

ABSTRACT

A STUDY OF IN-SERVICE EDUCATION PROGRAMS FOR CLASSROOM TEACHERS UTILIZING INSTRUCTIONAL TELEVISION IN SELECTED PUBLIC SCHOOLS IN MICHIGAN

by Thomas G. Cook

Statement of the Problem. The purpose of this study is 1) to review the existing professional literature on the in-service education of teachers, and on the utilization of instructional television in the classroom; 2) to survey public school administrators in Michigan to determine the nature and extent of the in-service education programs being conducted at present for teachers utilizing in the classroom; 3) to develop detailed descriptions of programs in three selected schools to examine in depth the in-service education programs for classroom teachers utilizing instructional television; and 4) as a result of the study, to suggest basic principles, procedures, and activities for public school personnel to consider in the development of in-service education programs for teachers utilizing instructional television in the classroom.

Research Procedure. The normative-survey method of research employing the questionnaire and visitation-interview techniques form the research procedure for this study. A questionnaire was sent to one hundred and fifty-four

elementary, junior high, and senior high school building principals of schools who were using television to some extent in their instructional program. Three of these schools were selected for visitations and detailed study. Personal interviews secured data for this phase of the research.

Conclusions. The following selected conclusions are among those drawn:

1. Various types of utilization of instructional television are difficult to describe and identify.
2. There are basic procedures to follow in the planning for ITV utilization and these procedures often form the basis for portions of in-service education programs concerning ITV utilization.
3. There are principles of in-service education which can be applied generally to the planning and operation of all programs of professional improvement.
4. Schools conducting in-service education programs, whether formal or unstructured, for classroom teachers utilizing ITV, tend to develop such programs based upon the needs and interests of the local staff.
5. Teachers, administrators, and other local school personnel are generally involved in the planning and direction of in-service education programs focusing on ITV utilization.

6. Schools conducting in-service education programs tend to depend upon the television broadcast source for ideas and materials for such programs.

Recommendations. The major recommendations, or guidelines, resulting from the study are:

1. School systems considering the adoption of instructional television should be informed about the problems they are likely to encounter. Financial resources, quality of reception, program scheduling, and telecast content should all be carefully evaluated.
2. In-service education programs for classroom teachers utilizing ITV should:
 - a. be planned, organized, and directed according to staff interest and need, as well as the objectives of the school's total program.
 - b. develop as an integral part of the ITV program.
 - c. involve in the planning all personnel who will be affected by the program.
 - d. contain evaluation procedures as an integral part of the total program.
 - e. have its format and activities based upon content and need.
3. The local administrator should participate with the staff in developing goals and procedures for such programs. In addition, he should promote an atmosphere for professional growth and encourage the

organizational development of the in-service education program.

4. Teacher education programs need to provide more adequate opportunities for the undergraduate prospective teacher to become acquainted with the theory and principles of the communication process, and with the potential of the television medium as it relates to the learning processes.

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By

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CHAPTER I

INTRODUCTION

Modern technological developments have affected nearly every aspect of contemporary society. These advances have been, and continue to be, numerous. Technology's influence upon education has been varied; often direct in its impact and, at other times, indirect. Probably the one development which is most directly influential and with which most people are familiar is the communication channel of television. The familiarity results from its visibility in a vast majority of homes; its influence is reflected in recent research of both a commercial and an educational nature.

While the value of television in the teaching-learning processes has been examined for some period of time, the utilization of the medium in the instructional programs of public schools continues to increase. Consideration for and implementation of instructional television has been evidenced in all levels of education from elementary through adult programs. Growth in the number of schools using TV is occurring in Michigan as it is elsewhere. Presently, more than one-sixth of the total number of school districts in

the state are utilizing television in some manner in their elementary or secondary grades.¹

Public schools in Michigan began as local institutions and, to a large extent, have remained local in nature throughout their development. Education, today, is a function of state government. Ultimate responsibility for what happens in the schools rests at the state level. Through the Department of Public Instruction, the state delegates control over the operation of schools to the board of education in the local district. The state outlines, in general, the conditions under which the local board must or may perform its functions.

In a published statement on Education Television and Curriculum Policy, the Department of Public Instruction points out that,

We urge that school systems make of themselves even more dynamic centers of education. In such settings, educational television and other modern teaching techniques may be tested out to utilize their potentialities . . . we have urged local school systems to review, in terms of state curriculum policy and in terms of their own purposes and philosophies, what would best serve them. Educational television presents an exciting invitation to experiment. We urge all concerned to experiment with open minds and keen perceptions.²

¹Survey of Five Years of Progress in Public Education in Michigan. Department of Public Instruction, Lansing, Michigan, 1963. (Unpublished)

²Michigan Department of Public Instruction, Educational Television and Curriculum Policy. Publication No. 517. Lansing, 1961, pp. 6-8.

As more and more schools experiment with television and make the decision to integrate it into their educational program on a permanent basis, a continuing effort will need to focus upon acquainting teaching personnel with the knowledge available concerning television's potential as an instructional tool and its utilization in the classroom. The classroom teacher is a key figure in the success of most utilization techniques. The creativity of the individual teacher is important in this process, just as it is in the development of most other learning opportunities. In addition to this individual originality, however, the classroom teacher can be involved in the examination and communication of program objectives and research concerning ITV utilization. A well-planned, complete in-service education program might well serve these functions.

Factors involved in curriculum development are often closely interrelated to the in-service education activities of a school system. As a professionally educated person, the teacher is expected to evidence growth in competence, both as an individual and as a member of a faculty. Most often such growth will follow patterns which reflect current issues and problems facing the teacher in the classroom. Likewise, a professional faculty will desire involvement in a program designed to consider the continuing implications of a curricular innovation or development such as instructional television.

Statement of the Problem

The purpose of this study is (1) review the existing professional literature on the in-service education of teachers, and on the utilization of instructional television in the classroom; (2) to survey public school administrators in the state to determine the nature and extent of the in-service education programs being conducted at present for teachers utilizing television in the classroom; (3) to develop detailed descriptions of programs in three selected schools to examine in depth the in-service programs for classroom teachers using television; and (4) as a result of the study, to suggest basic principles, procedures, and activities which have been successfully employed by others, for public school personnel to consider in the development of in-service education programs for teachers utilizing television in the classroom.

Assumptions of the Study

The study is based upon the following assumptions:

Instructional television is a resource which is available to the majority of the public schools in the state and one which the local school officials have authority to examine and adopt.

Classroom teachers utilizing television need to be knowledgeable regarding the implications and potential of the medium for the educational program in the school.

The implications and potential of television in the classroom can and should be communicated to the professional staff of the school through in-service education programs developed through the leadership of local administrators.

The public school building principal is in the best position to provide accurate information regarding the in-service activities conducted in a school for classroom teachers using television.

A satisfactory instrument can be constructed to secure basic information about the nature and extent of in-service education programs for teachers using television in the classroom in public schools in Michigan; and, to cite basic information about the extent of television usage in Michigan's public schools.

Providing the professional personnel in Michigan's public schools with the elements of present in-service programs and those principles indicated in the literature will assist them in constructing a meaningful in-service program at the local level.

Scope of the Study

This study is confined to public school systems in Michigan which are utilizing television in their curriculum for any purpose as indicated by the State Department of Public Instruction's A Survey of Five Years of Progress in Public Education in Michigan.

Since the Department of Public Instruction's Survey was conducted during the 1962-63 school year, this study does not include those schools that may have initiated the use of instructional television since that time.

In-service activities, practices, and procedures found in the conclusions and recommendations are drawn inductively from the general survey and the detailed investigations of the selected schools.

Definition of Terms

1. In-service Education Program--includes all those activities which are designed to contribute to the professional growth and competence of classroom teachers and others in a school concerned with the utilization of television as an instructional tool.³
2. Utilization of Television--the manner in which a television broadcast is prepared for, presented, and followed-up by the classroom teacher so that it does, in fact, have an impact upon the learner and fulfills its role as a factor in local curriculum.
3. Instructional Television (ITV)--is designed to present formal subject matter to student groups according to preconceived curricular objectives. Television serves as the channel of communication through

³Richard F. Gross, "A Study of In-Service Education Programs for Student Personnel Workers in Selected Colleges and Universities in the U. S." (doctoral dissertation, Michigan State University, 1963), p. 11.

which the subject matter flows to the students. ITV may be utilized in various ways within the receiving classroom. How it is specifically used depends upon the function which the local school expects it to fulfill.

4. Educational Television (ETV)--Differs from ITV in that ETV programs are not necessarily aimed primarily for in-school consumption, but are telecast for the general public.⁴
5. MPATI--Midwest Program on Airborne Television Instruction; from an airplane flying at high altitude over north central Indiana. MPATI transmits video taped educational courses to schools throughout a 200 mile radius in a six-state area.
6. Closed-Circuit (CCTV)--Those television programs which are transmitted by cable or microwave and fed to various receivers but not telecast on the air.
7. Kinescope--(Kine) (1) A technique for recording complete TV programs on film; (2) tube used in receivers or monitors on which the TV picture is reproduced.

Need for the Study

If television is to make any contribution to the local curriculum, it is necessary that the classroom teacher

⁴Edward R. Gork, "A Comparative Study of Selected Elementary School Teachers and Administrators' Attitudes Toward Instructional Television Programs and Related Problems" (doctoral dissertation, Michigan State University, 1961), p. 12.

be aware of the strengths and weaknesses of the medium. They need to know what it can and cannot do as an instructional tool.

The question is not whether television is effective--research to date indicates that it can be. Instead, the question is now, how can these MPATI telecasts be improved? How can they be made more effective? How can these Midwest schools improve their practices in using them?⁵

These same questions can be asked concerning instructional television programs originating from sources other than MPATI. Generally, how can the utilization of instructional television be improved?

In an examination of teacher needs in this area for the future, Maloney and Donner point out:

. . . that every teacher in the United States, present or prospective, should have a sound, basic familiarity with television as an instructional instrument . . . Our recommendation is that every prospective teacher in the United States be given proper training in his or her role and skills vis-a-vis educational (instructional) television; and that practicing teachers, by means of workshops refresher courses receive the same training. While some workshops have been set up for this purpose, we shall obviously need many more.⁶

Unfamiliar roles and the need for new skills will inevitably face classroom teachers who utilize instructional television. Obviously, they will need to be aware of the

⁵ School Evaluations of M.P.A.T.I., 1961-62, Handbook for Principals and Teachers. Midwest Program on Airborne Television Instruction, West LaFayette, Indiana, 1962. p. 15.

⁶ Martin J. Maloney and Stanley T. Donner, "Personnel and Training Needs in ETV, 1961-71," ETV--The Next Ten Years (Stanford: The Institute for Communication Research, 1962), p. 194.

theory, research and processes in existence concerning communication and learning. More important, they will need to be prepared to translate these concepts in terms of working routines at the classroom level in light of the dimensions of the new resource--ITV.

Several studies have been conducted dealing with television as a means through which in-service education programs are transmitted to classroom teachers. Such research, however, does little to provide insight to the development of in-service programs which focus on instructional television as their subject matter. Other research concerning television in education, and that regarding in-service education programs, do not specifically direct themselves to this issue. Eltobgy⁷ recommended in his survey of opinions of faculty members in teachers colleges that in-service education programs be offered in the use of television in the classroom. However, he did not deal with the in-service programs themselves.

Hedden's study⁸ indicated that certain administrative adjustments and organizational adaptations were required in planning for the effective utilization of in-school television at the elementary level. There was very little

⁷Hussein H. Eltobgy, "A Survey of Opinions of Faculty Members in the Teachers Colleges in Egypt Regarding the Potential Use of Television in Teacher Education" (doctoral dissertation, Indiana University, 1962).

⁸Caryl G. Hedden, "Organizational and Administrative Adjustments for Effective Use of In-school Telecasts in the Elementary School" (doctoral dissertation, University of Buffalo, 1960).

differentiation made between these adjustments and those required in other areas, such as pupil preparation, scheduling, physical facilities, and equipment. Because of the broad range of topics dealt with in the study, it was not possible to examine the in-service education aspect in any depth.

Stevens⁹ conducted an investigation of the extent and kind of curriculum planning activities involved in the preparation of an educational television series. He points out that such planning is usually administratively dominated, loosely joined, and insufficient time is allotted for the planning process.

A study of the evaluations of teachers concerning the nature and effectiveness of in-service teacher education by Gerheim¹⁰ shows that teachers accepted and valued those in-service programs which were planned carefully, locally, and cooperatively; and, that they tended to reject those which are poorly planned or administratively imposed.

Thus, there are indications that practicing teachers want and need to participate in educational programs that study problems and issues with which they are confronted in their daily tasks. Specifically, the need is often expressed for educational programs of an in-service or pre-service

⁹Humphrey Stevens, "A Profile of Educational Television Curriculum Planning for Secondary Schools (Grades 7-12)" (doctoral dissertation, University of Buffalo, 1962).

¹⁰Mearl F. Gerheim, "Teacher Evaluation of the Nature and Effectiveness of In-service Teacher Education in Selected School Districts" (doctoral dissertation, University of Pittsburg, 1959).

nature which will prepare teachers to utilize instructional television in the classroom.

While various sources exclaim the importance of such in-service programs, very little information exists which can serve as a planning guide for administrators and teaching personnel who will be facing the problem in the future. It is the intention of this study to provide such guidelines.

Organization of the Study

The thesis consists of six chapters.

Chapter one, the introduction, includes a statement of the problem, basic assumptions, scope of the study, importance of the study, and a description of how the study is reported.

Chapter two is a review of the professional literature and research which is pertinent to in-service education programs in general, and to the utilization of instructional television in the classroom.

Chapter three is a presentation of the research procedures employed in the study.

Chapter four presents the data collected by the questionnaire survey of in-service education programs of public schools in Michigan utilizing television in the classroom.

Chapter five is concerned with the detailed descriptions of the ITV utilization and in-service education programs in three selected schools.

Chapter six presents the findings, conclusions, and recommendations.

CHAPTER II

REVIEW OF LITERATURE AND RESEARCH

Introduction

The purpose of this chapter is to discuss selected research and literature concerned with the utilization of instructional television in the classroom, and in-service education programs of both a general nature and as they relate to ITV. It is recognized that any in-service education program for teachers utilizing television would need to be developed in close coordination with the total curriculum. However, the primary effort in this presentation is an identification of general principles applicable to instructional television and in-service education.

In-Service Education

Most in-service education programs, whether designed for specific or general purposes, usually have similar objectives. These objectives or goals are expressed most effectively by understanding the terminology used. This study refers to in-service education as including all those activities which are designed to contribute to the professional growth and competence of classroom teachers and others concerned with the utilization of instructional television in

public schools. This definition provides a structural framework, as well as a specific subject-matter, for in-service education.

In defining in-service education generally, and without relation to specific content, Harnly is of the opinion that it is:

any procedure or activity which brings about growth in one's teaching, such as, summer school, conferences, or visits to other schools.¹

A definition by Gross is similar; however, he emphasizes that these activities should be planned in accordance with specific or assumed objectives.²

The Michigan Department of Public Instruction has interpreted in-service education as consisting of all activities which provide local staff members with adequate opportunities for professional growth. They envision the purpose of in-service education as being teacher growth.³

As this area is investigated it becomes increasingly obvious that in-service education is difficult to separate from curriculum planning, and curriculum planning is difficult to differentiate from supervision. Local needs and objectives will determine which concept is adopted. Spears has cited

¹Paul W. Harnley, "In-Service Education for Teachers," North Central Association Quarterly, 23: 272-75 (January, 1949), p. 272.

²Gross, op. cit., p. 131.

³Joint Committee on Conference and Curriculum Planning, Evaluating the In-Service Education Program of Your Community School: A Self-Survey Instrument, The Department of Public Instruction, Lansing, Michigan, 1957, p. 1.

the close relationships between these three functions and expresses the judgement that they are all concerned with achieving a similar goal. However, he states that in-service education is the most recent concept and is more readily accepted inasmuch as it implies continuous growth for the classroom teacher. He adds that:

although it is reasonable to expect a teacher to guide his own future development, it is the obligation of the school system to stimulate the advancement of its staff by providing opportunities for teachers to grow on the job. When properly planned and coordinated, these opportunities can be called in-service education. Although the prime purpose of in-service education is to promote the continuous growth of teachers, a portion of the effort represents the elimination of deficiencies of those inadequately trained during their pre-service education.⁴

A chapter is devoted to in-service in Campbell's book, Practical Applications of Democratic Administration. In this chapter, Rogers emphasizes that curriculum revision and in-service education are closely inter-related. It is his opinion that in-service education programs must be centered around the recognized needs of the teaching staff and that teachers should share in the planning of such professional improvement programs.⁵

Writing in In-service Education: the fifty-sixth yearbook of the National Society for the Study of Education,

⁴Harold Spears, Curriculum Planning Through In-Service Programs (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1957), pp. 315-316.

⁵Virgil M. Rogers, "Democratic In-Service Education in Operation," Practical Application of Democratic Administration, Clyde Campbell (ed.) (New York: Harper and Brothers, 1952), pp. 185-214.

Berge, et al., presented an organizational classification for in-service programs. They are classified into three types:

1. Centralized Approach--When in-service education is initiated, managed, and conducted by a central office or administration.
2. Decentralized Approach--When the major responsibility for in-service education programming rests with the teaching staff.
3. Centrally Coordinated Approach--When a central administrative unit shares with the professional staff the planning and execution of in-service education.⁶

They stress that freedom for experimentation is important in the Decentralized and Centrally Coordinated Approaches; and that much overlapping of one approach to another should be expected in every in-service program. Each approach usually contains identifiable elements of another approach.

According to Berry and Murfin, in-service education programs are effective only when certain barriers are recognized and removed. One such barrier is academic certification which creates a constant pressure on teachers to have college credit for any improvement activity. Other barriers cited include financial--when school systems expect teachers to stand the cost of in-service education; attitude--lack of interest, indifference, or apathy on the part of the teaching

⁶Marvin L. Berge, Harris E. Russell and Charles B. Walden, "In-Service Education Programs of Local School Systems," In-Service Education, National Society for the Study of Education, Part I, University of Chicago, 1957, pp. 197-223.

staff; and, time--the need for released time for staff members to participate in improvement activities.⁷

The literature suggests that if in-service education programs are to be organized and administered effectively, it is necessary that general principles, pertinent to most in-service education, be understood and considered. This section is a review of those principles.

A view shared by several research reports⁸ is that teacher responsibility for the organization and execution of the professional growth program tends to stimulate and challenge teachers.

This involvement of participants in the planning of in-service programs is also suggested by Parker in a listing of guidelines for the initiation of improvement programs:

1. People work as individuals and as members of groups on problems that are significant to them.
2. The same people who work on problems, formulate the goals and plan how they will work.

⁷John R. Berry and Mark Murfin, "Meeting Barriers to In-Service Education," Educational Leadership, 17:351-355 (March, 1960).

