was 57.74. With eleven degrees of freedom, the value of 57.74 was significant at the 0.05 level.

The number of teachers in the sample with a B. S. Degree and the number of tapes they used during the school

year is shown in Table LXIX. Thirty-five per cent of the teachers of the sample were in this group and they used 33% of the tapes in the sample.

TABLE LXIX
NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS WITH A B. S. DEGREE

School	No. of Tapes Used	No. of Teachers
Broken Arrow	137	6
Cushing	9	3
Davenport	17	3
Glenpool	4	1
Liberty Mounds	10	2
Mounds	17	3
Olive	29	5
Perkins	12	4
Ripley	74	5
Sand Springs	8	3
Stillwater	229	29
Yale	27	10
Total	573	74

The data relevant to the teachers with a B. S. Degree plus 15 hours is contained in Table LXX.

TABLE LXX
MEAN UTILIZATION OF TELEVISION TAPES BY TEACHERS
WITH A B. S. DEGREE PLUS 15 HOURS

School	Mean Utilization of Television Tapes
Broken Arrow	9.00
Glenpool	3.33
Olive	1.00
Ripley	9.00
Sand Springs	9.00
Stillwater	12.47
Yale	4.00
$\chi^2 = 14.62$	$df = 6$
	$p < 0.05$
$\chi^2 .05; 6 = 12.59$	

The chi square value for testing the data was 14.62. With six degrees of freedom, the value of 14.62 was significant at the 0.05 level.

The number of teachers in the sample with a B. S. plus 15 hours and how many television tapes they used during the school year is shown in Table LXXI. This group contains 15%

of the teachers of the sample, and they used 17% of the tapes.

TABLE LXXI
 NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
 TEACHERS WITH A B. S. DEGREE PLUS 15 HOURS

School	No. of Tapes Used	No. of Teachers
Broken Arrow	18	2
Glenpool	10	3
Olive	1	1
Ripley	36	4
Sand Springs	18	2
Stillwater	212	17
Yale	8	2
Total	303	31

The data relevant to the teachers with a B. S. Degree plus 30 hours is contained in Table LXXII.

TABLE LXXII

MEAN UTILIZATION OF TELEVISION TAPES BY TEACHERS
WITH A B. S. DEGREE PLUS 30 HOURS

School	Mean Utilization of Television Tapes
Davenport	7.00
Mounds	7.00
Perkins	4.00
Ripley	5.00
Sand Springs	6.00
Stillwater	7.62
$\chi^2 = 1.54$	$df = 5$
	$p > 0.05$

$$\chi^2 .05; 5 = 11.07$$

The chi square value for testing the data was 1.54. With five degrees of freedom, the value of 1.54 was not significant at the 0.05 level.

The number of teachers in the sample with a B. S. Degree plus 30 hours, from each school and how many television tapes they used during the school year is shown in Table LXXIII. This group contains 11% of the teachers of the sample, and they used 1% of the tapes.

TABLE LXXIII
 NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
 TEACHERS WITH A B. S. DEGREE PLUS 30 HOURS

School	No. of Tapes Used	No. of Teachers
Davenport	7	1
Mounds	7	1
Perkins	4	1
Ripley	10	2
Sand Springs	12	2
Stillwater	122	16
Total	162	23

The data relevant to the teachers with a M. S. Degree, is contained in Table LXXIV.

The chi square value for testing the data was 12.51. With eleven degrees of freedom, the value of 12.51 was not significant at the 0.05 level.

TABLE LXXIV
 MEAN UTILIZATION OF TELEVISION TAPES BY TEACHERS
 WITH A M.S. DEGREE

School	Mean Utilization of Television Tapes
Broken Arrow	8.50
Cushing	6.33
Davenport	3.00
Glenpool	4.00
Liberty Mounds	4.00
Mounds	3.00
Olive	7.00
Perkins	5.50
Ripley	10.66
Sand Springs	7.66
Stillwater	10.52
Yale	5.00
$\chi^2 = 12.51$	$df = 11$
	$p > 0.05$

$\chi^2 .05; 11 = 19.68$

The number of teachers in the sample with a M. S. Degree, from each school and how many television tapes they used during the school year is shown in Table LXXV. This group utilized 20% of the tapes.

TABLE LXXV

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS WITH A M. S. DEGREE

School	No. of Tapes Used	No. of Teachers
Broken Arrow	17	2
Cushing	19	3
Davenport	3	1
Glenpool	4	1
Liberty Mounds	4	1
Mounds	3	1
Olive	14	2
Perkins	11	2
Ripley	32	3
Sand Springs	28	3
Stillwater	221	21
Yale	10	2
Total	361	42

The data relevant to the teachers with a M. S. Degree plus 15 hours is contained in Table LXXVI.