⁸Julia M. Haven, "The Nature and Influence of In-Service Education Programs in Selected Suburban Elementary Schools" (doctoral dissertation, Northwestern University, 1954); David M. Jackson, "Administrative Procedure in Curriculum Revisions," Administrators Notebook, 5:4 (1957); Robert A. Landers, "A Study of Administration and Organization Aspects of In-Service Education Programs in Public Schools of Arkansas" (doctoral dissertation, University of Arkansas, 1954); James M. Pridgeon, "The Organization of the In-Service Education Program for Elementary Teachers in Morehouse Parish, Louisiana" (doctoral dissertation, George Peabody College, 1955).

3. Opportunities should be developed for people to relate themselves to each other.
4. Continuous attention needs to be given to the individual and to group problem-solving processes.
5. An atmosphere should be created that is conducive to building mutual respect, support, permissiveness, and creativeness.
6. Multiple and rich resources must be made available and used.
7. The simplest possible means should be developed to move through decisions to actions.
8. Constant encouragement needs to be present to test and to try new ideas and plans in real situations.
9. Appraisal should be an integral part of in-service activities.
10. Continuous attention must be given to the inter-relationship of different groups.
11. The facts of individual differences among members of each group must be accepted and utilized.
12. Activities must be related to pertinent factors of the current educational, cultural, political, and economic scene.⁹

Not only is it important that in-service education programs stem from staff and curriculum needs but the achievements of such a program should be applied and evaluated as a part of personnel administration in public schools. Elsbree and Reutter point out that the administrator needs to be concerned about in-service education and that a comprehensive program of continuing professional development should:

- (1) involve all personnel;

⁹ Cecil J. Parker, "Guidelines for In-Service Education," In-Service Education, National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), Chapter 5, pp. 103-128.

- (2) utilize a wide variety of media and resources both from within and outside the system;
- (3) include provision for training personnel to assume positions of responsibility in the school system;
- (4) make available sabbatical leaves for professional improvement on a systematic basis to all qualified professional personnel with adequate stipends provided and obligations of recipients clearly stated.¹⁰

However, Campbell, et al., stress the importance of teacher participation in planning, organizing, and evaluating improvement programs. It is their feeling that programs planned for the teachers, solely by administrators, are doomed to failure before they begin. Teachers, as well as administrators, must be in the process of growing. An adequate in-service education program provides growth opportunities for both.¹¹

Several researchers have concluded that in-service education programs are more successful when teachers are included in the planning and participate in the formulation of objectives. Teachers tend to accept and value in-service programs that are planned carefully, locally, and

¹⁰Willard S. Elsbree and E. Edmund Reutter, Jr., Principles of Staff Personnel Administration in Public Schools, Bureau of Publications, Teachers College, Columbia University (1959), pp. 37-40.

¹¹Roald Campbell, John E. Corbally, Jr. and John Ramseyer, Introduction to Educational Administration (Boston: Allyn and Bacon, Inc., 1958), p. 209.

cooperatively. These general conclusions were reached by Hassel, Larson, Gerheim, and Dreisbach.¹²

A doctoral dissertation by Cory indicates age, sex, marital status, and parenthood do not appear to be major factors in teachers' willingness or ability to take part in in-service programs. Also there are indications that the essential characteristics of a good in-service education program are the same for both large and small schools.¹³

At times in-service activities are conducted at random and without reference to any particular goal or objective. The goal of in-service education as perceived by Wilson is to assist the faculty in providing students with opportunities to achieve at a level of maximum potential. She offers the following principles for in-service education:

- (1) In-service education must be continuous.
- (2) In-service education must be adapted to varying levels of professional readiness.

¹²Carl Winter Hassel, "A Study of Certain Factors Related to In-Service Education in Selected School Districts in New York State" (doctoral dissertation, Syracuse University, 1960); Olaf Peter Larson, "A Study of In-Service Education in School Districts and Counties of Alberta" (doctoral dissertation, University of Oregon, 1962); Mearl F. Gerheim, "Teacher Evaluation of the Nature and Effectiveness of In-Service Teacher Education in Selected School Districts" (doctoral dissertation, University of Pittsburgh, 1959), Dodson E. Dreisbach, "A Survey of the Opinions of the Supervising Principals, Elementary Principals, and Elementary Teachers Concerning the In-Service Programs Conducted in the Joint School Systems of Berks County, Pennsylvania" (doctoral dissertation, Temple University, 1959).

¹³Noel D. Cory, "Incentives Used in the In-Service Education of Teachers" (unpublished doctoral dissertation, Indiana University, 1959).

- (3) In-service education must be multi-disciplined.
- (4) In-service education should make broad use of the literature in the field.
- (5) In-service education must recognize personality needs of the staff.
- (6) In-service education should utilize community resources.
- (7) In-service education should be planned by the group.
- (8) In-service education must be integrated and modified in terms of situational needs.¹⁴

It is apparent that staff interest and involvement are important factors in developing improvement programs. The designated leader or administrator is viewed as an important figure in this process by Griffith. The administrator should provide opportunities for teachers to improve professionally and should encourage his teachers to do better work. The school administrator then becomes an improver of the people with whom he works; wanting them to do the best job possible and providing encouragement and opportunities for them to improve.¹⁵

The role of the administrator is to serve as a facilitator or coordinator of in-service education and Lewis indicates certain specific tasks that he must discharge. These would include: (a) providing inspiration; (b) encouraging

¹⁴Frances M. Wilson, "What Makes An Effective In-Service Training Program?" National Association of Deans of Women Journal, 16:51-62 (1953), p. 56.

¹⁵Daniel E. Griffiths, Human Relations in School Administration (New York: Appleton-Century-Crofts, Inc., 1956), p. 246.

the development of good organization for in-service education; (c) facilitating the work of groups; and (d) creating a climate for professional growth. Consequently the role of the program leader is prominent and is a factor in determining the success of the program.¹⁶

Techniques for In-Service Education

In-service education programs have been conducted in a wide variety of formats. The format or technique used should be determined primarily by the problem to be studied.

- Cooperative techniques, those which involve active teacher participation in planning and policy-making, tend to be more successful. A questionnaire study by Weber secured value ratings for the most in-service techniques which are listed as: (1) visiting other teachers in one's own school according to a plan devised by the teachers themselves; (2) visiting other teachers in other schools according to a plan devised by teachers themselves; (3) departmental meetings to study curriculum; (4) experimenting with new classroom procedures; (5) making surveys of pupil problems and needs; (6) exchanging teachers with other schools; (7) electing committees to conduct experiments; (8) organizing teachers to study recent educational research bearing on certain problems and reporting them to fellow staff members; (9) providing an

¹⁶Arthus J. Lewis, et al., "The Role of the Administrator in In-Service Education," In-Service Education, National Society for the Study of Education (Chicago: University of Chicago Press, 1957), Chapter 7, pp. 153-173.

adequate professional library; (10) electing committees to study phases of curriculum development; (11) organizing a summer workshop.¹⁷ It is also pointed out that those techniques which result from administrative initiative appear to have the least promise for successful programming.

According to a study by Larson,¹⁸ in-service activities considered to be the least effective for promoting professional growth were those related to classroom visits by principals and supervisory bulletins. Of the extensive list of techniques indicated in the literature, the more valuable would include the use of consultative services from various agencies, staff discussions and seminars, building workshops, participations, reading of professional literature, orientation for new teachers, college level courses, committee work, and professional meetings. This review of the literature would indicate that there are principles of in-service education that can be applied generally to all improvement programs.

The Utilization of Instructional Television

In reviewing the existing professional literature regarding the utilization of television in the classroom, it is important that we keep in mind our earlier definition of

¹⁷C. A. Weber, "Techniques of In-Service Education Applied in North Central Secondary Schools," North Central Association Quarterly, 17:195-198 (July, 1942).

¹⁸Larson, op. cit.

"utilization." For our purposes, utilization of instructional television refers to the manner in which a television broadcast is prepared for, presented, and followed up by the classroom teacher so that it does in fact have an impact upon the learner and fulfills its role as a factor in local curriculum. The specific way in which television is used in our schools is largely dependent upon the role it is expected to perform in the classrooms where it will be viewed. The Michigan Department of Public Instruction, in a statement of educational television and curriculum policy, asserts the potential role of television in the classroom should be based primarily on a school system's continuous evaluation of their educational values and curriculum objectives. While there are many approaches which will enhance learning, efforts should be made to achieve the goal that the learner be an active participant in television programming. The policy encourages a continued focus on the learner, rather than on facilities or organization. They continue:

We urge that school systems make of themselves even more dynamic centers of education in such settings, educational television and other modern teaching techniques may be tested out to utilize their potentialities.¹⁹

Some specific suggestions to teachers include: (1) the teacher should determine when the use of educational television is advisable and when actual life experiences would

¹⁹ Michigan Department of Public Instruction, Educational Television and Curriculum Policy, Publication No. 517, Lansing, 1961, p. 6.

be more desirable; (2) the teacher should use multiple resources and determine what means and media should be employed; (3) the teacher should be responsible for helping young people enter into creative participation and production of television programs; (4) the teacher should be responsible for evaluating the effectiveness of his choices; (5) the purposes of instruction should be clear enough that the teacher could determine how some of the various teaching media at hand would be better used than certain others for different purposes such as a study of a close-up of electronically magnified material or sharing international experiences; (6) the teacher should recognize and welcome educational television as a vehicle for presenting in the classroom skills, knowledge, and materials which are not readily available to the locality through other media.²⁰

The policy statement invites school systems to experiment with the potentials of television and education, but to do so with open minds and in a perceptive manner. These guidelines provide a foundation upon which planning for instructional television can be initiated.

A doctoral dissertation by Bergsma discusses common patterns schools follow in adopting the use of the in-school television. He points out that:

The sequence of adoption of in-school television seems to follow patterns of adoption described by sociological research studies . . . leaders in school districts

²⁰Ibid., pp. 7-8.

approach the acceptance of television through this sequence: (1) awareness of existence of the medium; (2) interest in its use; (3) evaluation through the determination of opinions of neighboring school people and those who have used it; (4) trial on a limited, cautious basis; (5) final acceptance and adoption with membership in one of instructional television programs available in the state.²¹

Although this is a common adoption pattern, some schools deviate from it by deliberately planning the use of television as an instructional medium in their program.

Bergsma's study also pointed out that school administrators are of the opinion that problems in adopting ITV for use in schools include:

- (1) cost, which appears to be the principal factor;
- (2) the difficulty in fitting telecasts into local schedules;
- (3) a dissimilarity between content of telecasts and local lessons being taught by teachers in the districts.²²

He relates that many educators are concerned that the utilization of television in the curriculum will result in a loss of local autonomy and control rather than alter local lesson content. Some administrators would rather do without some of the benefits available through television. Two specific recommendations resulting from Bergsma's study warrant inclusion here. They are:

- (1) Some means other than mail must be devised whereby intercommunication or feedback is possible. One

²¹S. Kenneth Bergsma, "The Relationships of Selected School District Characteristics to the Use of Educational Television in Michigan High School Districts" (doctoral dissertation, Michigan State University, East Lansing, 1963) p. 185.

²²Ibid., p. 187.

of the weaknesses of television in the schools in Michigan is its scope. Centrally located television personnel are making the major content decisions. It is very important for teachers to be able to react to their television counterparts about the lesson content and procedures.

- (2) There is a need for school people to take a long, hard look at local curriculum in an attempt to arrive at common goals for specific areas of learning. This would enhance television planning as well as curriculum development.²³

The utilization of instructional television in the local curriculum may take many forms. As stated earlier, the particular form used will depend upon what role TV is to play in the instructional program. Another factor in determining how television is to be used is the telecast source or broadcast facility available. The literature tends to suggest that the role television has to play should be determined first, and then the determination should be made whether or not the available telecast source will permit fulfillment of this role. Many terms have been used throughout the literature to indicate the various phases of instructional television utilization. The following categories represent generally the types mentioned:

- (1) total teaching by television;
- (2) cooperative use;
- (3) supplemental use;
- (4) occasional enrichment; and
- (5) observational use.

²³Ibid., p. 192.

Gray suggests the following diagram for depicting the coordinated roles of television and classroom teacher in instructional television utilization:²⁴

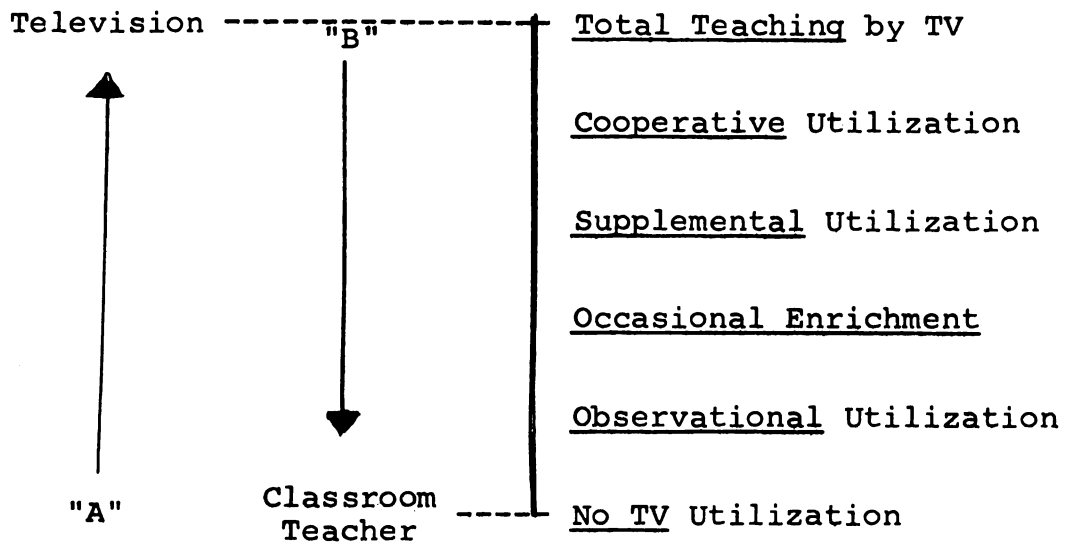


Figure 1. The coordinated roles of television and the classroom teacher in television utilization.

As the influence or utilization of television, represented by arrow "A", is increased within the curriculum, the closer the technique approaches Total Teaching by television.

At the other end of the scale, as the classroom teacher's role becomes more and more prominent in instruction, the less television is a factor in the utilization process.

²⁴Taken from lecture notes of Television and Radio 489, Radio and Television in Education, taught by Dr. Gordon Gray, Michigan State University.

In the middle ranges of the continuum, various degrees of television utilization are achieved depending upon the increased or decreased emphasis placed upon the role TV plays vis-a-vis the increased or decreased emphasis of the role of the classroom teacher.

Thus is described the difficulty in assigning a pure utilization category or term to any particular program where ITV is present.

Total teaching. According to Costello and Gordon the only good reason for attempting total teaching by television is that either inadequate facilities make it difficult to provide instruction in any other manner or a skilled instructor is not available for regular classroom teaching.²⁵ Since under these circumstances television is the only instructional source available, it becomes responsible for student motivation as well as teaching. It becomes responsible for the entire learning process. In view of these factors, it is understandable why higher education and adult education find this type of utilization more successful than do elementary and secondary schools. Variations in the total teaching technique are possible with the use of "talk back" systems allowing one-way or two-way communication between the on-camera teacher and the students in the classroom. Other possibilities include the presence of a supervisor in

²⁵ Lawrence F. Costello and George N. Gordon, Teach With Television (New York: Hastings House, 1961), p. 129.

the viewing classroom for the purpose of distributing papers or tests, giving instructions and picking up homework. Also total teaching by television can be alternated with regular class sessions, seminars, lectures or small group discussions. This approach is most common at the college level, although the literature suggests several instances of this type of utilization at the high school level. The following factors will require close scrutiny and consideration if total teaching by television is to be successful: (1) the kind of subject matter taught; (2) the nature of the students; and (3) the skill of the television teacher.

In an article discussing the curricular implications of instructional television, Caswell warns that there are serious limitations in teaching totally by television.²⁶ He indicates that this use of ITV is appropriate only in the elective, specialized phases of the curriculum because these are the only areas where instruction can be built around the interests and purposes of the pupils. He adds that total teaching limits the variety of possible pupil activities and the adjustment to individual differences is limited. A factor important to consider is that it tends to eliminate the stimulus of personal interest by a teacher and pupil achievement. Caswell is of the opinion that total teaching tends to fragment the curriculum, making it difficult to

²⁶Hollis L. Caswell, "Curriculum Viewpoint on ETV," Educational Leadership, 15:107-115 (November, 1957), pp. 107-113.

relate television instruction to out-of-school experiences.

He states:

We must appraise with care what the effects will be on our prize principle of local control. Television as envisioned by some could well erode this principle over the years; an outcome which I would personally view with apprehension. The use of television in education must be checked persistently against the broad criterion of desired curriculum and teaching.²⁷

In examining the personnel and training needs in educational television for the period 1961 - 1971, Maloney and Donner²⁸ doubt that the experienced live teacher in the classroom will ever be replaced by an automated machine. They do indicate that television can be used alone as an effective teaching device and that it can for some purposes be turned into a kind of teaching machine at no discoverable loss to the learning process. These facts become very important when one considers the monumental future tasks facing our educational system in terms of teachers, resources, material and money.

Cooperative use of television. As its name implies, this type of television utilization requires close communication and planning between the on-camera teacher and the classroom teacher. Television is the major resource used and the telecasts contain the main burden of formal course presentation. Other experiences in the instructional program are under the guidance and direction of the classroom teacher.

²⁷ Ibid., pp. 114-115.

²⁸ Martin J. Maloney and Stanley T. Donner, op. cit., p. 200.

Frequently this type of utilization is most effective in the relatively small closed-circuit systems where communication is easily achieved between the studio and the classrooms. Teachers' guides are very important in this procedure and must clarify the specific role of the classroom teacher and the specific responsibilities of the television teacher. The nature of the course of study and additional materials to be used in individual lessons must be clearly set forth.²⁹

The Department of Audio-Visual Instruction Television Committee expresses concern for this teaching partnership approach. They offer the following steps to consider in this cooperative effort: (1) curriculum planning must combine the effort and approval of all persons involved in the project. The classroom teacher must state ways in which TV content can best serve him. (2) Areas of responsibility must be clearly defined. The classroom teacher continues to assume responsibility for culminating activities as he always has no matter what other resource materials have been used, whether textbooks, films, or records. (3) Two-way communication is very important. The classroom teacher must interpret student reaction to the on-camera teacher. An appropriate feedback system needs to be developed, whether it be telephone, visits, or conferences. This communication can

²⁹Lawrence F. Costello and George N. Gordon, op. cit., p. 29.

be a valuable form of evaluation.³⁰ The Committee cites MPATI as being a good example of this type of instructional television utilization assuming that all channels of communication remain open and are utilized to their fullest. This serves to emphasize the point that the important factor in cooperative utilization is the close classroom contact with the television source, whether it be closed-circuit or open circuit.

Supplemental use of instructional television. This category is similar to cooperative use of television in that the programs are designed and produced so as to enrich in-school instruction. The prime difference lies in the fact that close, cooperative planning between the local classroom teacher and the on-camera television teacher is lacking in this approach. It is possible that this communication functioned when programs were originally being developed but, for some reason or other, was not regularly maintained thereafter. Consequently, programs became somewhat general in nature and not geared specifically to meeting the needs of local curricula. However, school systems may continue to utilize the programs on a somewhat regular basis as one other audio-visual resource to expand further upon ideas brought up in the classroom.

As Tarbet points out, this type of utilization enables specialists to be brought into the classroom to discuss

³⁰ And TV Too, Department of Audio Visual Instruction, Television Committee, National Education Association, Washington, D.C., 1961, pp. 16-17.

topics or to bring exhibits of materials which might not otherwise be available to the students. Time and distance of travel limit the extent of such participation in these classroom activities. Such programs are designed to supplement the work of the classroom teacher and usually consist of a series of "spot" programs rather than a closely, coordinated teaching series.³¹ The classroom teacher's responsibility then rests in pulling together as many kinds of experiences for pupils as he can including the television broadcasts.

Occasional enrichment. This use of television in the classroom may stem from either a commercial or an educational station and consists of either instructional television programs or educational programs. While they might be designed for in-school use, they bear no direct relationship with any specific curriculum. The portion of an instructional television series or a particular commercial program may be used in this manner.

A teacher often calls attention to some program being presented over a commercial station which is considered to have particular educational value for the students in his class.

MEET THE PRESS and TWENTIETH CENTURY are good examples of such programs. They are usually characterized by good production techniques and readily capture the interest of student groups. If a teacher keeps well informed on

³¹Donald G. Tarbet, Television and Our Schools (New York: Ronald Press, 1961).

future television offerings, he can assist students in developing the ability to discriminate between good and poor programs.³² Principles that apply to the effective use of audio-visual aids should be considered when planning for the occasional enrichment utilization of television.

Observational use of in-school television. Relatively inexpensive closed-circuit television installations have demonstrated their value as effective teaching tools for the purposes of magnification and demonstration. While it is possible for this technique to be functional at most levels of education, it is most frequently found in colleges and universities.

In describing how this use of TV is made by a dental school, Cassierer relates that:

When used as a tool manipulated by the teacher, the television camera may be located in the auditorium itself so the instructor can use a projection microscope, film projector, or a model to show specific portions of his course; but he will do this in constant contact with the students who see him directly while they also see his demonstrations on the television screen. Another less satisfactory alternative is for the teacher to go to an adjoining small television studio to perform part of his operation and return to the classroom for the remainder of the lecture and discussion, or again, his assistant may perform the operation in the TV studio so that the professor can observe and comment upon it directly to the students in the auditorium, relaying their questions or his instructions by the two-way communication. These are only examples to indicate the extreme flexibility in the use of this medium in dentistry.³³

³² Ibid., p. 16.

³³ Henry R. Cassirer, Television Teaching Today, United Nations Educational, Scientific and Cultural Organization, Paris, 1960, p. 138.

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By means of this demonstration technique, it appears that television can better teach certain phenomena that either are being taught now by other means or are not being presented at all.

Whatever type of ITV utilization is employed in a school, it must be remembered that television in itself does not teach. It is merely a medium of communication. It provides more time for learning and encourages creativeness in teaching.³⁴ Also, it tends to stimulate the use of a variety of other resources and audio-visual materials.

Planning for Utilization

The role of the classroom teacher using ITV will depend to a large extent upon the type of utilization selected. Obviously, the classroom teacher has little or no responsibility where "total teaching" by television is conducted. However, in instances where other types of television utilization is involved, the classroom teacher must clearly understand her functions. Although they may be applied in different ways and proportions, the following aspects need development by the classroom teacher in conjunction with other personnel involved: (1) preparation of the class for the television experience; (2) viewing the tele-lesson; (3) follow-up activities for providing depth of understanding

³⁴D. M. Bivens, "Educational By-Products of Television Teaching," National Association of Secondary School Principals Bulletin, 44:262-264 (April, 1960), p. 262.

of the issues presented by television as well as other resources. In addition, the teacher in the classroom receiving instructional TV needs to be concerned about evaluating the experience. Classroom environment and the physical factors affecting viewing and listening are also usually considered the classroom teacher's responsibility.

Preparation of the class. If ITV programs are to supplement or enrich the school curriculum, the teacher needs to communicate to students information about television content. More importantly, an effort should be made to explain how the TV content relates to the subject matter covered in the classroom. School systems holding membership in instructional television series from a specific broadcasting source will usually be provided with study guides and teaching units which correlate with the programming. Those school systems which view without any affiliation will need to establish a procedure whereby teachers utilizing the telecasts will have some assistance in planning preparatory activities. The presence of the television resource in the classroom will cause the teacher to examine her specific role in relation to it and might well tend to result in the development of some new skills on his part. Reflection, analysis, generalization, and imagination are among the characteristics the classroom teacher will want to develop and instill in students. This will require an understanding by the teacher of the communication and learning processes, as

well as an ability to apply such theory and research to workable classroom routines.³⁵

Additional procedures of a more specific nature which will assist in preparing for the television experience might include:

1. A letter to parents containing rationale for the use of ITV and information about program content.³⁶
2. Explain the various possible uses and values of television instruction to the students.
3. Provide students with instruction in the areas of note taking, outlining, and good listening and viewing procedures.
4. Acquaint the class with the on-camera teacher whenever possible by presenting specific information about his background and experience.
5. Explain fully what responsibilities the students will have in terms of class participation in activities during viewing, homework, and testing or evaluation concerning content.
6. Immediately prior to viewing, the teacher can create interest and readiness through the formulation of questions to be answered by the telecast or directions to be looking for items previously discussed in class.³⁷

The classroom teacher should attempt to secure the most appropriate auxiliary materials and devices which will add depth and quality to the TV lesson.

Viewing the television. The literature suggests that if the television lesson is to accomplish all it is designed

³⁵Martin J. Maloney and Stanley T. Donner, op. cit., p. 209.

³⁶See Appendix E for a sample letter.

³⁷Airborne Television Instruction (New York: McGraw-Hill Book Company, Inc., 1961), p. 47-51.

to accomplish, the students will need to be more than merely passive observers. In many cases the learner will become actively involved in an activity being presented by the on-camera teacher or studio group.³⁸ Physical education, music and foreign languages are subject matter areas where interaction or reaction is requested of pupils by the teacher on TV. The classroom teacher's role thus becomes one of explaining the need and desirability of such interaction and encourages a climate where it is able to occur. One way in which this might be accomplished is by the class being able to witness the classroom teacher as an active and participating viewer and performing in much the same manner as is expected of students.

Among other functions the classroom teacher might perform during the telecast include the taking of necessary notes, selection of questions to be asked of class after viewing and the determination of the emphasis for the follow-up period.³⁹

Follow-up activities. Since the utilization of instructional television usually provides only a portion of the actual instruction concerning the topic under study, follow-up activities are necessary to relate the TV material to other on-going content, and to clarify issues and questions arising as a result of viewing the ITV program. Ideas for

³⁸Tarbet, op. cit., p. 35.

³⁹Mary Howard Smith (ed.), op. cit., p. 65.

individual and class projects may also arise from the viewing.

The involvement of local resource people; arranging for trips or visits appropriate to the content or problem under study; and, cooperation with other community agencies such as the library, museums, or industry are other ways in which the classroom teacher can plan a meaningful follow-up to the television lesson.⁴⁰

Evaluation. The extent to which ITV is successful must be measured in terms of the goals or objectives it is expected to fulfill. There is a tendency for this evaluation to follow two patterns. One is the measurement or evaluation of student learning which occurred as a result of the television experience. Examination or testing of the pupils for content covered by ITV is a common procedure in those instances where television programs are an integral part of the curriculum.⁴¹

The second evaluation process deals with the value of ITV as an instructional tool. Production techniques and qualities of the on-camera teacher are factors which are commonly evaluated.

Costello and Gordon offer some Do's and Don'ts in evaluating the results.

⁴⁰Ibid., pp. 73-75.

⁴¹Tarbet, op. cit., p. 37.

Do:

1. Evaluate both the project and students' progress.
2. Interview a sample of interested parties to evaluate the installation.
3. Give special weight to the opinions of cooperating teachers.
4. Test Students' progress frequently to evaluate television teaching.
5. Compare test to comparable classes not using television.
6. Prepare periodic reports on all phases of the project's operations; distribute them widely.

Don't

1. Rely entirely upon the popularity of instruction or teachers in making any final judgements.
2. Attempt detailed evaluation of television teaching without the advice of a specialist in educational research and statistics.
3. Duplicate experimentation on instructional television already carried out; check reports of television experiments to find out what has been done.
4. Rely entirely upon tests in judging instructional television.
5. Attempt complex evaluation procedures too soon after the installation has begun operation, unless necessary.⁴²

Evaluation should be continuous and devices for this purpose can be developed and adopted on a system-wide basis or by the individual classroom teacher depending upon the need it is designed to serve.

⁴²Costello and Gordon, op. cit., p. 171.

Summary

When television and in-service education are discussed jointly in the literature, the reference to television is frequently regarding its potential as a medium by which in-service education programs can reach local teachers. Seldom is it discussed in terms of the purposes of this study; that is, instructional television as the focus or subject matter around which an in-service program is developed. However, Schuller speaks to this point when he indicates that school administrators need to discover the specific needs of his staff and to provide them with the necessary information about the medium to enable them to utilize it wisely as an instructional tool.⁴³

In the Report of the President's Commission on National Goals, John Gardner writes:

The educational use of television holds great promise. But this marvelous tool of communication is powerless in itself to improve education. It may be employed to good effect or foolishly. One of the challenges facing education in the 1960's is to learn to use it well.⁴⁴

⁴³ Charles F. Schuller (ed.), The School Administrator and His Audio-Visual Program, Department of Audio-Visual Instruction, National Education Association, Washington, D.C., 1954, pp. 162-163.

⁴⁴ John W. Gardner, "National Goals in Education," Goals for Americans, Report of the President's Commission on National Goals, The American Assembly, Columbia University, New York, 1960, p. 89.

Suggesting one way in which this challenge might be met, Gork⁴⁶ recommends that workshops for the classroom and on-camera teachers be conducted prior to the commencement of telecasting, and continue during the reception periods so that coordination and optimum articulation can be achieved and full benefit derived from the medium.

An examination of the literature reveals that there are principles of in-service education which can be applied generally to all programs of professional improvement. Such in-service education programs may involve a number of techniques which may have been used successfully by other local agencies. Planning for in-service education should be co-operative and involve all those staff members who will ultimately be affected by resulting programs and activities. Purposes and objectives of the role instructional television is to play in the local curriculum should determine the manner in which ITV is utilized by classroom teachers. Utilization should attempt to serve the stated goals and, in turn, must be understood and determined by the classroom teacher. Most utilization will involve a four-phase process of preparation, viewing, follow-up, and evaluation. The factors discussed in this chapter need to be considered when planning such an in-service education program.

⁴⁵Edward R. Gork, op. cit., p. 122.

CHAPTER III

RESEARCH PROCEDURE

Selecting a Research Procedure

As stated in Chapter I, the purpose of this study includes: (1) a survey of public school administrators in the state to determine the nature and extent of the in-service education programs presently conducted for classroom teachers utilizing ITV; and, (2) detailed descriptions of programs in three selected schools to examine in depth the in-service education activities for classroom teachers utilizing instructional television.

To achieve these purposes it was necessary to select a research procedure that would determine existing conditions, gather facts, and obtain the opinions and judgements of school administrators concerning ITV utilization and in-service education programs for those classroom teachers involved in the utilization. In addition, a procedure was desired that would enable the researcher to identify those activities, procedures, and policies that appeared to be functional and desirable for, and worthy of consideration by, other schools planning such in-service education programs. Several possible approaches were examined and the

normative-survey method was chosen as the most appropriate for this investigation. Good, et al., point out that the normative-survey method:

. . . tends to focus attention on needs that might otherwise remain unobserved . . . may call attention to current trends and permit people to evaluate and direct these new tendencies which are taking shape.¹

They add further that:

data coming directly from the field represents field conditions; they tend to be practical because they grow out of practical situations; and they generally answer the questions of the man in the field because they are likely to be cast in the terms in which he thinks.²

A variety of techniques are available to the researcher when employing the normative-survey method. This study was developed by using a complement of two techniques: the questionnaire and the interview.

Questionnaire Construction

Data on (1) the extent of television utilization in public schools in Michigan; and, (2) the nature and extent of in-service education programs for teachers utilizing ITV were gathered by a three-phase questionnaire.³ The questionnaire technique was used because it:

normally comes into use where one cannot readily see personally all of the people from whom responses are desired, or where there is no particular reason to

¹Carter V. Good, A. S. Barr and Douglas E. Scates, The Methodology of Educational Research (New York: Appleton-Century-Crofts, Inc., 1941), p. 292.

²Ibid., p. 291.

³See Appendix C.

see them personally . . . the questionnaire is an important instrument in gathering information from widely scattered sources.⁴

In addition they explain that:

Questionnaire inquiries are adapted both to gathering facts and to gathering opinions and attitudes and have a wide range of application.⁵

Concerning this technique, Reavis states that:

Questionnaires have constituted the chief source of information regarding current practices in public school organization and administration.⁶

The instrument was designed to secure information from public school principals and consisted of three phases which are categorized as follows:

1. Respondents no longer utilizing television in their curriculum.
2. Respondents utilizing ITV in their curriculum, but not having an in-service education program for teachers utilizing ITV in the classroom.
3. Respondents utilizing television in their curriculum and having an in-service education program for teachers utilizing television in their classrooms.

The questionnaire was designed so that it was not necessary for a respondent to complete the entire instrument unless all the items contained therein were pertinent to his

⁴Good, et al., op. cit., p. 325.

⁵Ibid., pp. 373-74.

⁶William C. Reavis, "Methods of Research in School Organization," Chapter III in "Methods and Techniques of Educational Research," Review of Educational Research IV, No. 1 (February, 1934), p. 26.

situation. For example, if a respondent's school was no longer utilizing ITV, it was not necessary for that respondent to continue beyond item III in the questionnaire. If the school was utilizing ITV, but lacked an in-service program, the respondent was able to conclude his response with the completion of item VII. If the respondent's school utilized ITV and had an in-service education program for teachers utilizing the medium, he was asked to complete the entire instrument. This design was intended to have the questions apply to the respondents' situation as much as possible.⁷

Questionnaire items were selected after a review of the literature and discussions with advisors, public school administrators, and teachers in schools utilizing instructional television. Good, et al.,⁸ and Best⁹ were used as references for phrase construction and wording of the instrument.

A study by Gross¹⁰ of in-service education programs in another field involved the use of an instrument which contained several items of a nature pertinent to this study. These were refined and adapted to the problems and concerns

⁷Good, et al., op. cit., p. 338.

⁸Ibid., pp. 337-341.

⁹John W. Best, Research in Education (Englewood Cliffs: Prentice-Hall, Inc., 1959), pp. 143-154.

¹⁰Richard F. Gross, "A Study of In-Service Education Programs for Student Personnel Workers in Selected Colleges and Universities in the United States" (doctoral dissertation, Michigan State University, 1963).

of in-service education programs for teachers having instructional television in their classrooms.

A second draft of the questionnaire was discussed in face-to-face interviews with three public school principals whose schools were participating in ITV. The three included an elementary principal, a junior high principal and a high school principal. These critiques provided additional evaluation and suggestions which resulted in appropriate modification to the questionnaire. The instrument was then submitted in its existing form for gathering the required data.

Establishing a Statewide Population

In attempting to examine in-service education programs related to ITV it became apparent that a basic listing of all schools using ITV in the state would be needed. Investigation showed that only one source could provide such a listing: The Michigan Department of Public Instruction's, A Survey of Five Years of Progress in Public Education in Michigan,¹¹ conducted during the 1962-63 school year. A portion of this survey gathered information concerning the use of educational TV classes as reported by a representative of each public school building in the state.

No specific information as to what broadcasting source provides the programs or how the telecasts are used in

¹¹A Survey of Five Years of Progress in Public Education in Michigan, Department of Public Instruction, Lansing, Michigan, 1963. (Unpublished)

the schools was secured by the survey instrument. However, for the first time, a reasonably comprehensive listing was available of public schools in Michigan which were utilizing some type of television broadcasting in some manner or other. It was not previously possible to determine such a listing without contacting each school building in the state. Partial lists were available from educational broadcasters, but these included only those schools holding membership in their program and, possibly, others the broadcaster knew was viewing. However, there was no way to identify the non-member who was viewing educational stations or the schools using programs carried by commercial stations without individual and complete contact with all schools.

The Five-Year Survey indicated that a total of 250 public school districts were utilizing some type of television instruction in their curriculum. Table 1 presents this data.

Eighty-eight per cent, or 220 of the 250, districts using television operate a kindergarten through grade twelve program of instruction. The remaining thirty districts do not operate a senior high school. Information on the statewide extent of television utilization in the public schools of Michigan is offered in Table 2.

Table 1. Number and type of school districts using TV in Michigan during 1962-63 school year.

LEGAL CLASSIFICATION OF THE DISTRICT ^a	NO. DISTRICTS USING TV
1st Class	1
2nd Class	1
3rd Class	61
4th Class	184
Primary	0
Special	3
Total	250

^aPersonal Inquiry of Department of Public Instruction, Lansing, Michigan, on May 25, 1964.

Definitions of Legal Classification

Primary Districts - Those districts whose school census contains less than 75 children between the ages of 5 and 20.

4th Class Districts - Those districts whose school census contains more than 75 but less than 2400 children between the ages of 5 and 20.

3rd Class Districts - Those districts whose school census contains more than 2400, but less than 30,000 children between the ages of 5 and 20.

2nd Class Districts - Those districts whose school census contains more than 30,000 but less than 120,000 children between the ages of 5 and 20.

1st Class Districts - Those districts whose school census contains 120,000 or more children between the ages of 5 and 20.

Special Districts - Those districts formed by a special act of the legislature.

Table 2. State-wide extent of TV use in public schools during the 1962-63 school year.

TOTAL NO. OF DISTRICTS IN MICHIGAN ^a	NO. OF DISTRICTS USING TV	% OF DISTRICTS USING TV
1438	250	18.1

^aPersonal inquiry of Department of Public Instruction, July 1, 1964.

It should be pointed out that the 18.1 per cent figure represents utilization during the 1962-63 school year only. Data presented in Table 6, Chapter IV, indicates that 19 per cent of a sample of 142 buildings in these 250 districts no longer engage television as an instructional tool. Based on this knowledge and the assumption that other districts have initiated ITV programs since the 1962-63 school year, one realizes that this is a dynamic area in which to assess accurate involvement over any extended period of time.

Table 3 presents data concerning the number of school buildings within the 250 districts which were utilizing television during the 1962-63 school year.

The percentage, 6.5 per cent, of school buildings reporting the discontinued use of television on the 1962-63 Five Year Survey is somewhat less than the percentage, 19 per cent, of buildings indicating no TV utilization among the school buildings comprising the respondent population in the 1964 survey described in the following chapters. This tends

to indicate that there was an increased rate of eliminating TV use during the 1963-64 school year. No attempt is made here to compare these data with rates of adoption of television into the curricula of other systems.