TABLE LXXVI
 MEAN UTILIZATION OF TELEVISION TAPES BY TEACHERS
 WITH A M. S. DEGREE PLUS 15 HOURS

School	Mean Utilization of Television Tapes
Cushing	5.33
Olive	20.00
Perkins	7.00
Ripley	10.00
Sand Springs	1.00
Stillwater	9.35
$\chi^2 = 23.12$	$df = 5$ $p < 0.05$

$\chi^2 .05; 5 = 11.07$

The chi square value for testing the data was 23.12. With five degrees of freedom, the value of 23.12 was significant at the 0.05 level.

The number of teachers in the sample with a M. S. Degree plus 15 hours from each school and how many television tapes they used during the school year is shown in Table LXXVII. This group contains 15% of the teachers of the sample, and they used 15% of the tapes.

TABLE LXXVII

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS WITH A M. S. DEGREE PLUS 15 HOURS

School	No. of Tapes Used	No. of Teachers
Cushing	32	6
Olive	20	1
Perkins	7	1
Ripley	20	2
Sand Springs	1	1
Stillwater	187	20
Total	267	31

The data relevant to the teachers with a M. S. Degree plus 30 hours is contained in Table LXXVIII.

The chi square value for testing the data was 5.29. With one degree of freedom, Yates's correction for continuity was applied. The value of 5.29 was significant at the 0.05 level.

TABLE LXXVIII

MEAN UTILIZATION OF TELEVISION TAPES BY TEACHERS
WITH A M. S. DEGREE PLUS 30 HOURS

School	Mean Utilization of Television Tapes
Sand Springs	2.00
Stillwater	9.87
$\chi^2 = 5.29$	$df = 1$
	$p < 0.05$
$\chi^2 .05; 1 = 3.84$	

The number of teachers in the sample with a M. S. Degree plus 30 hours from each school and how many television tapes they used during the school year is shown in Table LXXIX.

TABLE LXXIX

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS WITH A M. S. DEGREE PLUS 30 HOURS

School	No. of Tapes Used	No. of Teachers
Sand Springs	2	1
Stillwater	79	8
Total	81	9

This group contains 4% of the teachers of the sample, and they used 5% of the tapes.

H. 13. There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers who have taken part in an in-service program and teachers who have not taken part in an in-service program.

To test this hypothesis the responses were divided into two appropriate groups. Group one was composed of teachers that had taken part in an in-service program and group two was composed of teachers that had not taken part in an in-service program. The relevant data appears in Table LXXX.

The chi square value for testing the hypothesis was .41. With one degree of freedom, Yates's correction for continuity was applied. The value of .41 was not significant at the 0.05 level. The hypothesis was accepted.

TABLE LXXX

MEAN UTILIZATION OF TELEVISION TAPES BETWEEN TEACHERS
 THAT HAVE TAKEN PART IN AN IN-SERVICE PROGRAM
 AND THOSE THAT HAVE NOT

School	Mean Utilization of Television Tapes
Have had in-service training	9.88
Have not had in- service training	7.39
$\chi^2 = .41$	$df = 1$
	$p > 0.05$
$\chi^2 .05; 1 = 3.84$	

An examination of the two groups independently of each other was made. The group of teachers that have taken part in an in-service program is examined in Table LXXXI.

The chi square value for testing the data was 20.53. With seven degrees of freedom, the value of 20.53 was significant at the 0.05 level.

TABLE LXXXI

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
 THAT HAVE TAKEN PART IN AN IN-SERVICE PROGRAM

School	Mean Utilization of Television Tapes
Davenport	5.75
Glenpool	3.33
Mounds	5.75
Olive	1.00
Ripley	11.25
Sand Springs	9.50
Stillwater	11.35
Yale	1.00
$\chi^2 = 20.53$	$df = 7$
	$p < 0.05$
$\chi^2 .05; 7 = 14.07$	

The number of tapes utilized by teachers that have in-service training is shown in Table LXXXII. Thirty-seven per cent of the teachers of the sample have had in-service training and they used 44% of the tapes in the sample.