Table 3. Number of school buildings reporting use of television during 1962-63 school year.

TYPE OF SCHOOL	NO. USING TV	NO. REPORTING TV USE DISCONTINUED	% REPORTING TV USE DISCONTINUED
Elementary	493	23	4.7
Junior High	59	10	16.9
Senior High	81	8	9.8
Totals	633	41	6.5

Sample Selection for Questionnaires

Selected from this basic state wide listing were those elementary schools, generally kindergarten through grade six, which involved more than 200 students in the viewing of ITV programs. Secondary schools, grades 7 through 12, with more than 100 students viewing ITV were also identified. Of the data collected by the Department of Public Instruction's Five-Year Survey, "the number of students involved" in viewing provided the most desirable factor available for locating extensive ITV utilization and, thus, well-developed in-service education programs accompanying such utilization.

The sample was then divided into three categories by the manner in which the schools identified themselves: elementary, junior high, and high school. The figures are illustrated in Table 4.

Table 4. Number and category of sample schools using ITV.

CATEGORY	N
Elementary Schools	90
Junior High Schools	31
Senior High Schools	33
TOTAL SAMPLE (N)	154

Where districts contained more than one school building with the minimum "number of students involved," the building having the greatest number involved was selected. With the exception of selected large districts, only one school building per district was included in the sample.

Those districts not providing data on the "number of students involved" in the Five-Year Survey were excluded from the sample.

Questionnaire Distribution and Return

Questionnaire cover sheets were color-keyed for identification purposes:

White - Elementary Schools
Yellow - Junior High Schools
Blue - Senior High Schools

Cover sheets contained the title of the study and introductory information as to purpose and definition. Cover letters¹² were individually typed and personally addressed to each school building principal and accompanied the questionnaire. Also included was a self-addressed and stamped envelope. This initial mailing was made on March 24, 1964, and resulted in approximately one hundred responses.

Follow-up letters,¹³ including additional questionnaires and return envelopes, were mailed on April 8, 1964, to those not responding to the first contact. Ultimately, a total of 145 responses were received, of which 142 were usable. The total response by category is presented in Table 5.

Three of the instruments returned were eliminated because the respondents could not be identified by category or no written response was indicated.

School Visitations and Interviews

The second research technique utilized in this study is the interview. While data gathered by questionnaire provided a quantitative appraisal of the nature and extent of

¹²See Appendix A.

¹³See Appendix B.

in-service education programs for classroom teachers utilizing ITV, the interview phase of the study was an attempt to examine in depth those factors which played a major role in the history and development of ITV in-service programming, and to analyze the interaction between these factors. Best points out that:

Through the interview technique the researcher may stimulate the subject to greater insight into his own experiences, and thereby explore significant areas not anticipated in the original plan of investigation . . . certain types of confidential information may be obtained that an individual might be reluctant to put in writing. The interviewer can explain the purpose of his investigation, and can explain more clearly just what information he wants.¹⁴

Table 5. Total response by category to questionnaire.

TYPE OF SCHOOL	NO. QUESTIONNAIRES SENT	NO. QUESTIONNAIRES RETURNED	% QUESTIONNAIRES RETURNED
Elementary	90	81	90.0
Junior High	31	28	90.3
Senior High	33	33	100.0
TOTALS	154	142	92.2
Questionnaires returned but not usable		3	94.1
		145	

¹⁴Best, op. cit., pp. 165-166.

The purpose for the visitations and interviews was to gain further insight into existing in-service education programs for teachers using ITV and to identify those procedures, policies, and activities not included in the questionnaire, as well as gaining additional information on the questionnaire items.

In order to provide detailed descriptions of these facets of in-service education programs for teachers utilizing ITV, three schools were selected for visitation and interview. Selection was based upon the following criteria: (1) Extensiveness of in-service education program as indicated by questionnaire response; (2) diversity of television program source; (3) inclusion of all grade levels, elementary through secondary schools; and (4) willingness on the part of the schools to participate in an extended study of their programs.

The principals of the three selected schools were contacted by telephone and arrangements made for the visitation. The purpose of the visitation was clearly stated during this telephone conversation.

An interview guide¹⁵ was constructed to insure a proper sequence of questions and comments that would provide, in an orderly manner, the desired responses. The investigator made written notes both during and immediately after the interview.

¹⁵See Appendix D.

the interview. Materials that would provide the investigator with a more complete understanding of the program were solicited and received.

Data Presentation

Questionnaire responses are tabulated and responses to the closed-form items are summarized and analyzed in Chapter IV. Responses to the open-end items are indicated. Detailed descriptions of the programs in the three schools visited are presented in Chapter V.

CHAPTER IV

PRESENTATION OF THE QUESTIONNAIRE DATA

Introduction

A summary of the questionnaire responses is presented in this chapter. The questionnaire data are summarized according to three categories.

1. Respondents no longer utilizing television in their instructional program.
2. Respondents utilizing instructional television, but having no in-service education programs for teachers utilizing television in the classroom.
3. Respondents utilizing television in their curriculum and having in-service education programs for classroom teachers utilizing the medium.

Questionnaires were sent to 154 public school building principals in the State of Michigan who had previously indicated they were using television to some extent during the 1962-63 school year. Of the study population of 154, ninety were elementary schools, thirty-one were junior high schools, and the remainder were senior high schools. This information and other selected details concerning total response to the questionnaire are presented in Tables 4 and 5, Chapter III.

The relatively high response to the instrument, 94.1%, tends to give some indication that the problem being studied is recognized by public school principals as important. Since several requests for copies of the questionnaire and summaries of the study were requested, it is evident that the problem is one with which they are locally concerned.

Category I: Schools No Longer
Utilizing Television

Twenty-seven, or 19 per cent, of the respondents indicated that they were no longer using television of any kind in their curriculum. These findings are summarized in Table 6.

Table 6. Respondents no longer using television (category 1).

TYPE OF SCHOOL	USABLE RESPONSES	NO. INDICATING NO USE OF TELEVISION	% INDICATING NO USE OF TELEVISION
Elementary	81	6	7.4
Junior High	28	9	32.1
Senior High	33	12	36.3
Totals	142	27	19.0

Once TV was introduced into the program of sample schools, a higher percentage of junior and senior high schools discontinued the utilization of television than did elementary schools. Slightly less than one-third of the

junior high school sample and slightly more than one-third of the senior high school sample reported they have discontinued TV utilization.

No data was requested which would indicate specific causes for discontinuing television use. However, of the six elementary schools indicating no use of television, three made the following comments:

1. When in operation we used Channel 9. We used TV for one semester, but due to lack of finances it was dropped. In general we thought it a valuable program.
2. We previously used television in our school for seven years.
3. Your choice of topics is current and should develop some thought-provoking conclusions. At the present time we are not using television. Last year we were in the middle of a building program and this year our reception has been so sporadic that it has been useless. By the Fall of 1964, we hope to have all the bugs out.

Five of the nine negative junior high school respondents indicated the following information.

1. We were in the Pilot ETV Project for five years over WTVS, Channel 56, Detroit, using 8th grade science and 9th grade World History.
2. We are not using the program this year because of scheduling problems. We have used it for the past two years.

3. We haven't used MPATI for the past two school years due to poor picture quality. Experiencing technical problems with equipment.
4. We would like to receive information to initiate a program.
5. The use of television in our school has been a hit-miss proposition since we are not notified far enough in advance of when the programs are going to be offered. Therefore, a TV program must coincide with our class period time or it is of very little use to us.

Only one of the eleven responding senior high schools commented on their not using television.

1. We are not using television at the present. We had MPATI, but discontinued.

These comments center around some problem areas that the literature indicate as being of concern to schools using television.

Category 2.: Schools Utilizing Television But Having
No In-Service Education Program for Teachers
Utilizing Television in the Classroom

Sixty seven schools, or 47.2 per cent of the respondents, indicate that they are currently utilizing television in their instructional program, but do not have an in-service education program for the classroom teachers involved in the use of the medium. Table 7 presents a summary of the responses for this group of schools.

Table 7. Schools using television, but not having an in-service education program (category 2).

TYPE OF SCHOOL	USABLE RESPONSES	NO. INDICATING TV USE BUT NO IN-SERVICE	% INDICATING TV USE BUT NO IN-SERVICE
Elementary	81	45	55.5
Junior High	28	12	42.9
Senior High	33	10	30.3
Totals	142	67	47.2

Respondents were asked to indicate the number of years their school has used television in the instructional program. Sixty-one principals responded and indicate television has been used for an average of 3.32 years in their schools. Table 8 contains the complete data on this question for category two.

Table 8. Years respondents in category 2 have utilized TV.

TYPE OF SCHOOL	N	MEAN NO. OF YEARS USED	RANGE
Elementary	40	3.3	2 - 7
Junior High	11	3.5	1 - 8
Senior High	10	3.3	1 - 7
Totals	61	3.32	1 - 8

Sixty-one schools, 42.9 percent of the total 142 respondents, have utilized television in the curriculum for an average of 3.32 years without conducting any planned in-service education program for the classroom teachers involved. While some have recently initiated ITV use, others have been engaged in the practice for as many as eight years.

Respondents using television were asked to indicate all stations from which programs were currently being received. Table 9 offers frequency data on the television broadcast sources for category two. As is obvious from Table 9, many schools indicated more than one television station as a source for their programs.

All grade levels in the sample appear to receive MPATI programs to a greater extent than programming from other sources. WTVS, the Detroit Public Schools UHF open-circuit station is the most frequently used TV source and displays extensive use by the elementary sample. These findings are a direct result of these two programming sources being made available to the most densely populated regions in the state; the metropolitan Detroit area served by WTVS and the southern tier of counties in the lower peninsula served by MPATI.

Table 9. Frequency of TV broadcast source by schools in category 2.

TV SOURCE	CHANNEL	TYPE OF SCHOOL			TOTAL N=67
		ELEMENTARY N=45	JUNIOR HIGH N=12	SENIOR HIGH N=10	
WJBK	2	3	3	0	6
WKZO	3	1	1	3	5
WWJ	4	3	3	0	6
WTOM	4	0	0	0	0
WNEM	5	5	2	3	10
WJIM	6	1	2	0	3
WXYZ	7	3	3	0	6
WPBN	7	0	0	0	0
WOOD	8	2	0	2	4
WWTV	9	6	0	1	7
CKLW	9	2	2	0	4
WMSB	10	8	3	0	11
WILX	10	4	2	0	6
WJRT	12	5	2	4	11
WZZM	13	3	0	0	3
WTVS	56	13	5	1	19
WKNX	57	0	0	0	0
MPATI	72	7	4	4	15
MPATI	76	8	4	5	17
Out-of-State		0	0	0	0
Others		2 ^a	1 ^b	0	3

^aSoo - Channel 10; and CCTV.^bDetroit Commercial Station.

Other sources, also located in the state's more heavily populated areas, also were indicated as frequent program sources. WMSB, Channel 10 from Michigan State University, WJRT, Channel 12 from Flint and WNEM, Channel 5 from Bay City, both outlets for Central Michigan Television Council telecasts, all were among the more frequently listed stations being viewed by schools in Category 2.

Information concerning how television is used, and for whom it is presented, is contained in Table 10.

Schools of all grade levels generally offer television programs for all students in a particular grade or class. The five respondents indicating programs for teachers only in Item V also indicated TV offerings for students. They receive certain additional programs which are viewed only by teachers.

Item VI in Table 10 offers data on the manner in which the TV programs are utilized at the local level.

It is somewhat surprising to find the only four total teaching responses listed as elementary schools. Total teaching is not a common form of television utilization in grades K - 12, and particularly unusual at the elementary level.

Since the most frequently used television sources, which were identified earlier, attempt to develop TV programs and series on the basis of close contact with the schools they serve, it follows that such programs would be utilized in a cooperative, supplemental, or enrichment manner. These

Table 10. How television is utilized in schools having no in-service education program.

QUESTIONNAIRE ITEM	RESPONSE	TYPE OF SCHOOL				TOTAL N=67	% OF SCHOOLS
		ELEMENTARY N=45	JUNIOR HIGH N=12	SENIOR HIGH N=10			
V. For whom are the television pro- grams presented in your school? (Check all that are applicable)	For selected students	7	3	2	12	17.9	
	For all students in a class	42	11	9	62	92.5	
	For teachers only	2	3	0	5	7.4	
	Others	0	1 ^a	0	1	1.4	
VI. In what way are television pro- grams used in your school? (Check all that are applicable)	For total teaching	4	0	0	4	5.9	
	For cooperative teaching	24	8	4	36	53.7	
	For supplemental instruction	32	7	4	43	66.1	
	For enrichment	26	6	6	38	56.6	
	For entertainment	2	2	2	6	8.9	
	For special events	32	11	6	49	70.1	
	On a regularly scheduled basis	26	7	5	38	56.6	
	Other	0	0	0	0	0	

^aParent groups on special occasions.

three types of utilization are indicated as being the most frequently employed at all three grade levels. As an additional use of television, most respondents rely upon it to present special events in the classroom.

In most instances, when television is utilized in the instructional program of a local school, it is done so on a regularly scheduled basis.

Respondents were asked at this point to indicate whether their school conducted a planned in-service education program for the classroom teachers utilizing television in the classroom. Data on the respondents replying positively to this question are presented in Category 3.

Category 3: Schools Utilizing Television and Having
an In-Service Education Program for Teachers
Utilizing Television in the Classroom

Slightly more than one-third of all respondents conduct a planned in-service education program designed to improve television utilization in the classroom. These findings are presented in Table 11.

The presence of in-service education from one grade level to another varies by only 12 per cent. Thirty-seven per cent of the elementary respondents having in-service activities compares to more than fifty-five per cent of the elementary respondents who do not. Overall, there are only 11 per cent more respondent schools not having in-service than those having such a program.

Table 11. Respondents using television and having an in-service education program (category 3).

TYPE OF SCHOOL	RESPONSES	NO. INDICATING TV USE AND IN-SERVICE	% INDICATING TV USE AND IN-SERVICE
Elementary	81	30	37.0
Junior High	28	7	25.0
Senior High	33	11	33.3
Totals	142	48	33.8

Data on the number of years the schools in Category 3 have utilized TV in their school program is presented in Table 12.

Table 12. Years respondents in category 3 have utilized TV.

TYPE OF SCHOOL	N	MEAN NO. OF YEARS USED	RANGE
Elementary	28	3.4	1 - 5
Junior High	6	3.5	1 - 5
Senior High	10	4.5	3 - 7
Totals	44	3.7	1 - 7

Forty-four respondents indicate that television instruction has been present in their schools for an average of 3.7 years. The respondents to this item, 30.9 per cent

of the total respondents, have utilized TV over a range of from one to seven years. Most have utilized the medium for a period of time longer than one year. Only the elementary grade level shows a minimum range as low as one year.

While the respondents in Category 3 have utilized TV over lesser range of time, they present mean number of years of television utilization which is approximately .4 of a year greater than those respondents in Category 2. Schools conducting in-service education programs for teachers utilizing TV have had slightly more experience as a group with TV over a period of eight years, than those respondents indicating no in-service program.

Table 13 presents data on the frequency of TV broadcast source for category 3.

MAPTI and WTVS, Channel 56 of the Detroit Public Schools, are the most frequently used TV program sources among those respondents conducting in-service programs for teachers utilizing TV in the classroom. These two sources maintain their frequency through all grade levels.

One elementary and one senior high school indicate closed-circuit systems as TV program sources while there was one junior high school in category 2 relying on CCTV.

Table 14 presents the response to Questionnaire items V through XII for Category 3. As item V in Table 14 shows, forty-six, or 95.8 per cent of the respondents in Category 3 indicated that television programs are presented to all students in a class. The findings for this item are similar in

Table 13. Frequency of TV broadcast source by schools using TV and having an in-service education program.

TV SOURCE	CHANNEL	TYPE OF SCHOOL			TOTAL N=48
		ELEMENTARY N=30	JUNIOR HIGH N=7	SENIOR HIGH N=11	
WJBK	2	3	2	0	5
WKZO	3	3	0	0	3
WWJ	4	4	2	0	6
WTOM	4	0	0	0	0
WNEM	5	4	1	5	10
WJIM	6	0	0	0	0
WXYZ	7	4	1	0	5
WPBN	7	0	0	0	0
WOOD	8	2	0	0	2
WWTW	9	5	1	2	8
CKLW	9	2	1	0	3
WMSB	10	4	1	3	5
WILX	10	1	0	0	1
WJRT	12	4	1	4	9
WZZM	13	2	0	0	2
WTVS	56	9	4	1	14
WKNX	57	0	0	0	0
MPATI	72	14	2	3	18
MPATI	76	13	4	3	20
Out-of-State		0	0	0	0
Other		1 ^a	0	1 ^b	2

^aClosed-circuit system.^bClosed-circuit system.

Table 14. Total frequency responses to questionnaire items V - XIII for category 3.

QUESTIONNAIRE ITEM	RESPONSE	TYPE OF SCHOOL				TOTAL N=48	% OF SCHOOLS
		ELEMENTARY			SENIOR HIGH		
		N=30	N=7	N=11			
V. For whom are the television pro- grams presented in your school? (Check all that are applicable)	For Selected Students	5	3	3	11	22.9	
	For All Students in a Class	30	6	10	46	95.8	
	For Teachers Only	3	2	0	5	10.4	
	Other	0	0	0	0	0	
VI. In what way are television pro- grams used in your school? (Check all that are applicable).	For Total	1	0	2	3	6.2	
	Teaching						
	For Cooperative Teaching	17	2	7	26	54.1	
	For Supplemental Instruction	23	6	9	38	79.1	
	For Enrichment	19	4	5	28	58.3	
	For Entertainment	1	1	0	2	4.1	
	For Special Events	19	5	5	29	60.4	
	On a Regularly Scheduled Basis	2	5	5	32	66.6	
	Other	0	0	0	0	0	

Table 14. Continued

QUESTIONNAIRE ITEM	RESPONSE	TYPE OF SCHOOL				TOTAL N=48	% OF SCHOOLS
		ELEMENTARY N=30	JUNIOR N=7	HIGH N=11	SENIOR N=11		
<u>IN-SERVICE INFORMATION</u>							
VIII. For whom is in-service education programs specifically designed?	Teachers using TV in our building only	11	1	3		15	31.2
	Teachers using TV in our school system	17	6	5		28	58.3
	Teachers, in general, who use TV in the classroom, whether in our school system or another	4	1	4		9	18.7
	Other	1 ^a	0	2 ^b		3	6.2

^a"Other" comment: Through the college that provides the programming.

^b"Other" comment: (1) Those interested in ETV; (2) Teachers not using TV, interested in it, or those expecting to use it.