TABLE LXXXII
 NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
 TEACHERS THAT HAVE IN-SERVICE TRAINING

School	No. of Tapes Used	No. of Teachers
Davenport	23	4
Glenpool	10	3
Mounds	23	4
Olive	1	1
Ripley	90	8
Sand Springs	19	2
Stillwater	602	53
Yale	3	3
Total	771	78

The data relevant to the teachers that have not taken part in an in-service program is contained in Table LXXXIII.

The chi-square value for testing the data was 26.74. With eleven degrees of freedom, the value of 26.74 was significant at the 0.05 level.

TABLE LXXXIII

MEAN UTILIZATION OF TELEVISION TAPES AMONG TEACHERS
THAT HAVE NOT TAKEN PART IN AN IN-SERVICE PROGRAM

School	Mean Utilization of Television Tapes	
Broken Arrow	17.20	
Cushing	5.00	
Davenport	4.00	
Glenpool	4.00	
Liberty Mounds	4.66	
Mounds	4.00	
Olive	7.87	
Perkins	4.25	
Ripley	10.25	
Sand Springs	4.50	
Stillwater	7.72	
Yale	3.81	
$\chi^2 = 26.74$	$df = 11$	$p < 0.05$

$\chi^2 .05; 11 = 19.68$

The number of tapes utilized by teachers that have not had in-service training is shown in Table LXXXIV. Sixty-three per cent of the teachers have not had in-service training, however, they used 56% of the tapes, or 976 during the school year.

TABLE LXXXIV

NUMBER OF TEACHERS AND NUMBER OF TAPES UTILIZED BY
TEACHERS THAT HAVE NOT HAD IN-SERVICE TRAINING

School	No. of Tapes Used	No. of Teachers
Broken Arrow	172	10
Cushing	60	12
Davenport	4	1
Glenpool	8	2
Liberty Mounds	14	3
Mounds	4	1
Olive	63	8
Perkins	34	8
Ripley	82	8
Sand Springs	45	10
Stillwater	445	58
Yale	42	11
Total	976	132

Summary

The data collected for this study included the responses of teachers in the sample that was randomly selected from the 40 school districts that make up the Oklahoma Region Five.

District. Only the 210 teachers that had used at least one television tape during the 1972-73 school year, provided by the Stillwater Television Center, were given the questionnaire. One hundred per cent of the questionnaires were completed and returned. Chapter IV contains the data provided by the questionnaires. The data was placed in tables so as to make it manageable and help the reader in understanding what the writer is attempting.

Chapter V will contain the findings, implications and recommendations based on the responses to the Region Five Television Tape Utilization Questionnaire, Form A.

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter will present the findings of this research, attach meaning to the data reported in the preceding chapters, discuss the instrumentation of the study and derive issues which appear to warrant further investigation.

One of the primary functions of this study was to empirically investigate the utilization of television tapes by teachers in the schools of the sample.

Eighty-eight per cent of the teachers in the Ripley school system have used television tapes from the Stillwater Center. Broken Arrow was the school with the smallest per cent (4.6) of their teachers using television tapes from the Stillwater Center. The mean of the 12 schools of the sample indicate that 22% of the teachers from each school have used television tapes while 78% have not.

The twelve districts vary somewhat in wealth. The mean annual expenditure per student of the sample was \$625.89. The mean assessed valuation per student of the sample was \$5,187.83.

The responses of the teachers by sex show that 159 or 83% of the 210 teachers of the sample were female. Most of the teachers in the sample (47%) were 21 to 30 years of age

while only 14% were over 50 years of age.

The responses of the teachers by education show that 76 or 36% of the teachers of the sample hold a B. S. Degree. Twenty-one per cent or 44 teachers have a M. S. Degree and only 4% have a M. S. Degree plus 30 hours.

The years of experience of the teachers of the sample show that 50% have 5 years or less. Also only 3% of the teachers of the sample using television tapes have 31 years of experience or more.

Less than one-fourth of the teachers of each school utilized the television tapes produced by the Stillwater Television Center. Nearly half of the teachers are less than 30 years of age and they utilized 50% of the tapes produced. Sixty-four per cent of the teachers have above a B. S. Degree.

The television tapes were utilized by schools more than 30 miles from Stillwater just as much as by schools less than 30 miles from Stillwater. There was no significant difference in the amount of utilization by schools more than 30 miles from Stillwater.

The television tapes were utilized just as much by high school and junior high teachers as by elementary teachers.

There was no significant difference in the amount of utilization by teachers in schools with an A.D.A. less than 2,000 and teachers in schools with an A.D.A. over 2,000. There was no difference in the amount of utilization by teachers in schools with an A.D.A. less than 2,000. There

was a difference in the amount of usage by teachers in schools with an A.D.A. over 2,000.