Continued

Table 14. Continued

QUESTIONNAIRE ITEM	RESPONSE	TYPE OF SCHOOL				TOTAL N=48	% OF SCHOOLS
		ELEMENTARY			SENIOR HIGH		
		N=30	N=7	N=11			
IX. Indicate all those persons or groups who take part in the <u>planning</u> of the in-service program activities for your classroom teachers using TV.	School Building Principal	23	4	4	31	64.5	
	School Building Faculty Committee	12	3	4	19	39.5	
	School System Superintendent	9	1	6	16	33.3	
	Other School System Administrator	10 ^c	2 ^d	1 ^e	13	27.0	
	School System Faculty Committee	7	1	2	10	20.8	
	TV Coordinator for School System	6	5	2	13	27.0	
	Educational Coordinator representing the TV Station	6	3	4	13	27.0	

^cOthers: Curriculum Director, Director Elementary Education, Administrative Assistant to the Superintendent, Elementary Director, Audio-Visual Director (3) Assistant Superintendent, High School Principal, Supervisors.

^dOthers: Supervisors (2),

^eOther: Supervisors.

Continued

Table 14. Continued

QUESTIONNAIRE ITEM	RESPONSE	TYPE OF SCHOOL				TOTAL N=48	% OF SCHOOLS
		ELEMENTARY N=30	JUNIOR N=7	HIGH N=11			
	Joint Planning Committee Made Up of Teachers from Several School Systems Including Ours Other	6 2 ^f	1 0	3 4 ^g	10 5	20.8 10.4	
X. Indicate all those persons or groups who take part in the <u>direction</u> or "carry- ing out" of the in- service program activities for your classroom teachers using TV.	School Building Principal School <u>Building</u> Faculty Committee School System Superintendent Other School <u>System Adminis-</u> trator	23 13 7 8 ^h	5 3 3 1 ⁱ	4 4 7 0	32 20 17 7	66.6 41.6 35.4 14.5	

^fOthers: On-camera teacher, Administrator.

^gOthers: On-camera teacher (2); Viewing teacher (2).

^hOthers: Director Elementary Education, Audio-Visual Director, Elementary Director, Assistant Superintendent, Supervisors, Curriculum Coordinator, Department Heads, Curriculum Director.

ⁱOthers: Supervisors.

Continued

Table 14. Continued

QUESTIONNAIRE ITEM	RESPONSE	TYPE OF SCHOOL				TOTAL N=48 SCHOOLS	% OF SCHOOLS
		ELEMENTARY	JUNIOR HIGH	SENIOR HIGH			
		N=30	N=7	N=11			
	School System						
	Faculty						
	Committee	6	0	2	8		16.6
	Television Co-ordinator for						
	School System	4	4	2	10		20.8
	Educational Co-ordinator						
	Representing						
	the TV Station	8	1	3	12		25.0
	Joint Planning						
	Committee Made						
	Up of Teachers						
	from Several						
	School Systems	4	2	3	9		18.7
	Including Ours	3j	0	3k	4		8.3
	Other						

j Others: Curriculum Director, On-camera teacher, Administration.

k Others: On-camera teacher, Viewing teacher, Board of Education.

Continued

Table 14. Continued

QUESTIONNAIRE ITEM	RESPONSE	TYPE OF SCHOOL				TOTAL N=48	% OF SCHOOLS
		ELEMENTARY N=30	JUNIOR N=7	HIGH N=11	SENIOR N=11		
XI. In your opinion, which, if any, of the following factors account for the success of the in-service education program for teachers using TV in your school?	Sufficient Time Adequate Budget Allotment Effective Leadership Meaningful Topics and Content Interest of Teachers Other	7 4 13 13 22 3 ¹	0 1 2 4 2 0	5 1 5 6 9 1 ^m	12 6 20 23 33 4		25.0 12.4 41.6 47.9 68.7 8.3
XII. In your opinion, which, if any, of the following factors hinder the success of the in-service education program for the teachers using TV in your school?	Lack of Time Inadequate Budget Allotment Ineffective Leadership Inappropriate Topics and Content Lack of Teacher Interest Other	12 3 4 4 5 7 3 ⁿ	3 0 0 0 2 2 0	7 1 2 0 0 3 1 ^o	22 4 6 7 12 4		45.7 8.3 12.4 14.5 25.0 8.3

¹"Other" Comments: (1) Special MPATI telecasts; (2) Excellent correlation of TV with subjects taught; (3) Adequate program information from sending stations.

^m"Other" Comment: Cooperative effort.

ⁿ"Other" Comments: (1) Other, more pressing, issues to be considered; (2) Ineffective classroom planning; (3) Inadequate program information.

^o"Other" Comment: We've been experimenting and now hope to definitely make it a part of our program.

categories 2 and 3. There were five responses in Table 14 showing five instances where programs are offered for teachers only. No senior high school among the respondents offer programs for teachers only.

Cooperative, supplemental, and enrichment types of television utilization were indicated as the most frequently used in item VI. Again, there was a similarity in the pattern of response for this item among Categories 2 and 3. A difference great enough to note here is in the area of using TV for viewing special events. Category 2 indicates it uses television in this way more often than do the respondents in Category 3. Also, it is interesting to note that not a single respondent indicated any other form of television utilization than those which were indicated in the questionnaire.

In-service education procedures. Only those schools having a planned program of in-service education for classroom teachers utilizing television responded to items VIII through XIII.

Of the schools conducting in-service education programs, 89.5 per cent report in Item VIII that such programs are designed to serve the needs and interests of teachers either in a local school building or school system. In-service education programs for teachers using television in a single school system represent 58.3 per cent of the responses indicated. Thirty-one per cent of the respondents indicate in-service programs for teachers, in general, who use TV in the classroom, regardless of the school system.

Item IX points out that the school building principal participates in the planning of in-service education programs to a greater extent than any other individual. School building faculty committees are indicated as being employed in the planning process more frequently than either a system-wide faculty committee or a joint committee representing several systems.

Among the responding population, generally the same individuals or groups who plan in-service programs also direct or administer the in-service programs.

Item XI is included in the questionnaire in an effort to identify certain factors considered by respondents as contributing to the success of in-service education programs. The interest of teachers in the program is cited by 68.7 per cent as an important factor. Meaningful topics and content, and effective leadership are often factors listed frequently.

Lack of time is indicated by 45.7 per cent of the respondents as a factor hindering the success of the in-service education program. Twelve respondents, or 25 per cent, report the lack of teacher interest as a factor negatively affecting program success. Six respondents consider ineffective leadership as a factor hindering in-service success.

Budget allotment for in-service education programs was not indicated frequently as a factor affecting either the success or failure of such programs.

No unique aspects for in-service education programs were described by the respondents.

In-service education activities. The checklist and rating scale at the end of the questionnaire is an attempt to identify the nature and extent of the in-service education formats and activities employed in public schools for the teachers utilizing television in the classroom. Seven formats, or organization structures and ten activities are listed for selection.

Respondents were first asked to indicate all formats and activities used in the television in-service program. These results are presented in Table 15.

Staff meetings are indicated by 68.8 per cent of the responding schools as a format used for in-service education programs. Its use is much more frequent at the elementary level in comparison to other formats than at the junior high or senior high schools. Attendance at professional meetings is the second most popular format at all three grade levels. Workshops, both pre-school and in-school, are used frequently at the elementary and senior high levels. No respondents indicated they were using a staff retreat as an in-service format.

Teachers guides and manuals ranked as the most frequently used in-service activity. Of the schools responding, 97.7 per cent report the use of teachers' guides and manuals for staff improvement programs. Television viewing is the second ranked in-service activity and is used by

Table 15. Frequency of in-service formats and activities in category 3.

QUESTIONNAIRE ITEM	TYPE OF SCHOOL				TOTAL RANKING ALL SCHOOLS	% OF SCHOOLS USING
	ELEMENTARY N=29	JUNIOR HIGH N=5	SENIOR HIGH N=11	TOTAL N=45		
FORMATS:						
Staff Meetings	22	2	7	31	1	68.8
Pre-school Workshops	12	1	8	21	3	46.6
In-school Workshops	15	2	3	20	4	44.4
Academic Coursework on Television in Education	8	1	4	13	5	28.8
Staff Retreats	0	0	0	0	7	0
Attendance at Professional Meetings	17	2	9	28	2	62.2
Interschool Visitations	5	1	4	10	6	22.2
ACTIVITIES:						
Teachers Guides and Manuals	29	5	10	44	1	97.7
Consultants - Speakers	11	2	4	17	3	37.7
Case Studies	0	0	2	2	10	4.4
Directed Readings	3	0	2	5	8	11.1
Research	5	2	1	8	7	17.7
Publications	8	1	5	14	5	31.1
Role Playing	1	1	2	4	9	8.8
Tapes, Films, Slides	7	5	4	16	4	35.5
TV Viewing	13	4	4	21	2	46.6
Observational Techniques	6	2	3	11	6	24.4
Others	0	0	1 ^a	1	11	2.2

^aKinescopes of other productions.

46.6 per cent of the respondents. Consultants, speakers, tapes, slides, films, and publications are all indicated as being frequently used activities. Role playing is a technique employed in four schools and two high schools use a case-study approach in their in-service education program.

A rating of the importance of each format and activity used to the respondent was sought by questionnaire. Table 16 presents this information. The number of schools considering the format or activity important and the degree of importance attached to each item by the school rating it are the two factors which determine the rating of importance.¹ Each activity could have been listed by forty-two schools, the total number of usable responses. The best rating each could have received is five which is high in a 1 - 5 scale. Multiplying these two factors, 42 by 5, results in the highest possible rating of importance, 210, each item could be given. A mean rating of importance is determined for each activity for all grade levels combined by summing the ratings given and dividing by the total number of ratings given the item.

Pre-school workshops are considered an important in-service education format at both the elementary and high school levels. This format was also rated highest in the total mean rating of importance.

¹Gross, op. cit., pp. 53-55.

Table 16. Rating of importance of in-service education formats and activities in category 3.

QUESTIONNAIRE ITEM	MEAN RATING OF IMPORTANCE BY TYPE OF SCHOOL			MEAN RATING OF IMPORTANCE TOTALS N=42
	ELEMENTARY N=27	JUNIOR HIGH N=4	SENIOR HIGH N=11	
FORMATS:				
Staff Meetings	3.78	4.5	4.2	3.9
Pre-school Workshops	4.36	---	4.6	4.4
In-school Workshops	3.76	4.5	3.6	3.8
Academic Coursework on Television in Education	2.8	---	5.0	3.6
Staff Retreats	---	---	---	---
Attendance at Professional Meetings	3.3	4.5	3.7	3.5
Inter-school Visitations	3.4	5.0	2.3	3.2
ACTIVITIES:				
Teachers Manuals and Guides	3.84	5.0	3.8	3.9
Consultants - Speakers	3.45	4.0	3.0	3.4
Case Studies	---	---	2.0	2.0
Directed Readings	2.33	---	2.0	2.2
Research	2.5	3.0	2.0	2.0
Publications	2.42	5.0	2.5	2.6
Role Playing	5.0	4.0	3.0	3.7
Tapes, Films, Slides	3.33	4.6	3.2	3.6
TV Viewing	3.45	4.5	2.0	3.3
Observational Techniques	3.6	4.5	3.5	3.7
Others	---	---	---	---

Teacher's guides and manuals are rated as the most important activities to use in an in-service education program. Also rated high were consultants, speakers, tapes, films, slides, observational techniques and television viewing.

Although role playing and publications are not frequently indicated as techniques which are used, they are rated highly by the few schools employing them.

The third part of the questionnaire checklist requested the selection of the one activity or format which is most frequently used in the respondents' school in in-service education program for teachers utilizing television in the classroom. Thirty-seven total responses were obtained. Staff meetings and teachers' guides and manuals were indicated as the most frequently used by elementary school respondents. Senior high school respondents selected staff meetings, pre-school workshops, and teachers' guides as the most frequently used formats and activities.

The following list presents the formats and activities most frequently used by all schools for in-service programs along with the number of times each one was selected in parenthesis.

Teachers' guides and manuals	(14)
Staff meetings	(9)
Pre-school workshops	(7)
In-school workshops	(2)
Academic course work on television in education	(2)
Tapes, films and slides	(2)
Consultants and speakers	(1)

The three activities listed above as the most frequently used are also rated as the most important in Table 16.

Tables 17 and 18 present a compilation of responses from Categories 2 and 3 for items III and IV in the questionnaire.

Table 17. Years that respondents in categories 2 and 3 have used TV.

TYPE OF SCHOOL	N	MEAN NO. OF YEARS USED TV	RANGE
Elementary	68	3.3	1 - 7
Junior High	17	3.5	1 - 8
Senior High	20	3.9	1 - 7
Totals	105	3.46	1 - 8

Table 18 presents the extent to which MPATI and WTVS, among others, are more frequently used by schools than are other TV sources by the respondents in Categories 2 and 3.

Summary

The questionnaire data describes three categories of respondents. Category 1 deals with those schools no longer utilizing television in their curriculum. This category contains 19 per cent of the total respondents and shows a tendency for the percentage of junior and senior high schools

Table 18. Frequency of TV broadcast source of respondents in categories 2 and 3.

TV SOURCE	CHANNEL	TYPE OF SCHOOL			TOTAL N=115
		ELEMENTARY N=75	JUNIOR HIGH N=19	SENIOR HIGH N=21	
WJBK	2	6	5	0	11
WKZO	3	4	1	3	8
WWJ	4	7	5	0	12
WTOM	4	0	0	0	0
WNEM	5	9	3	8	20
WJIM	6	1	2	0	3
WXYZ	7	7	4	0	11
WPBN	7	0	0	0	0
WOOD	8	4	0	2	6
WWTW	9	11	1	3	15
CKLW	9	4	3	0	7
WMSB	10	12	4	3	19
WILX	10	5	2	0	7
WJRT	12	9	3	8	20
WZZM	13	5	0	0	5
WTVS	56	22	9	2	33
WKNX	57	0	0	0	0
MPATI	72	21	6	6	33
MPATI	76	21	8	8	37
OUT-OF-STATE		0	0 ^b	0 ^c	0
OTHERS		3 ^a	1	1	5

^aOthers - Channel 10, Soo; CCTV; CCTV.

^bOthers - Detroit Commercial Station.

^cOthers - CCTV.

having discontinued their ITV programs to be somewhat higher than elementary schools. Lack of financial resources, poor reception or picture quality, and scheduling problems are among the reasons that the schools in Category 1 discontinued the use of instructional television.

The data presented in Category 2 describes the characteristics of those schools using instructional television, but not having an in-service educational program for classroom teachers involved in the utilization of the medium. Slightly more than one half of the respondents indicating the use of television do not conduct such an in-service program.

The third category included those respondents utilizing and conducting in-service education programs for teachers using the medium. The viewing characteristics of respondents in Categories 2 and 3 are quite similar. Both groups have utilized television for approximately the same length of time and respondents in both groups most frequently view the same sources for television programs. Both groups are inclined not to segregate students for viewing purposes and telecasts are usually viewed by all students in a particular class. The cooperative, supplemental and enrichment types of utilization are the most common found in both categories. A very large number of respondents in both groups indicate the use of television for viewing special events. The similarity of viewing characteristics in Categories 2 and 3 is also evident from one grade level to another.

Only in Category 3 do we find television offerings being made available specifically for teachers.

The in-service education programs reported by the respondents in Category 3 tend to be designed particularly toward teachers in a specific school building or school system. School building and system administrators, as well as building and system faculty committees, most frequently plan and direct the in-service programs. It appears that teacher interest in programs of professional improvement is an important factor in determining their success. On the other hand, a lack of time is reported as a factor that hinders the success of in-service education.

Although 48 respondents indicated an in-service program for classroom teachers utilizing television, none of them listed or described any aspects of their in-service program that they considered to be unique.

Staff meetings, pre-school and in-school workshops, and attendance at professional meetings are the most frequently employed in-service formats. The use of the staff meeting is much more frequent at the elementary level than at the junior high or senior high school level. The other three formats tend to be used at all three grade levels.

A wide variety of activities and techniques are available for use within in-service programs. Among those which are most frequently used and rated highest in importance are teachers guides and manuals, the viewing of in-service telecasts, and interaction with speakers and consultants.

Teachers guides are ranked highest in importance by all three grade levels and are selected as the one activity most frequently used. Staff meetings are indicated as the most frequently applied in-service format.

Since approximately one-half of the schools in the sample using television do conduct an in-service education program for classroom teachers who use TV, it would seem appropriate that any group involved in the examination or consideration of initiating television into their curriculum would also consider the desirability of a professional improvement program to augment it. The characteristics herein described provide samples of procedures and activities that other schools have used to some extent.

CHAPTER V

DETAILED DESCRIPTIONS OF THREE SELECTED IN-SERVICE EDUCATION PROGRAMS

INTRODUCTION

The purpose of this chapter is to provide detailed descriptions of existing programs of in-service education for teachers utilizing television in the classroom. Attempts are made to identify procedures and activities being successfully employed by selected public schools in Michigan. This phase of the study is based upon the assumption that these descriptions will offer samples of extensive programs for study by other school systems.

Three schools were selected for visitation and interview. The selection of the three schools was determined by the following criteria: (1) Extensive in-service education programs as indicated on the returned questionnaire; (2) diversity of programming source; (3) inclusion of all grade levels, elementary through secondary; (4) willingness expressed in the returned questionnaire to participate in an extended study of their programs.

Tables 19a and 19b present comparative data on the size, grade level, financial resources and the type of ITV telecasts received by the three schools selected.

Table 19a. 1963-64 data on type of three schools selected for visitation and interview.

SCHOOL	GRADE LEVEL	STATE EQUALIZED VALUATION PER CHILD (APPROXIMATE)	INSTRUCTIONAL TELEVISION SOURCE
School "X"	Elementary	\$ 6,300	M.P.A.T.I.
School "Y"	Senior High School	\$ 16,000	Closed-Circuit System within School Building
School "Z"	Junior High School	\$ 17,900	System-wide Open-Circuit System (Ultra High Frequency Transmission)

Table 19b. 1963-64 data on size of three schools selected for visitation and interview.

SCHOOL	GRADES TAUGHT	PUPIL MEMBERSHIP (APPROXIMATE)	NUMBER OF TEACHERS	NUMBER OF TEACHERS USING TV
School "X"	K-6	600	19	17
School "Y"	9-12	800	32 (plus 8 Interns)	25 (Plus 8 Interns)
School "Z"	K-9	1625	64	40

To present a comprehensive view of the selected programs each is discussed in a format consisting of an introductory description of the community and school system; an outline of the manner in which television is utilized within

the curriculum; a detailed statement of the in-service education program conducted for teachers using television in the classroom; and, a summary of each school program.

School "X"

School and Community. School "X" is one of three elementary schools in a public school system serving a suburban community of an estimated 4,818 population. Often referred to as a "bedroom" community, it's general socio-economic composition is described as lower-middle class by the principal of School "X". All residents are white with no minority group represented.

School officials express an awareness of a high community interest in the educational program, indicating that this is probably due, in large part, to the lack of a local city governmental structure. The community remains unincorporated.

The school system is composed of a kindergarten through twelve grade district with 3100 children enrolled. Of this number, 1900 students are in grades kindergarten through six.

The administrative staff consists of a superintendent, an assistant superintendent for business affairs, a high school principal with an assistant to be appointed for the 1964-65 school year, a junior high school principal, a director of elementary education and four elementary principals. The teaching faculty consists of 130 members.