The television tapes were used as much in schools that did not provide all the video equipment that the teachers felt they needed as in schools that did provide all the video equipment needed. There was no significant difference in the amount of usage in schools that provided all the video equipment needed. There was a significant difference in the amount of usage by teachers in schools that did not provide all the video equipment needed.

There was no significant difference in the amount of usage by teachers in schools that lacked equipment or facilities and by teachers in schools that did not lack equipment or facilities. There was a significant difference in both groups as to the amount of usage when the within groups were tested.

There was no significant difference in the mean utilization among teachers with classrooms on the third, second, or first floor. When examining just the teachers with classrooms on the first floor, one finds that there is a significant difference in the mean utilization. The teachers with classrooms on the second floor also showed a significant difference in their mean utilization.

There was no significant difference among teachers in schools with enrollment, below 350 pupils, 351-700 pupils, and over 700 pupils.

There was a significant difference in the mean

utilization of television tapes among teachers in schools whose expenditure per child is less than \$600., \$601-699., and over \$700.

There was no significant difference in the years of experience of the teachers who used the tapes.

There was no significant difference according to the sex of the teachers who used the tapes.

There was no significant difference among the age groups of the teachers who used the tapes.

There was no significant difference among the groups according to the level of education of the teachers who used the tapes.

There was no significant difference between teachers who had in-service training and those teachers that had no in-service training.

Analyses of the Hypotheses

There were thirteen hypotheses stated for this study in Chapter I. These hypotheses and the findings relative to each are now presented.

Hypothesis No. 1: There is no significant difference in the mean utilization of television tapes provided through The Stillwater Television Center between teachers located in schools more than 30 miles from the Center and teachers located in schools less than 30 miles from the Center.

There was no significant difference.

There was also no significant difference among teachers in schools less than 30 miles from Stillwater.

There was however, a significant difference among teachers in schools more than 30 miles from Stillwater.

Hypothesis No. 2: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in elementary schools, teachers in junior high schools or middle schools, and teachers in senior high schools.

There was no significant difference.

Hypothesis No. 3: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers in schools with an A.D.A. less than 2,000 and teachers in schools with an A.D.A. over 2,000.

There was no significant difference.

There was also no significant difference among teachers in schools with an A.D.A. less than 2,000.

There was however, a significant difference among teachers in schools with an A.D.A. over 2,000.

Hypothesis No.4: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers in schools that provide all the video equipment that the teachers feel they need and teachers in schools that do not provide all the video equipment that the teachers feel they need.

There was no significant difference.

There was also no significant difference among teachers in schools that provided all the video equipment needed.

There was however, a significant difference among teachers in schools that did not provide all the video equipment needed.

Hypothesis No. 5: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers who say that a lack of equipment or facilities has prevented them from taking full advantage of the Region Five Center resources and teachers who say that a lack of equipment or facilities has not prevented them from taking full advantage of the Region Five Center resources.

There was no significant difference.

There was however, a significant difference among teachers in schools that lack facilities or equipment.

There also was a significant difference among teachers in schools that do not lack facilities or equipment.

Hypothesis No. 6: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose classroom is on the first floor of the school building, teachers whose classroom is on the second floor of the school building, and teachers whose classroom is on the third floor of the school building.

There was no significant difference.

There was however, a significant difference among teachers whose classrooms are on the first floor.

There also was a significant difference among teachers whose classrooms are on the second floor.

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship among teachers whose classrooms are on the third floor could not be meaningfully utilized.

Hypothesis No. 7: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in schools with an enrollment below 350 pupils, teachers in schools with an enrollment of 351-700 pupils, and teachers in schools with an enrollment of over 700 pupils.

There was no significant difference.

Due to restrictions in the number of schools in the group with enrollment below 350 pupils the data could not be meaningfully utilized.

There was no significant difference among teachers in schools with enrollment of 351-700 pupils.

There was however, a significant difference among teachers in schools with enrollment over 700 pupils.

Hypothesis No. 8: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers in schools

whose expenditure per child for net operating expense is less than \$600., teachers in schools whose expenditure per child for net operating expense is \$601-\$699., and teachers in schools whose expenditure per child for net operating expense is \$700. and above.

One must reject the hypothesis; there was a significant difference.

There also was a significant difference in the schools that had operating expenses less than \$600. per pupil.

There was no significant difference in the schools that had operating expenses of \$601. to \$699. per pupil.

There also was no significant difference in the schools that had operating expenses over \$700. per pupil.