A seven member board of education provides lay leadership for the district and is made up primarily of semi-professional, or "white collar", personnel. For example, a civil engineer serves as president and other members include an insurance agent and a school teacher from another system.

Throughout the years the board has maintained a supportive attitude toward in-service education programs, although no policies have been designated specifically for television in-service programming.

The teaching staff of School "X" includes two kindergarten instructors, neither of whom use television in the classroom.

A female principal, who describes herself as a "Johnny-come-lately" to the profession did her undergraduate work in Journalism and later qualified for her teacher certificate. After two years of successful teaching she was given the responsibility of a principalship for two schools simultaneously. In the meantime she completed her masters degree in teacher education at a nearby state university. She has served one year as principal of School "X". Within the administrative organization of the system, the building principal works closely with both the superintendent and the director of elementary education. However, she is directly responsible to the superintendent.

How ITV is utilized. The school has been involved with the Midwest Airborne Program for Television Instruction (M.P.A.T.I.) for three years. Presently, this is the only source from which regular programming is received. The initial impetus to become involved in television instruction was of both an external and internal nature.

Internally, the administration and faculty were examining the potential which television contained for improving local instruction prior to any outside contact concerning M.P.A.T.I. In fact, the system was originally utilizing another ITV source on an experimental basis. As general knowledge on the airborne project became public, the staff was initially doubtful as to whether M.P.A.T.I. would ever become functional. It was at approximately this time that external sources in the form of a state university and M.P.A.T.I. contacted school system officials and invited local representatives to exploratory discussion sessions concerning participation in the program. It was agreed that the system would participate on a temporary basis, establishing two of its buildings as demonstration schools for one year. One of these two schools was School "X".

During the demonstration period varied activities centering around the appraisal and value of television instruction took place. Faculty committees considered curricular implications. M.P.A.T.I. provided evening telecasts for parents and board of education members. These programs,

in particular, did much to develop community support and a positive attitude toward ITV.

The following are quotations from School "X" faculty and administrators relating advantages and limitations experienced during the demonstration period:

The methods we used in our evaluation besides day-to-day teacher observation, were the use of questionnaires which we sent home to parents, and questionnaires filled out by the teachers. All three responses were predominantly in favor of continuing M.P.A.T.I. association.

Some teachers said the course outlines were too limited. They feel that after having gone through one year, they'll be better prepared next year to know what is coming and how they can best utilize it.

Possibly we could have a little bit more information as to what she (on-camera teacher) would like to have us do, but still we can use our own imagination. I think that we are motivated to be creative.

I can imagine only one disadvantage to the science program and that is the time element. Unfortunately, with television, you cannot choose the time you want to turn on your science. The main advantage is that most elementary teachers feel their greatest weakness is in science and, in this respect, television is meeting an important need.

I'm afraid I can't say as much for the language programs. Mainly because language should be a subject that the classroom teacher guides to the needs of her class. This is a little difficult to do if you use the television and follow it up adequately. Also, I don't feel that this has been as well presented as the science.

The science program is presented for 25 minutes four times a week, however it just includes two programs. That actually is a very nice feature, for it allows some flexibility in your programs. One telecast on Monday, the follow-up on Tuesday, that way if you miss a program you can watch it on the following day, and I think there is possibly one or two days that we have lost the picture, well actually, we didn't miss out at all for we could view it on the following day. Our

program follows the (television) program, and it is quite possible to use it as a core.

At the conclusion of the one year demonstration period a system-wide faculty committee submitted a recommendation to the Board of Education encouraging the adoption of membership into M.P.A.T.I. Among the reasons cited for this recommendation were: (1) financial advantages in that the participating school paid only for those students who would be viewing the television programs and not upon total membership as is the policy of some ITV broadcasters; (2) the talent available for television teaching through the airborne project was judged superior to that of other potential sources; (3) flexibility of content enabling one grade level to utilize the content designated for another; and, (4) more program variety.

The recommendation, which urged television use in all elementary and high school buildings was readily adopted by the board of education and the program was under way.

School "X" involves seventeen classroom teachers in television instruction. Four hundred and fifty of the 600 students view programs regularly. Only the two kindergarten classes are not affected directly by the M.P.A.T.I. programming.

None of the staff had any experience whatsoever with instructional television prior to School "X"'s consideration of the program. None had had any academic preparation in the radio-television area.

Programs utilized at each grade level are selected by the local teacher solely on the basis of classroom need. The result is that M.P.A.T.I.'s recommended grade level is not specifically adhered to at all times. Local school officials indicate that the airborne program does not object to this flexible use of programming but, in fact, encourages it. Table 20 outlines the instructional television program schedule for School "X".

Table 20. School "X" ITV program schedule.

GRADE IN WHICH PROGRAM IS USED	PROGRAMS (MPATI)
1	Science (1 and 2)
2	Music, Early Ed.
3	Social Studies; Language Arts; Science
4	Social Studies; Language Arts; Science
5	Science; Music, Later Elem. (Optional) Spanish III
6	Science; Music, Later Elem. (Optional) French; Spanish

Picture reception of airborne programming is very good at School "X". If programming is ever interrupted, teachers have been directed to continue with the lesson using the teacher guides.

Generally, television programs are viewed by all the students in a classroom. Attempts are not made to form homogeneous viewing groups. The one exception to this practice is in the area of Spanish III which is offered in the fifth grade for eighteen students. Selection of this group was based upon individual student desire and past performance.

Basically, instructional television is utilized in School "X" on a "cooperative teaching" arrangement. The television teacher does much of the actual teaching, while the classroom teacher augments the television instruction. For "cooperative teaching" to be developed to the satisfaction and quality expectation levels of the local school and the local teacher, close communication is vital. However, in this instance, nearly all communication is in one direction: from broadcast source and on-camera teacher to the classroom teacher. Opportunity for the classroom teacher to react and make suggestions is limited to a mail response form or, indirectly and infrequently, through Area Council sessions. The Area Council is composed of representatives of approximately 20 schools in an area and serves a communication channel for participants. Another major purpose of the Council is to provide in-service education for member schools. Intercommunication is not taking place on a regular continuing basis.

A small amount of telecasting is offered on an enrichment basis. In some instances, a commercial station is used as a program source for this type of utilization.

The important and often difficult test of evaluating the effectiveness of instructional television in the learning process is not fully developed in School "X". It was expressed that they were looking to M.P.A.T.I. for assistance on this matter. Meanwhile, teacher comments and observation by the principal are the two techniques used.

In-service education for ITV. Although the principal at School "X" had no previous experience with instructional television, she served as the school's representative to the Area Council and, currently, is its executive secretary.

During the demonstration period the principal attended several M.P.A.T.I. conferences and seminars. She indicates these activities to be primarily responsible for instilling in her a personal interest in the project and for providing her with what knowledge she has gained concerning ITV. It was the intended purpose of these group sessions to train local representatives to conduct local staff meetings effectively.

The Area Council also has been described as being directed toward the development of local leadership for in-service education activities. The Council sponsors semi-annual, one-day workshops for the teachers in the area. Usually one is conducted during the first part of the calendar year and another in late spring prior to the end of the school year. The Board of Education completely subsidizes these workshops for attending teachers.

The responsibility for planning in-service education programs for the local teachers using television is described as resting jointly with the teacher-principal-director of elementary education--and M.P.A.T.I. It was expressed by the principal that M.P.A.T.I. provides the initiative for continuous planning. More specifically, ideas for new activities and possibly projects tend to come more often from M.P.A.T.I. than from local sources.

It was pointed out, however, that in-service programs are planned by local staff members particularly for teachers in the local system. Special M.P.A.T.I. telecasts of an in-service nature, area workshops, publications and even teacher manuals are adapted by School "X" to serve its own special interests and needs. In addition, one faculty member is involved in the revision of teacher manuals and guides.

A good example of this local adaptation is the system-wide committee procedure in which School "X" takes part. One such committee is an elementary science committee composed of representatives from each elementary school in the system. This group functions throughout the school year. They are continually evaluating teacher manuals and guides as they relate to new text books which are currently being considered. Part of their responsibility is to contact other teachers for ideas and suggestions.

It seems appropriate at this point to state that it is difficult, and not necessarily desirable, to separate in-service education and curriculum planning. As discussed in

the Review of the Literature, the two activities are functionally interrelated.

School "X" also conducts a one-week, pre-school orientation to ITV for new and beginning teachers. This program consists of special M.P.A.T.I. telecasts of "Utilization Tapes" which demonstrate step-by-step processes for using telecasts in the classroom. These tapes which deal with the functions and procedures involved in the classroom teachers role, are developed in various demonstration schools and are also available on kinescope. A film which offers a general introduction to ITV is shown. In addition, a panel of teachers experienced in ITV utilization make formal presentations relating to techniques and procedures they have found to be useful. They also conduct a question and answer session.

Approximately six weeks after school begins a follow-up meeting is conducted for the new teachers. Specific items which need clarifying and strengthening are dealt with at this time.

The principal is of the opinion that the orientation program for new and beginning teachers is the single most important in-service activity that School "X" conducts. Other in-service activities are employed in this system. Among them is the suggestion of appropriate and pertinent reading material. One such item would be the book Using Television

in the Classroom¹ prepared by M.P.A.T.I. for classroom teachers. Self-evaluations, conducted by experienced teachers and submitted to the appropriate system faculty subject matter committee, are also utilized.

Budgeting of funds for in-service education is done on a lump sum basis. A general subsidization is available for television in-service programming, but is not specific in terms of individual activities. Released time is an established procedure and generally takes the form of one-half day dismissals for in-service education. During the past year this occurred seven times in School "X" alone. Also subsidized are attendance at professional conferences and visitations to other schools on a professional study basis.

The in-service program for teachers using ITV in this school is evaluated informally by the local staff. This is done primarily through discussions among teachers, principals and the director of elementary education.

The principal indicated that lack of education about instructional television at the college and university undergraduate level is one of the difficult problems facing any school using ITV. New teachers simply have not been exposed to the strengths and limitations of television use in the classroom. If these fundamental factors were covered in teacher education programs, in-service education programs

¹Mary Howard Smith (ed.), Using Television in the Classroom, Midwest Program on Airborne Television Instruction (New York: McGraw-Hill Book Company, Inc., 1961).

could be designed to go beyond them and into more complex problems of a curricular nature, the principal explains.

Summary of School X. School "X" is an institution of modest means in an unpretentious setting which is attacking its instructional television issues as a participating member in a joint ITV venture with other school systems and educational agencies.

They are attempting to utilize television, in those areas where they feel it will strengthen and broaden their elementary offerings. While they are not operating under optimum viewing conditions, teachers indicate definite subject matter and motivating contributions are being made.

In-service activities, adapted to meet local needs, are provided for both new and experienced teachers using television in the classroom. M.P.A.T.I. plays an influential role in in-service programming, but local school personnel appear to welcome this and are content to convert these exterior concepts to interior functions so as to serve the local staff.

The principal of School "X" expressed the opinion that curricular problems and needs might be more effectively dealt with through the use of a closed circuit television system to compliment the M.P.A.T.I. offerings. It was pointed out that the value and flexibility that such an arrangement would afford is being examined for the future.

School "Y"

School and Community. School "Y" is a high school serving a suburban school district on the eastern fringe of one of Michigan's industrial cities. Like most suburban areas, the district has generally a youthful population, richly blessed with children. About 48 per cent of its total population is in the 0 - 19 age group. This compares with 38 per cent in the 0-19 age group in the city itself.

The affect of urban renewal in the city's central core has been felt in this suburban district. The result being a substantial increase in the number of citizens of minority races within the district. It is estimated by school administrators, through visual observation, that on the senior high school level (grades 9 - 12) there is a minority membership of 19 per cent. The school district covers a geographical area which is slightly less than a full township. While there are some very good farms in the service area, more than one half the tax base is supported by business and industry.

Described as lower middle class, by the principal of School "Y", the school district contains very few professional people. For example, one lawyer and one negro medical doctor are present among a total population of approximately 10,000 people. The high school, which began operation in 1959, graduated its first senior class in 1963. Of the 101 graduating seniors, only one had parents with a college education. The dispersion of the population is demonstrated by

the fact that the 30 Catholic students attending high school attended five different churches, and 40 Lutheran students attended 10 different churches.

It is interesting to note, however, since nearly all social and fraternal organizations are located in the central city, the school finds itself as a rallying center. It serves as an institution with which all people can identify themselves.

During 1963, over 2,600 children of school age in the school district were educated in four elementary schools, one junior high school and one high school. An instructional organization, deviating from traditional class structure, has been developed within the school system. This includes closed-circuit television and team teaching in the senior high school and open-circuit in the elementary and junior high school. The elementary schools hold membership in an open-circuit television program conducted by a nearby university. This programming has been conducted on a regularly-scheduled basis for four years and is used at the local level for enrichment and supplemental instruction.

Administratively, the six building principals report to the superintendent, who incidentally was a prime mover in the development of instructional television within the school system. Policy development guiding the operation of the school district is the responsibility of a seven-member board of education. Membership on the Board of Education reflects the composition of the school district population. The board

president is a circulation manager of the city's largest daily newspaper. The secretary is an office manager, the treasurer a small businessman. Other members include a non-executive banker, a factory worker, a retired railroad man and a retail clerk.

The senior high school "Y" serves 800 students, grades 9 - 12. Of this total, 143 are seniors. A faculty of 32 teachers, 8 interns, and television specialists are housed in a relatively new plant constructed to facilitate team teaching and closed-circuit television. The high school program was begun in 1959 and represents the combined efforts of the Ford Foundation and the school district superintendent, who first conceived the idea for the operation in 1957. Supported financially, to an extent, by the Ford Foundation, the curriculum was developed in a manner in which television was deliberately included as an instructional medium. The principal indicated that prime impetus for the program resulted from administrative direction and Foundation assistance.

How ITV is utilized. Originally the curriculum included television instruction in the areas of mathematics, science, social studies, and English for the ninth and tenth grades. An English and a social studies program for the eleventh and twelfth grades were added later. Table 21 presents the content areas currently handled via television.

Classes taught by team teaching and television vary in size from 60 to 160. Teaching teams are composed of an

experienced supervising teacher with an advanced degree in a specific subject field, one other qualified teacher, and one or two student-teaching assistants participating in a special five-year training program at a nearby university. The teaching assistants or interns monitor classrooms, assist with follow-up and small group discussions, perform clerical duties, and occasionally take part in a television presentation. A special staff, selected to administer the closed-circuit television operation, include a producer-director, a television technician, and an artist-secretary.

Table 21. ITV class schedule for School "Y".

CLASS PERIOD	TELEVISED LESSON
1	English 10 (Monday, Wednesday, Friday) General Math 9 (Tuesday, Thursday) American History 11 (M,W,F)
2	English 9 (M,W,F) Comm. Math 10 (T,Th) Government 12 (T,W,F)
3	Earth Science 11 (T,Th)
4	Science 9 (Daily)
5	World History 10 (M,W,F) English 12 (T,Th)
6	Algebra 9 (T,Th) English 11 (M,W,F)
7	Plane Geometry (M,W,F)
8	Civics 9 (M,W,F)

Early planning by the faculty in cooperation with the television personnel resulted in the adoption of the following procedure for program planning:

1. A conference between the teacher and the producer-director to outline the lesson and select visual materials to be used.
2. Preparation by the teacher of the formal script including an indication of the visual materials.
3. Setting up of the studio 15 minutes before the telecast by the teacher and producer-director.

Scheduling is easily managed since the entire television installation is within the school building. Programs can begin anytime within a class period and continue for various lengths of time, according to the needs of the subject matter unit. Ordinarily, however, telecasts begin at the start of a period and run from 10 to 25 minutes. If it becomes necessary to increase the time spent on a unit, it can be done quickly and with a minimum of effort. With both the studio and classrooms in the same building, teachers can return directly to their classrooms after a telecast to determine the effectiveness of the lesson. This system also encourages student participation in telecasts and allows those interested to gain a knowledge of television production.

As many as 40 telecasts per week are made from School "Y's" studio and the teachers have relative freedom in selecting the television curriculum. An important conclusion of

this system is that effectiveness of television teaching is completely dependent on the TV teacher. This was demonstrated in the telecasts for English where the creativeness of the teacher made the lessons as "visual" as they are in science. On the other hand, regardless of the subject area, if the teacher lacks imagination and a flare for showmanship, the tele-lesson is dull and uninteresting. A second conclusion pointed out by the faculty of school "Y" is that time for preparation, rehearsal, and in-service education of both the teachers and production crews is important and essential for improving tele-lesson quality.

Other conclusions on the basis of operation in School "Y" are:

1. Back-to-back lessons taught by ETV were far less satisfactory in terms of student reaction than alternate ETV lessons and small group lessons;
2. From 10 - 12 per cent of the students expressed a desire to withdraw from the large group classes using ETV and be instructed in small groups under traditional procedures.
3. Classes taught by ETV, which were small in number (approximately 50) and which did not use ETV every school day, showed the least gain in subject matter mastery over traditional classes.
4. Abilities or aptitudes between the 140 tenth graders of 1959, who had received the ninth grade subjects in the traditional method, and the 140 tenth graders

of 1960 who had been taught in the new high school with large groups and ETV and with team teaching were not measurably different.

5. The subject matter mastery of the 1960 group increased by 20 points on a 185-point test in English while improvement in general science was 17 points in a 100-point test. The same tests were used each year but the instructing teachers did not administer or even see the test which was used. In algebra and in general mathematics, no gain or loss in tests given was noticed. No tests were given in the social studies fields.²

Under the team-teaching arrangement in School "Y", the supervising teachers working with teaching assistants or interns have certain responsibilities:

1. Orient team teaching assistant to the classroom;
2. Establish affinity with the university and its representatives;
3. Familiarize himself with the background of the teaching assistant or intern;
4. Provide opportunities for the professional growth of the assistant;
5. Familiarize the assistant with classroom routine and instructional procedure;
6. Familiarize assistant with student records;

²School "Y" monograph provided by the principal.

7. Familiarize assistant with supplies and equipment;
8. Familiarize assistant with accepted manner of lesson and class planning;
9. Treat assistant as a co-worker;
10. Provide continuous evaluation of the assistant's progress.³

In addition, the supervising teacher provides the assistant with such information as: (1) type of classes; (2) specific time for conferences; (3) how rapidly assistant will be expected to assume various duties such as taking role, discipline, and presentation of lesson; (4) abilities of students; (5) type of community; (6) policy concerning slower individuals; (7) relationship of principal to the teacher; (8) how the assistant will be evaluated.

Supervisors are encouraged to give ideas and good constructive criticism to his assistants. It is suggested that he keep his assistant informed as to what to do and what is expected. In addition, the supervisor is expected to exhibit an ability to plan cooperatively. Usually, on-camera telecasts are performed by the assigned supervising teacher or by one of his teaching assistants. However, the supervising teacher maintains complete responsibility for this position.

The procedure in School "Y" for preparing the television lesson includes conferences which are held two days before the telecasts. At these conferences decisions are

³Ibid.

made as to what visual materials will be used. The teacher is to have completed a rough written outline of the content to be covered. Those instructors with multiple tele-lessons must have an outline for each program. A request form for art work is completed and submitted to the director at the conclusion of the conference. A complete, typewritten script and all slides and pictures with numbers for identification and any special props which are to be used must be prepared at least one day prior to the television lesson.

If any instructor wishes to schedule a tele-lesson at a time other than the start of the period, he must receive the approval of the principal, the TV producer-director, and the teacher whose tele-lesson immediately follows his. This must be done before the conference for the period affected.

The use of films and film strips are indicated in writing for the tele-lesson. The television staff must be notified of all cancellations by Wednesday of the preceding week. This enables assignment of that "air time" to another teacher.

If any of these conditions are not met, the tele-lesson for the day affected is cancelled and an entry in the log states that the program was cancelled because of lack of preparation on the part of the teacher. Minor changes in the script may be made up to two hours before air time.

School "Y" staff members express the opinion that adequate preparation for the broadcast and interesting

follow-up appear to be the keys to student interest when utilizing ITV in a large group situation.

Teachers in this school are reminded that unless considerable time is spent in obtaining materials and conceiving unique means of conveying the concept to be taught, the presentation will tend to be similar to a typical lecture which usually does little to motivate students. The principal suggests that the important ingredients for a good presentation seem to include an imaginative instructor and adequate time for preparation. Also, it is desirable to have materials available to illustrate the concepts being taught.

The instructor's daily lesson plan in School "Y" should contain concepts to be taught, methods of presentation, and a type of follow-up to be used. A list of vocabulary words and reference books is also suggested.

To maintain a supply of appropriate materials, teachers are encouraged to:

1. Collect all picture magazines available;
2. Obtain pictorial books for the library;
3. Write to foreign consulates, business firms, governmental agencies, and other sources for any free materials they may have available;
4. Inform other teachers and friends for the need for specific materials.

Simplicity is emphasized as a desirable characteristic because it does not detract from the lesson while reinforcing the point.

The producer-director works with on-camera television instructors in giving great attention to their speech. Excellent articulation is imperative and teachers are reminded that they need to be more deliberate in their delivery than when ordinarily speaking, and that repetition of important points is usually quite effective.

During the television presentation, class organization is considered quite important. Students are encouraged to take notes during the presentation and instructors make an attempt to be as natural as possible before the camera. When the television presentation begins, students are directed to be prepared to take notes.

An orientation period for students to the television type of presentation is also a part of School "Y"'s approach. This includes seating arrangements, grading systems, and routine procedures such as who turns on the television sets. Such topics as the purpose of the television lesson, the teacher's responsibility, the pupils' responsibilities, how to take notes, and how to outline are also discussed at this time.

The follow-up is considered to be a very important part of the total lesson in School "Y"'s organizational pattern. Teachers use it as an opportunity to pursue questions as well as to stimulate discussions concerning the television lesson or other related areas. Audio-visual techniques are not reserved for use on the telecast only. They are an important asset to the teacher in the follow-up period. It

was pointed out that the temptation to re-hash materials presented in the tele-lesson is avoided, and students have the opportunity to apply and expand the concepts presented on television. The student is encouraged to ask questions for clarification of principles or to broaden the scope of his personal understanding.

The principal of School "Y" pointed out some of the important aspects of the team teaching technique utilized in his school. He emphasized that preparation is of prime importance. A professional responsibility to other team members makes thorough planning a necessity. It was indicated that probably the most important value in utilizing closed-circuit television as opposed to broadcast television is that the content is under complete internal control. Flexibility, adaptability, and control of scheduling are also important factors. But having the planning of the subject matter in the hands of local school personnel is necessary.

It was indicated that evaluation of such a program is spontaneous. When the on-camera teacher, who is usually the supervising teacher, returns to the classroom after the telecast, he knows immediately how effective his presentation has been. He has direct feedback and an opportunity to directly observe those students who have received his tele-lesson.

As an incentive for the team teaching technique, the supervising teacher receives a 6 per cent increment in salary if his student group number 100 - 150, or he receives a

3 per cent increment in salary if his student group numbers 75 - 100.

With the relatively small student body at School "Y" the cost per student has been high. Local school administrators are of the opinion that expansion will eventually be necessary. It is important, however, to maintain as much direct control of the program as is possible, and not lose the excellent feedback channels of a small system. To meet both of these needs, School "Y" is interested in establishing a "dual purpose" ETV network which would tie together several high schools in joint ETV facilities. Responsibility for telecasts in those subjects which are of common interest (English, social studies, general science, and general mathematics) would be divided so that each school would produce telecasts in one area for the entire network. At the same time the participating schools could operate other programs to meet their own needs. For example, one school might be primarily interested in a business curriculum while another might develop an accelerated college preparatory program. Such a plan would expand the financial base for the television curriculum and help maintain local control.

The school district of which School "Y" is a part is also interested in expanding closed-circuit television lessons to the elementary level and initiating some adult education courses over a local open-circuit station.

In-service education for ITV. A basic realization of the program in School "Y" has been the need and importance

for preparation and training of both classroom teachers and TV production crews. In preparing for this project, School "Y" conducted a two-week training workshop with emphasis on television production for the teachers who were to participate. They were introduced to basic techniques used in front of the camera; through practice they became accustomed to on-camera teaching. They also covered the problems of the teacher in the classroom where television is a teaching tool. The workshop was under the direction of the producer-director with the help of teachers from other school systems where large class television teaching was already a reality.

Teacher groups met informally during the school year to discuss issues involved in television utilization. In addition to this, they also have daily contact with the production specialists and many detailed questions are answered in this way. The value of this informal activity should not be underestimated. Problems and procedures pertinent to the classroom utilization of television are the center of such informal contact. A school with several teachers experienced in ITV utilization can benefit greatly from encouraging new teachers to interact with them and vice versa. Obviously, there would probably be a void in this informal interaction in a school when it first employs ITV. Until teachers can gain experience, in-service education programs may be used to accomplish such objectives.

New and beginning teachers are introduced to the closed-circuit TV and team teaching process by means of a

one-week pre-school conference. This conference is the responsibility of the principal and involves all those people concerned with tele-lesson planning. The team teaching process is described in detail and new teachers have an opportunity to meet individually with each of the people he will be working with in the lesson development conferences throughout the school year.

While the responsibility for planning in-service education programs for teachers using television rests with the high school principal, specialists are often involved to cover particular points. The producer-director plays a major role in this function and has continual contact with the teaching teams.

An \$800 conference allotment is included in the annual budget. Although this amount is for conferences of all kinds, it generally involves one national conference per year and another area conference dealing with either instructional television or team teaching or both. An alternating plan is used in selecting staff members to attend these conferences in an attempt to provide an opportunity for as many different people to participate as possible.

At the beginning of each school year actual televising of lessons does not begin until the second week of classes. The first week is used to train student camera-men and to work out operational details with teaching teams.

A collection of library materials dealing with television instruction is available for the teachers in School

"Y". These materials are on file in the teachers' section of the school's main library. All staff members are urged to contribute materials as they see them to be appropriate.

The teachers' handbook, previous program scripts, and kinescopes of earlier productions all serve to offer new and experienced teachers with valuable information dealing with ITV.

Summary of School "Y". School "Y" has developed a program of television instruction on the basis of curriculum need and placed the responsibility for its success squarely upon the shoulders of the teaching staff.

The experience of this system indicates certain guidelines for other schools interested in examining the potential of closed-circuit television teaching:

1. Planning should start early and include personnel from a variety of fields.
2. Professionally trained persons in both television production and TV engineering should be consulted in planning a studio.
3. Existing school television systems should be visited and their ideas and suggestions sought.
4. Curriculum studies should be made to decide which subjects are to be taught in large groups by television.

Specifically, television's role as a teaching tool must be decided early on the basis of the projected educational program. In closed-circuit television, on-camera teachers need to be selected on the following criteria:

1. Knowledge of subject matter
2. Pedagogy
3. Poise
4. Imagination in handling materials
5. Speech quality⁴

Preferably, training sessions should be held over an entire summer for everyone involved. Once the program is in operation, continual evaluation should lead toward improvement. Most important is a concise plan of operation outlining objectives and a step-by-step schedule for achieving them.

The use of closed circuit television and team teaching appears to require a closely-knit organizational structure that is understood by all concerned. It is very important that each person involved do his part and that he do it well and on time.

Such an arrangement requires open channels of communication at all times and a flexibility on the part of staff.

This program seems to present some suggestion that in-service education programs should develop through and around the manner in which instructional television is being utilized. Obviously, the in-service program described previously in School "X", could not be satisfactorily applied to the staff in School "Y". Each system is unique and demands in-service activities and content which are appropriate to its needs.

⁴Ibid.

School "Z"

School and Community. The service area of School "Z" is composed of residential tracts and general service businesses. It is located on the periphery of a large metropolitan complex and is a parcel of an expansive city school system.

When the school was established in 1949 the community consisted primarily of professional people. Since that time, however, a large percentage of this group has gradually migrated to the suburbs and have been replaced by population described by the principal as a strong middle class.

In 1959 the school was converted to a kindergarten - grade nine organization with the addition of a grade 7 - 9 junior high school. As a result, the junior high school service area extends further than does the elementary and the fringe area borders on a grouping that school officials classify as lower middle class.

This pattern tends to yield a population that is quite heterogeneous in terms of racial background, socioeconomic level, and intelligence. Also, this is reflected in the composition of the school membership.

Another consequence of this population dispersion is that the majority tends to look upon the school as a focal point of local interests and loyalties. While it is not a unanimous attitude, the school program is generally supported.

The school system of which School "Z" is a part, serves a large metropolitan city. The administrative organization has adapted to the growth in numbers and area by establishing nine sub-districts, or service areas within the one system. A superintendent of schools and his central staff maintain over-all responsibility, while each of the sub-districts are under the direction of a district administrator. Lines of authority extending downward from this level include building principals, assistant principals, school counselors, department heads, assistant department heads and senior teachers respectively. The district administrator's role is primarily one of communication. Most of these positions are assisted only by secretarial staff.

Instructional supervision and curriculum services are the responsibility of an assistant superintendent at the district level. He exercises leadership for the Division for the Improvement of Instruction. Departments within the division are organized by subject matter area and also includes a Department of Educational Radio and Television. The administrative structure of the division includes the division director, departmental directors, and supervisors. In the sub-district where School "Z" is located there are thirty-six different schools. Of this total, three are high schools and ten are junior high schools. The size of the total district is clarified when it is remembered that it includes nine sub-districts such as the one described above.

School "Z" is an elementary-junior high school containing grades kindergarten through nine. With a total membership of approximately 1625 children, 1050 are in grades K - 6 and 575 are in grades 7 - 9. The staff consists of a building principal with two assistants, one being responsible for the elementary program and the other directing the junior high school. The teaching faculty numbers sixty-four and in addition a group of service teachers are available at the elementary level for special areas such as music, art, and physical education.

In a ratio approximating that found in the surrounding community area, two negro teachers are on the faculty dealing with the music and mathematics programs.

The principal, who described the average ability of the student body as a class "B" mentality, is an experienced educational administrator with slightly less than 20 years service in the profession. He holds a master's degree and has completed a majority of the requirements for a doctoral program in school administration. He expresses deep interest and knowledge in the challenges he encounters in School "Z".

A most cordial and relaxed atmosphere on the part of the faculty was evident.

How ITV is used. To trace the historical development of television into the instructional program of School "Z" it is necessary to go back to 1953. Prior to that time, co-operative efforts were underway involving the board of education, three nearby universities, a school studies bureau

and local community leaders to initiate a program of instructional and educational television.

Subscriptions from various business and industrial sources enabled the board of education, advised by administrative leadership within the district, to begin concrete planning and development of the UHF station and its programming facilities. Also during this period, a corps of on-camera teachers were being trained. Virtually all of these instructors came from within the classroom ranks of the system.

Programming decisions and development occurred through a faculty committee structure. Committees centered around subject matter areas and were coordinated by the newly established educational radio and television department of the Division for Improvement of Instruction.

Much of the early impetus originated from the high degree of interest in the television medium by the district's administration. This is demonstrated by the involvement of local school leaders in the M.P.A.T.I. program as it emerged. The local system has been, and is, represented on the advisory and administrative units of the airborne project. Consequently, School "Z" has membership not only in its own ITV program, but in M.P.A.T.I. as well. The school has utilized television in its instructional program from the system-wide offerings since 1956.

Telecasts in the school are presented for three general groups: selected students in some instances; for

all students in a class the majority of the time; and, for teachers on an in-service basis.

It was estimated that about one-half of the teaching faculty regularly utilize ITV in their classroom. Regularly was described as "weekly at least." Most of the remaining 50 per cent use it to some lesser degree. Regularly scheduled programs that are utilized are described in Table 22.

Table 22. School "Z" ITV program schedule.

<u>FOR STUDENTS:</u> GRADE LEVEL	TV PROGRAM
3	Reading (Enrichment) T, F
5	Spanish, M, F
8	Science M, T, Th, F
9	World History M, F
<u>FOR TEACHERS:</u>	French I & II for Teachers T, W
	TV As We Use It (Math) W
	*Superintendent Reports W (F repeat)
	*Teacherama W (F repeat)
*Alternate weeks	
<u>OTHERS:</u> (Example)	Junior High School Math (3 sessions in-service series designed to supplement a newly adopted text)

Two of the programs for teachers, "French I and II for Teachers" and "TV As We Use It" (Mathematics) are viewed usually by classroom teachers and students at the same time. The classroom teacher is expected to observe the techniques, terminology, and procedures displayed by the on-camera teacher. Meanwhile, the on-camera teacher's responsibility is to provide a language or mathematics lesson to the best of his ability so that both the classroom teacher and his students benefit from the presentation.

"Teacherama" and "Superintendent Reports" are in-service education television programs dealing with a wide range of topics. Usually the "Superintendent Reports" program is designed to communicate matters of a system-wide nature to faculty and staff and is scheduled to appear the day following board of education meetings. Seldom, if ever, do these particular telecasts deal specifically with classroom utilization of instructional TV. This is also the case with the three-session "Junior High School Mathematics" program indicated in Table 22. These programs are scheduled for the noon hour and the teaching staff exhibits very little interest in viewing during this time period. The telecasts are repeated after school, from 3:30 to 4:00 p.m. and the interest by teachers remains low at this time slot.

How all programs are utilized at the local level is determined individually by the classroom teacher. A course outline and teacher guide provide suggestions but she has the

flexibility to use any portion or the total program in the manner she believes best for that point in time.

While School "Z" is equipped to view M.P.A.T.I. in addition to the system-wide station, they are not yet utilizing it. The blending of airborne program offerings into system-wide schedules needs to be resolved. This responsibility rests with the local principal and his staff. Once they have examined and evaluated the potential of the new program source, they are free to use it in any manner they determine to be most effective for their curriculum.

Interest in a closed-circuit system for the building is being considered. It is felt that this could serve as an excellent compliment to current open-circuit reception.

In-service education for ITV. The in-service education program for classroom teachers using television in School "Z" is developed and adapted from the activities provided by the Division for the Improvement of Instruction. Responsibility for in-service program planning is vested within the system, but at an administrative level that centralizes it. System-wide in-service activities are developed centrally, with local advice and consent and distributed for local adaptation.

Participation in planning by staff members of a local school occurs through subject-matter departmental meetings. Five of these sessions are conducted each year at the sub-district level. Depending upon content area, two or more

sub-districts may pool their resources for such planning meetings. In-service education is but one of the topics these groups discuss and for which they offer recommendations. Building principals are also included in this planning.

In-service activities are designed, generally, for two types of clientele: (1) the teachers in the school system who are using television; and, (2) teachers, in general, who use television in the classroom, whether or not they are in the system.

Subject matter supervisory staffs strongly urge all teachers involved to view the in-service telecasts. Viewing is not required, but encouraged. While a large percentage of these telecasts deal with topics indirectly related to television instruction, several are designed, specifically, to assist the classroom teacher with ITV utilization. More importantly, this assistance is extended in consideration of the subject matter area involved. This interrelationship of subject matter and television renders the in-service activity most meaningful and valuable to the classroom teacher.

Another phase of the in-service program in School "Z" is the visitations to the classroom by the television director and on-camera teachers. This interaction is needed and desired by both parties. A multitude of relatively insignificant and varied questions are answered in this manner.

New and beginning classroom teachers are given basic ITV information at pre-school workshops. This program is the

responsibility of the principal and ITV resource people. The workshop deals with the variety of pre-school matters and the session for new teachers is merely a small portion of it.

In addition, all new teachers are requested to attend a meeting at the radio and television department sometime during the first six weeks of school. Television schedules are discussed, library materials presented, and general questions are answered. Beginning teachers are also encouraged to seek out additional ITV orientation from experienced teachers and, in turn, experienced teachers are urged to share their experiences and knowledge.

Two week annual summer workshops are held for the purpose of planning telecast content. One workshop is conducted for each subject matter area. One teacher from each academic area per school attend and are expected to represent prior local efforts of their respective staffs. New guides and manuals are developed and additions and revisions are made to those used previously. Because of this procedure and effort, the teachers' manuals and guides are among the most important in-service materials the classroom teacher utilizes.

Teacher guides are provided classroom instructors for each program series to be viewed. The format of a typical guide is as follows:

Introduction

Purpose of the guide

Textbook upon which course material is based

Committee by whom course was planned and prepared

Name of On-camera teacher

Table of Contents

Lists units, lessons, titles and page numbers

Units

Title of lesson
Objectives and goals are stated
Major concepts and points to be covered
Vocabulary
Suggested films

Viewing students are given a workbook which has been designed as an integral part of the entire series. One workbook is used for each unit of study. The format of the workbooks is as follows:

Title page for unit, i.e., "Navigation"

Lesson information

Corresponding textbook page numbers
Statement of the problem, i.e., "How do we locate our position on the earth's surface?"
Suggested Activities
Vocabulary

Objective test covering the entire unit

Parental contact is also considered important. Information about the television series, how it is to be conducted and material to be covered is sent to parents in letter form. A sample of such a letter may be found in appendix E.

Technical information concerning television utilization is provided the classroom teacher by her principal. Television technicians of the television and radio department regularly distribute to principals memoranda on technical hints for TV use. Topics include such items as lighting, seating, accoustics and receiver adjustment.

School "Z" has no established budget for ITV in-service programming. However, current expenditures have included a \$100 charter membership for M.P.A.T.I. In addition, resource people are available on request from the system's staff of supervisory personnel.

The principal indicates that "meaningful topics and content" and the "interest of teachers" account for the success of those portions of the in-service program considered effective. "Lack of time," "inappropriate topics," and "lack of teacher interest" are indicated as factors which hinder the success of other in-service activities. When asked whether he felt the in-service program was, on the whole, successful and effective, the response was, "Yes, they (teachers) are getting what they feel they need."

No formal evaluation of the total in-service program is conducted. Comments and suggestions for change are welcomed from faculty in an informal manner.

Program quality was expressed as one of the most important elements in a successful ITV program. The value and effectiveness of scheduled telecasts is measured by the extent to which they are viewed regularly.