Hypothesis No. 9: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose experience is 0-5 years, teachers whose experience is 6-10 years, teachers whose experience is 11-15 years, teachers whose experience is 16-20 years, teachers whose experience is 21-25 years, teachers whose experience is 26-30 years, teachers whose experience is 31-35 years, teachers whose experience is 36-40 years, and teachers whose experience is over 40 years.

There was no significant difference.

There was a significant difference among teachers with 0-5 years of experience.

There was no significant difference among teachers with 6-10 years of experience.

There was a significant difference among teachers with 11-15 years of experience.

There was a significant difference among teachers with 16-20 years of experience.

There was no significant difference among teachers with 21-25 years of experience.

There was a significant difference among teachers with 26-30 years of experience.

There was a significant difference among teachers with 31-35 years of experience.

There was a significant difference among teachers with over 40 years of experience.

Hypothesis No. 10: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between male teachers and female teachers.

There was no significant difference.

The chi square value of .07 indicated that there is practically absolute zero difference between the men and women teachers as far as utilization of television tapes in the sample is concerned.

Hypothesis No. 11: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose ages

are 21-30, teachers whose ages are 31-40, teachers whose ages are 41-50, and teachers whose ages are over 50.

There was no significant difference.

There was however, a significant difference among teachers 21-30 years of age.

There was also a significant difference among teachers 31-40 years of age.

There was no significant difference among teachers 41-50 years of age.

There was also no significant difference among teachers over 50 years of age.

Hypothesis No. 12: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center among teachers whose training includes a Bachelor's Degree, a Bachelor's Degree plus 15 hours, a Bachelor's Degree plus 30 hours, a Master's Degree, a Master's Degree plus 15 hours, and a Master's Degree plus 30 hours.

There was no significant difference.

There was however, a significant difference among teachers with a B. S. Degree.

There was also a significant difference among teachers with a B. S. Degree plus 15 hours.

There was no significant difference among teachers with a B. S. Degree plus 30 hours.

There was no significant difference among teachers with a M. S. Degree.

However, there was a significant difference among teachers with a M. S. Degree plus 15 hours.

There also was a significant difference among teachers with a M. S. Degree plus 30 hours.

Hypothesis No. 13: There is no significant difference in the mean utilization of television tapes provided through the Stillwater Television Center between teachers who have taken part in an in-service program and teachers who have not taken part in an in-service program.

There was no significant difference.

There was a significant difference among teachers that have taken part in an in-service program.

There also was a significant difference among teachers that have not taken part in an in-service program.

Suggestions for Further Research

One facet of an empirical study is the suggestion of further research. Several possibilities for future studies were generated from the present investigation.

(1) Additional research must be conducted to confirm and substantiate the validity of the results of this study. A similar study to examine attitudes of the teachers seems warranted.

(2) Will the program continue to grow or will it "wither on the vine" when federal monies are gone? Longitudinal studies may be needed.

(3) Further research should investigate possible

interactions among the independent variables.

(4) This program depends a lot on the single person in each school that is in charge of the program. Is the mean utilization of that school related to the exuberance of the person in charge of the program more than the personal variables of the teachers in that school?

Further research might tell.

(5) To what extent do the board members and superintendents of these schools support this program? Is the mean utilization of their school related to the value they place on this program? Further research might tell.

Toward the Future

When television was first introduced into our schools some educators felt that they were witnessing the beginning of a new era in American education. They saw television as the solution to all of their problems: Television would relieve the teacher shortage by making one good teacher available to an unlimited number of students; the quality of instruction would be upgraded because the television teacher could present material of higher quality in less time than it took the classroom teacher; television would give every child a front row seat for demonstrations, experiments and language instruction; television was, in short, the greatest invention since the printed book.

At the same time, there were teachers and administrators who looked on television as just another intrusive gadget in the classroom. It interfered with the true business of education by disturbing the delicate relationship between teacher and student. Television was threatening to invade their classrooms and they wanted nothing to do with this purveyor of cartoons and commercials.

No one can say with absolute certainty why some educators accept television, while others reject it. Perhaps enthusiasm, sincere desire for improvement, and willingness to change would account partly for the positive point of view, and fear, uncertainty, and resistance to change would account partly for the negative point of view.

Research in the area of educational television has been hindered by muddy and unmeasurable objectives, much duplication, little application, and a lack of both breadth and depth.

Often in the comparisons of televised instruction with standard teaching techniques the teacher has simply been moved into the television studio with a minimum of change. Unless the techniques that make television teaching more effective are used and unless enough time is devoted to lesson preparation, the true effectiveness of the medium will remain unknown.

Many important aspects of television utilization have yet to be fully investigated. These include, among others, the interrelationships of television teaching, student attitude, and student motivation, and the effectiveness of

various types of television application combined with small-group and self-study learning situations under the direction of the classroom teacher. An effort must be made to explore the combination of techniques and configurations that will produce the best results within each and every course.

Well-designed, carefully conducted research programs will determine television's role in education. Research rather than intuition is the long-range guide to improved instruction. Only with reliable and valid findings can administrators and teachers present a rationale for how and what we teach. But once these facts do become known it is the responsibility of both teacher and administrator to put the information into practice.

At no other stage of our history have we found education in such a dynamic period of growth and yet, paradoxically, a time of change coupled with conservatism and resistance. Perhaps someday we will consider the early 1970's as the period in which our school system matured, leaving behind the basic tenets that have been the guiding forces since the "Little Red School". Educational television, if its potential is realized, can surely be one of the major aids in our striving toward a new, qualitatively higher educational standard in this country.

A SELECTED BIBLIOGRAPHY

Ballew, Carmel William.

- 1960 "An Investigation of the Use of Audio-Visual Materials from the Audio-Visual Department of the University of Missouri by the Schools in Missouri." Dissertation Abstracts, 21, 14-29.

Beck, Wesley, Jr.

- 1971 "Toward a Significant Difference in Oklahoma Educational Television." An ESEA Title III Funded Project for Stillwater, Oklahoma.

Briggs, Leslie J.

- 1967 "The Problem and a Plan for a Solution for the Instructional Media, A Procedure for the Design of Multi-Media Instruction, Critical Review of Research, and Suggestions for Future Research." Audiovisual Instruction, Vol. XII, Number 4, 380-1.

Burleigh, Judith C. and Harold W.

- 1967 "Videotapes in Teacher Education." The Elementary School Journal, Vol. LXVIII, 35-38.

Carnegie Commission.

- 1967 "Public Television, A Program for Action." Times Educational Supplement, 2699, 473.

Cassirer, Henry R.

- 1967 "Some Thoughts About Educational Television." Audiovisual Instruction, Vol. XII, Number 9, 1018.

Cresser, Howland Gardner.

- 1969 "An Analysis of the Relationship of Media In-Service Training to Teacher Utilization of Media in the Public Schools." Dissertation Abstracts, 29, 4347-A.

Culver, Katherine B.

- 1967 "New and Promising Uses of TV." Audiovisual Instruction, Vol. XII, Number 9, 912.

Cutter, V. M. and C. W. Nix.

- 1967 "Education Service Centers - Agents of Change." The Texas Outlook, 51, 42-5.

Cyphert, Frederick R. and L. O. Andrews.

- 1967 "Using the Videotapes in Teacher Education." Audiovisual Instruction, Vol. XII, Number 10, 1067-69.

Davis, Keith.

- 1967 "Channels of Communication in Organizations." Studies in Personnel and Industrial Psychology. Ed. Edwin A. Fleishman. Homewood, Illinois: The Dorsey Press.

Estes, Nolan.

- 1967 "The Intent and Nature of ESEA, Title III." Theory into Practice, 6, 112-119.

Ford Foundation.

- 1961 ETV, A Ford Foundation Pictorial Report. New York: Ford Foundation.
- 1961 Teaching by Television, 2nd ed. New York: Ford Foundation.

Gordon, George N.

- 1970 Classroom Television: New Frontiers in ITV. New York: Hasting House, Publishers.

Graves, Carson Hobart.

- 1965 "An Evaluative Study of Certain Factors Related to Motion Picture Film Usage by Teachers in the Schools of the Secondary Supervisory District of Westchester County, New York." Dissertation Abstracts, 25, 7044.

Guilford, J. P.

- 1956 Fundamental Statistics in Psychology and Education.
4th ed. New York; McGraw Hill Book Company, Inc.

Hall, Sedley Duane.

- 1964 "A Comparative Study of Two Types of Organizations
of Instructional Materials Centers." Dissertation
Abstracts, 24, 5125.

Johnson, James A. and Clair R. Feltemer.

- 1970 "The Use of Portable Video-Taping Equipment in
Teacher Education." Audiovisual Instruction,
Vol. XV, Number 4, 108-10.

Kelley, Gaylen B.

- 1960 "A Study of Teacher's Attitudes Toward Audio-Visual
Materials." Education Screen and Audio-Visual
Guide, 39, 119-21.

Kerlinger, Fred N.

- 1964 Foundations of Behavioral Research. New York:
Holt, Rinehart and Winston, Inc.

Knowlton, J. and Hawes, E.

- 1962 "Attitudes: Helpful Predictor of Audio-Visual
Usage." Audio Visual Communication Review,
10, 147-57.

Konick, M. and Jenkins, Benjamin.

- 1966 "The Regional Instructional Materials Center in
Pennsylvania." Audiovisual Instruction, Vol. II,
Number 7, 554.

Lewis, Philip.

- 1961 Educational Television Guidebook. New York:
McGraw Hill Book Company, Inc.

- 1967 "Videotape Recorders Get Smaller, Cheaper,
Simplier." Nation's Schools, Vol. LXXIX, 9, 12.

Lichlider, J. C. R.

- 1967 "Television for Tomorrow." Audiovisual Instruction,
Vol. XII, Number 2, 140-2.

Morrison, Virginia B. and John Childs.

- 1969 "Strategies for the Application of Videotape in Teacher Education." Audiovisual Instruction, Vol. XIV, Number 1, 43-48.

National Education Association, Department of Classroom Teachers, Department of Audio-Visual Instruction.

- 1961 "And TV, Too!." Washington, D. C.: National Education Association.
- 1967 "Instructional Resources in the Classroom." NEA Research Bulletin, 45, 75-77.

North Central Association. The Subcommittee on Television of the Commission on Research and Service of the North Central Associations of Colleges and Secondary Schools.

- 1961 The Uses of Television in Education. Chicago: North Central Association.

Perlberg, Arye.

- 1968 The Use of Portable Video Tape Records and Micro-Teaching Techniques to Improve Instruction in Vocational-Technical Programs in Illinois. Final Report. Urbana: Illinois University.

Popham, James W.

- 1967 Educational Statistics. New York: Harper and Row, Publishers.

Ruark, H. C., Jr.

- 1965 "The IMC Idea: Regional Development Demanded." Educational Screen and Audio Visual Guide, 44, 141.

Schor, Theodore.

- 1960 "Some Variables Among Elementary School Teachers That Affect the Utilization of Audiovisual Materials." Dissertation Abstracts, 20, 2662.

Siegel, Sidney.

- 1956 Nonparametric Statistics for the Behavioral Sciences. New York: McGraw Hill Book Company, Inc.

Streeter, Charles Edward.

- 1967 "A Study of Relationships Among Selected Factors Affecting Media Use by Classroom Teachers Within Selected Schools." Dissertation Abstracts, 28, 1723-A.

Tarbet, Donald G.

- 1961 Television and Our Schools. New York: The Ronald Press Company.

Thomas, Larry A.

- 1960 Communications and In-Service Training, a New Use for Closed-Circuit Television in the Public Schools. Supplement "A". Stillwater: Stillwater Television Center.

VanderMeer, Abram W.

- 1944 "Specific Contributions of Films to Science Training." School Review, 49, 613-703.

Washington County Project.

- 1964 Washington County Television Report. Hagerstown, Maryland: Washington County Board of Education.

Welby, Smith.

- 1971 "Choosing and Using a VTR System." Media and Methods, Vol. VIII, Number 1, 71.

APPENDIX

INSTRUMENTS USED IN COLLECTION OF DATA

April 23, 1973

Dear Teacher:

I would like your assistance in completing the attached questionnaire. I am presently surveying the schools of Oklahoma Region Five that are participating in the ESEA Title III television program. This questionnaire is to be completed only by teachers that have used at least one television tape during the 1972-73 school year. After you have completed this questionnaire please return it to your school principal. Thank you for your cooperation in this survey.

Sincerely,

Lawrence G. Stephens
Lawrence G. Stephens
Graduate Assistant
Department of Education
Oklahoma State University

REGION FIVE TELEVISION TAPE UTILIZATION QUESTIONNAIRE

1. Sex: Male _____ Female _____
2. Age: 21-30 _____, 31-40 _____, 41-50 _____, Over 50 _____
3. Education: BS (BA) _____, BS + 15 Hrs. _____, BS + 30 Hrs. _____
MS (MA) _____, MS + 15 Hrs. _____, MS + 30 Hrs. _____
Advanced Degree _____, PhD or EdD _____
4. Years of experience: 0-5 _____, 6-10 _____, 11-15 _____,
16-20 _____, 21-25 _____, 26-30 _____, 31-35 _____, 36-40 _____,
over 40 _____.
5. From what college or university did you receive your last degree? _____
6. Subject area of major teaching assignment _____

7. Grade level of major teaching assignment _____
8. Your classroom for major portion of the day is located on the:
1st floor _____, 2nd floor _____, 3rd floor _____
4th floor _____, of the school building.
9. School identification:
School Name _____
District Number _____

REGION FIVE TELEVISION TAPE UTILIZATION QUESTIONNAIRE

EDUCATIONAL SUPPORT SYSTEMS CENTER

FORM A

1. Did you use television tapes from the Stillwater Educational Support Systems during the 1972-73 school year? Yes ___ No ___
- A. Approximately how many video tapes did you use from all sources during the 1972-73 school year? _____
- B. Of the total for 1972-73, how many were obtained from the Region Five Center in Stillwater? _____
2. To the best of your knowledge, supply the information indicated for the last tape you used with students:
- A. To how many of your classes did you show the video tape? _____
- B. How many of your students viewed the tape? _____
- C. How many additional teachers in your school used the same video tape? _____
- D. To how many classes did these additional teachers show the video tape? _____
- E. Total number of students that viewed the film shown by these additional teachers. _____
3. Have you attended any closed circuit television in-service programs provided by the Region Five Educational Support Systems Center, (either in your school or in Stillwater)? Yes ___ No ___
4. Has your school provided any in-service programs on the use of closed-circuit television equipment? Yes ___ No ___
5. Has your school purchased additional closed-circuit television equipment since the initial equipment was provided by the Region Five Project? Yes ___ No ___

6. Is your school providing all the video equipment that you feel you need? Yes ___ No ___
7. Has lack of equipment or facilities in your school prevented you from taking full advantage of the Region Five Center resources? Yes ___ No ___
8. Have you been reluctant to use video equipment and materials because you are unfamiliar with their operation and usage? Yes ___ No ___
9. Have you visited the Center's facilities during the year for any meetings, information, materials, etc.? Yes ___ No ___
10. Is there a need to improve the quality of the video tapes that the Center provides? Yes ___ No ___
11. Is the mailing of tapes providing adequate service for you as a teacher? Yes ___ No ___
12. Are the request procedures for materials and services satisfactory? Yes ___ No ___
13. Have you been adequately informed by Newsletters, catalogs, etc. about materials and services available from the Center? Yes ___ No ___
14. Are the tapes provided to teachers for sufficient periods of time to permit preview, proper showing and re-showing? Yes ___ No ___
15. Have you requested any information, materials, or services from any member of the Center's professional staff? Yes ___ No ___

VITA 1

Lawrence Grant Stephens

Candidate for the Degree of

Doctor of Education

Thesis: INSTITUTIONAL AND PERSONAL VARIABLES OF
TEACHERS AS RELATED TO THEIR UTILIZATION OF
TELEVISION TAPES PRODUCED BY THE STILLWATER
TELEVISION CENTER

Major Field: Educational Administration

Biographical:

Personal Data: Born in Sapulpa, Oklahoma, October 27, 1937, the son of Mr. and Mrs. F. J. Stephens. Married the former Joycelyn Walker of Kiefer, Oklahoma. Have three sons, Steve 16, Tracy 12, and Charles 3.

Education: Graduated from Kiefer High School, Kiefer, Oklahoma, in 1955; attended Murray State Junior College in Tishomingo, Oklahoma; received the Bachelor of Science degree with a major in Industrial Arts from Oklahoma Panhandle State College, Goodwell, Oklahoma in May, 1959; received the Master of Science degree with a major in Industrial Arts from Oklahoma State University, Stillwater, Oklahoma in August of 1965; attended North Texas State University, Denton, Texas during the summer of 1967; completed requirements for the Doctor of Education degree in July, 1974.

Professional Experience: Teacher of industrial arts, science and football coach in the schools of Liberal, Kansas, from 1959 to 1967; teacher of industrial arts, science, and football coach in the schools of Stillwater, Oklahoma, from 1967 to 1972; graduate assistant in the College of Education, Oklahoma State University, Stillwater, Oklahoma, 1972-73; administrative intern in

C. E. Donart High School, Stillwater, Oklahoma, 1972-73; high school principal, Hugoton Secondary School, Hugoton, Kansas, 1973-present.

Professional Organizations: National Association of Secondary School Principals; American Association of School Administrators; Kansas Association of School Administrators; Iota Lambda Sigma; Kansas Association of Athletic Directors; and Phi Delta Kappa.