As we have seen, the in-service education program in School "Z" incorporates the following techniques to channel information to classroom teachers: in-service telecasts; pre-school workshops; in-school workshops; teachers' guides and manuals, consultants and speakers, films and kinescopes, observational techniques, technical memos, printed

suggestions and utilization hints, library references, visitations, and informal teacher discussions. Teachers' guides and manuals have been rated the most important.

Summary of School "Z". While the instructional television program serving School "Z," and the school system of which it is a part, is designated to be an integral part of the local curriculum of each school, such appropriateness is not always existent. The size of the system results in a variety of schools containing a range of socio-economic environment, intelligence and aspiration that would probably be as broad and varied as those found across the state itself. Such heterogeneity fosters diverse needs and interests which are difficult to meet with standard television programming.

In-service programming for ITV is centrally developed and distributed for local use. School "Z" tends to rely heavily on system-wide in-service activities and the in-service material created locally is limited.

Opportunities for the involvement of local classroom teachers in the planning of in-service activities are furnished, but are not extensive. Interest in the ITV program is evident and a varied approach to in-service programming techniques is conducive to exposing as many teachers as possible to the program.

Composite Summary of Schools
"X", "Y" and "Z"

The three schools discussed in this chapter were selected for further study because they appeared to have extensive in-service education programs as indicated on the returned questionnaire, and there appeared to be diversity in the manner in which they utilized ITV.

Instructional television was initiated into the curriculum of the three schools in different ways. Careful and deliberate curriculum planning led to the adoption of appropriate instructional television programming in School "X". School "Y", on the other hand, found itself with the medium administratively imposed into the curriculum and then proceeded to provide for its orderly and meaningful inclusion in the instructional program. As part of a large school system, School "Z" was indirectly involved in the decision to make ITV available as a system-wide resource for local schools.

The type of utilization of instructional television varies in each of the three schools. Included are a team-teaching approach in conjunction with closed-circuit telecasting in School "Y"; a system wide broadcasting station with integral planning at the local level in various subject matter areas serving School "Z"; and, the involvement of School "X" in an attempted cooperative utilization with a broadcaster serving a large geographic area and many school

systems. Classes within the three schools view ITV on a regular basis.

Virtually no staff member in any of the three schools had any experience, association, or education concerned with instructional television, prior to the planning stages of ITV adoption in their schools.

School "Y" creates and conducts most of its own in-service education programs. The other two schools, however, depend a great deal upon their broadcast source for the initial planning and suggestions for ITV in-service content. However, both make extensive efforts to adapt these offerings to meet local needs and interests. Also locally developed activities are added to the total in-service education program. All three schools indicate that faculty members are actively involved in planning the total scope and nature of in-service education programs. The leadership for the planning of these activities in School "X" and in School "Z" generally comes from the school building principals. However, in school "Y" this responsibility is assigned to the television producer-director. It would appear that the reason for this difference in School "Y" is that the producer-director has daily personal contact with most of the classroom teachers utilizing television and has more of a feeling and knowledge for their problems and interests. He is simply more aware of the daily implications of this phase of the instructional program than is the principal.

Special emphasis for the education and orientation of new and beginning teachers is evident in all three schools. This function is achieved primarily through the use of a pre-school workshop format. A variety of techniques and activities are applied and include role playing, viewing "utilization tapes" which demonstrate step by step processes for utilizing ITV in the classroom, appropriate movie films, interaction with experienced classroom teachers, and an introduction to teachers' guides and manuals. Available library materials and reading lists dealing with ITV utilization are provided the new and beginning classroom teachers and the entire staff is informed when any new material is added or made available.

School "Y" is unique among the three schools in that the teacher who presents the lesson on television also has the opportunity to return immediately and directly to the classroom which receives the TV instruction. The procedure in the other two schools approaches this in that personal visitations are made to the classrooms by the television director and the on-camera teachers. Although none of the three schools indicate any formal or structured evaluation process of the effectiveness of their in-service education program, this classroom contact with a television source serves to provide some informal evaluation of ITV utilization, and thus, identifies problem areas and points of interest that can serve as content for future in-service education programs.

The descriptions of these three different school programs illustrate the point that each school planning ITV use needs to develop the program in a manner that is appropriate to its own structure, interest and need. It is evident that although instructional television programs and inservice education suggestions will be forthcoming from the television source, local schools will want to select and adapt these activities for their appropriate use.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Statement of the problem. The purpose of this study is (1) to review the existing professional literature on the in-service education of teachers, and on the utilization of instructional television in the classroom; (2) to survey public school administrators in Michigan to determine the nature and extent of the in-service education programs being conducted at present for teachers utilizing in the classroom; (3) to develop detailed descriptions of programs in three selected schools to examine in depth the in-service education programs for classroom teachers utilizing instructional television; and (4) as a result of the study, to suggest basic principles, procedures, and activities for public school personnel to consider in the development of in-service education programs for teachers utilizing instructional television in the classroom.

Research procedure. The normative-survey method of research employing the questionnaire and visitation-interview techniques form the research procedure for this study. A questionnaire was sent to one hundred and fifty-four

elementary, junior high, and senior high school building principals of schools who were using television to some extent in their instructional program. Three of these schools were selected for visitation and detailed study. Personal interviews secured the data for this phase of the study.

Findings. Presentation of the questionnaire data is made in Chapter IV. The following general findings are indicated by that data:

1. The utilization of television in the public schools in Michigan is extensive. It is employed in nearly 600 school buildings and more than 18 per cent of the total number of school districts. Far more elementary school buildings use television than do junior or senior high schools. This is to be expected; however, a much smaller percentage of elementary schools tend to discontinue their program than is the case with the other two grade levels. Junior high schools represent the fewest number of buildings using TV and has the largest percentage of buildings discontinuing its use.
2. A total of one hundred forty-five schools of the one hundred fifty-four samples returned the questionnaire. Of this number, one hundred forty-two questionnaires were usable and included eighty-one from elementary schools, twenty-eight from junior high schools, and thirty-three from senior high schools.

3. Twenty-seven, or 19 per cent, of the respondents no longer used television in their classrooms (Category 1). Among reasons for television's discontinued use are:
 - a. Lack of financial resources.
 - b. Poor reception or picture quality.
 - c. Scheduling problems.
4. Sixty-seven, or 47.7 per cent, of the respondents indicated they use television, but do not have an in-service education program for teachers utilizing the medium in the classroom (Category 2). This group has used television for an average of 3.32 years and receive their programs primarily from MPATI, WTVS, WMSB, WJRT, and WNEM. This group tends to utilize TV for all students in a class and employ the co-operative, supplemental and enrichment types of utilization. The use of television for viewing special events was indicated by 70.1 per cent of this group. Slightly more than 56 per cent of this group use television programs in their school on a regular basis.
5. Forty-eight, or 33.8 per cent, of the respondents indicated that they utilized television and conducted an in-service education program for classroom teachers utilizing the medium (Category 3). This group reports it has used television for an average of 3.7 years and primarily rely upon MPATI and WTVS for instructional TV. One elementary and one senior

high school report the existence of closed-circuit television systems in their schools as broadcast sources.

6. All students in a class view television lessons in 95.8 per cent of the respondents' schools. Five responses indicated TV offerings for teachers only. Cooperative, supplemental and enrichment types of utilization are the most frequently employed by the schools in this group. No form of utilization, other than those listed on the questionnaire, was indicated by any of the respondents.
7. In those schools where in-service education programs are conducted for teachers utilizing TV, 89.5 per cent of such programs are designed to serve the teachers in particular school buildings and systems. School building principals in 64.5 per cent of the schools take part in the planning of in-service education programs, as do school building faculty committees in 39.5 per cent of the schools and the school system superintendent in one-third of the reporting schools. These same persons or groups take part in the direction or "carrying out" of the in-service education program which is planned.
8. Schools conducting in-service education programs for television utilization indicate that the interest of teachers is an important factor in determining the success of such programs in 68.7 per cent of the

of the schools. The lack of time is reported by 45.7 per cent of the schools in this group as being a factor that hinders the success of in-service education.

9. None of the respondents conducting in-service education programs described any aspects of their program which they considered to be unique.
10. Staff meetings are indicated by 68.8 per cent of the schools as a format being used for in-service education programs dealing with the utilization of ITV. Attendance at professional meetings, pre-school workshops, and in-school workshops also are frequently mentioned formats.
11. All but 2.3 per cent of the respondents in Category 3 indicate that teachers guides and manuals are used in their in-service education program for ITV utilization. Television viewing was reported by 46.6 per cent and speakers and consultants by 37.7 per cent as in-service techniques which are used. Slightly more than 35 per cent indicate the use of slides, film, and tapes.
12. The pre-school workshop is rated as the most important in-service format at the elementary and senior high school levels, as well as in the total mean rating for all schools. Staff meetings and in-school workshops are also rated highly in importance as

formats for professional improvement programs for teachers who utilize ITV.

13. Teachers guides and manuals, tapes and slides, observational techniques, consultants and speakers are all rated highly in importance as in-service activities. Teachers guides are ranked highest in importance by all three grade levels and are selected as the one activity most frequently used. Staff meetings are indicated as the one most frequently applied in-service format.

The detailed descriptions of the three schools selected from the questionnaire are presented in Chapter V and provide the following findings:

1. The manner in which television was initiated into the instructional program varies in the three schools. The range is from careful, deliberate curriculum planning to administrative imposition of the medium.
2. The type of utilization of TV varies from school to school. This includes team teaching and closed-circuit telecasting; a system-wide broadcasting station with integral planning at the local level in subject matter areas; attempted cooperative utilization with a broadcaster serving a large geographic area and many school systems where interaction and communication with the TV source is not as satisfactory as the viewing school desires.

3. The three schools report they view ITV programs on a regular basis.
4. Virtually no staff member in any of the three schools had any experience, association or education concerned with instructional television prior to the planning stages of adoption in their schools.
5. In two of the three schools, local personnel depend upon the broadcast source of initial planning and suggestions for ITV in-service content. However, both make extensive efforts to adapt these offerings to meet local needs and interests. Also, locally conceived activities are added to the total in-service education program.
6. The third school plans and develops most of its own in-service education programs and they focus, usually, upon the problems and implications of team teaching and closed-circuit with studios housed in the building. The producer-director through his close daily contact with classroom and on-camera teachers plays an important role in in-service education, mainly in the technical aspects of classroom utilization.
7. All three schools indicate that faculty members are actively involved in planning total scope and nature of the in-service education program.
8. All three schools give special emphasis to the education and orientation of new and beginning teachers primarily through the use of pre-school workshops.

A variety of techniques and activities are applied within the workshop format and include role playing; viewing "utilization tapes" which demonstrate step-by-step processes for utilizing ITV in the classroom; appropriate movie films presenting general introduction to ITV; interaction with experienced classroom teachers; and, orientation and discussion of teachers guides and manuals.

9. Either libraries or reading lists dealing with ITV utilization are made available to the classroom teachers utilizing television in the three schools.
10. School "Y" is unique among the three schools as far as interaction with the television program source is concerned. This is due to the fact that the teacher who presents the lesson on television also has the opportunity to return immediately and directly to the classroom which received the ITV instruction. School "X" and "Z" approach this procedure when personal visitations are made to the classroom by the television director and the on-camera teachers. Although none of the three schools indicates any formal or structured evaluation of their in-service education program, this classroom teacher contact with the television source serves to provide some informal evaluation of ITV utilization and, thus, identifies problem areas and points of interest that

can later serve as content for in-service education programs.

11. None of the three schools allots any portion of its budget for the in-service education of classroom teachers utilizing ITV. A budgetary amount is specified for a general program of in-service education and the portion dealing with ITV utilization is charged to this allotment.

Conclusions

The following conclusions are drawn on the basis of the review of the literature and the data collected:

1. Various types of utilization of instructional television are difficult to describe, identify and differentiate.
2. There are basic procedures to follow in the planning for ITV utilization and these procedures often form the basis for portions of in-service education programs concerning ITV utilization.
3. Most schools, which initiate instructional television into their instructional program encounter difficulties and barriers to its successful utilization. Among these difficulties appear to be (1) unsatisfactory scheduling of telecasts into the daily routine of the local school; (2) poor quality reception; (3) inappropriate program subject matter for local needs; and (4) excessive costs.

4. For a variety of reasons, apparently similar to those listed in Conclusion Number 3, a substantial number of schools which initiate the utilization of ITV into their curriculum eventually discontinue the program.
5. There are principles of in-service education which can be applied generally to the planning and operation of all programs of professional improvement.
6. In-service education, curriculum planning, and supervision appear to be closely related and are generally designed to achieve similar goals.
7. Schools conducting in-service education programs, whether formal or unstructured, for classroom teachers utilizing ITV, tend to develop such programs based upon the needs and interests of the local staff.
8. Teachers, administrators and other local school personnel are generally involved in the planning and direction of in-service education programs focusing on ITV utilization.
9. Interest on the part of local teachers and staff members is an important factor in the success of an in-service education program for teachers utilizing ITV in the classroom. The lack of sufficient time is the factor which most frequently hinders the success of an in-service education program for ITV utilization.
10. A variety of formats and activities are available for in-service education programs, but like the

specific content of such programs, must be selected and determined on the basis of the problems and needs reflected in the local staff members.

11. Existing programs of in-service education for ITV have not fully utilized all the resources and activities available to them in the form of consultation, directed readings, and the case study approach.
12. Schools conducting in-service education programs tend to depend upon the television broadcast source for ideas and material on such programs.
13. Schools generally attempt to adapt most externally pre-arranged in-service activities to serve local needs and interests.

Recommendations

The primary purpose of this study is to set forth guidelines for the development of in-service education programs for classroom teachers utilizing instructional television. The principles, procedures, and activities presented here are examples of what is to be found in the literature and within current in-service education programs in other schools in the state. These factors are submitted for the consideration and examination by schools planning such programs with the understanding that they are not elements proven to effectively serve all programs of professional improvement. The guidelines, or recommendations, resulting from this study are:

1. School systems considering the adoption of instructional television into their curriculum should be informed about the problems they are likely to encounter in the developmental process:
 - a. A lack of financial resources.
 - b. Poor reception and picture quality.
 - c. Scheduling of telecasts into the daily school program.
 - d. Inappropriate telecast content for local lessons.

These areas should be examined carefully and resolved to the satisfaction of the local school personnel involved before any final commitments are made to initiate an ITV program.

2. In-service education programs for classroom teachers utilizing television should:
 - a. Be planned, organized, and directed on the basis of staff interest and need, as well as the objectives of the school's total program.
 - b. Develop as an integral part of the instructional television program.
 - c. Be planned and coordinated with the curriculum planning and supervisory functions performed within the organization and structure of the staff.
 - d. Involve in the planning stages all personnel who will be affected by the content decisions resulting from such programs.
 - e. Be structured to provide opportunities for staff interaction with each other and with resource personnel from a wide range of applicable academic areas. Consideration should be given the involvement of specialists in learning theory, communication theory,

television production and direction, and various affected subject matter areas.

- f. Identify and make available to staff a variety of resources of an inanimate nature, particularly appropriate professional literature and research.
 - g. Be organized to provide simple channels for translating decisions into actions.
 - h. Contain evaluation procedures as an integral part of the total program.
 - i. Be continuous and not stirred to action only by a crisis.
 - j. Recognize the difficulties such a program will face in its development. Such factors as lack of staff interest in the program, staff need for academic credit, need for released time for participating staff members, and the need for the cost of the program to be assumed by someone other than the participating staff members.
 - k. Attempt to build around staff interests.
 - l. Base format and activity selection upon content and need.
 - m. Employ, where appropriate, pre-school and in-school workshops as a format. They should be given consideration particularly at the elementary and senior high school levels.
3. The local administrator of the school developing an in-service education program for classroom teachers utilizing television should:
- a. Participate with the staff in developing goals and procedures for such programs.
 - b. Recognize factors of concern to staff members and attempt to deal directly with them. An awareness of such factors as staff need for academic credit, staff need for released time, basic staff interest in the program, and arranging for the financial support of the program is important.

- c. Serve an "enabling function" in creating an atmosphere for professional growth.
 - d. Encourage organizational development of the in-service education program.
4. Institutions conducting teacher education programs need to provide more adequate opportunities for the undergraduate prospective teacher to become acquainted with the theory and principles of the communication process, and with the characteristics and potential of the television medium as it relates to the learning processes.

In-service education programs will be successful only if they serve to achieve among the members of the professional staff an opportunity to grow and improve in their roles as teachers. The value of such a program lies in the fact that a teacher who is growing professionally, in turn, can provide increased opportunity for his students to achieve to their fullest potential.

It is assumed that the creative teaching and administrative staff of a school planning such an in-service education program would develop an approach to meet their own particular problems and needs. Hopefully, they will find in this study some insights, guidelines and ideas concerning the program possibilities for their local institution.

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APPENDIX A

Sample Cover Letter for Questionnaire

MICHIGAN STATE UNIVERSITY EAST LANSING

COLLEGE OF EDUCATION

Mr. Thomas G. Cook, an advanced graduate student in school administration at Michigan State University, is conducting a study of In-service education programs for teachers utilizing television in the classrooms of selected public schools in Michigan.

We would like to seek your assistance in making this study and would appreciate having either you or a member of the professional staff in your school building complete the enclosed questionnaire.

We believe this study will be of interest and value to public school educators involved in, or considering, the utilization of instructional television. In the report, your name or the name of your school will not be identified with any item of the questionnaire. A summary of the findings will be made available to you.

Please feel free to contact Mr. Cook if you have any question regarding this project. Your cooperation is appreciated.

Sincerely,

Floyd G. Parker
Associate Professor of Education
Michigan State University
East Lansing, Michigan

FGP:cs

APPENDIX B

Sample Follow-up Letter for Questionnaire

MICHIGAN STATE UNIVERSITY EAST LANSING

COLLEGE OF EDUCATION

On March 25, 1964, you and other school administrators in Michigan were sent a questionnaire dealing with inservice education programs for teachers using television in the classroom.

To date I have not received a reply from you. I realize that you may not have had the time to complete it or, perhaps, have mislaid it. However, I want to assure you that your single response is important in securing an accurate representation of inservice activities throughout the state.

An additional questionnaire is enclosed for your convenience. I will very much appreciate your filling it out and returning it as soon as possible.

Sincerely,

Thomas G. Cook
410 Erickson Hall
Michigan State University
East Lansing, Michigan

TGC:cs

Enclosure

APPENDIX C

Questionnaire

Q U E S T I O N N A I R E

Cover Sheet Color Key:

Elementary Schools - White

Junior High Schools - Yellow

Senior High Schools - Blue

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1010 spectrophotometer. The concentration of chlorophyll was expressed as $\mu\text{g mL}^{-1}$ of the sample.

[illegible]

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

CONFIDENTIAL - SECURITY INFORMATION

2000年12月29日 星期三

the \mathcal{H}^1 -norm. The \mathcal{H}^1 -norm is defined as

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bio. 1994; 10: 103-110.

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the 1990s, the number of people in the United States who are 65 years of age or older is projected to increase from 20 million to 30 million, and the number of people 75 years of age or older is projected to increase from 10 million to 15 million (U.S. Census Bureau, 1996). The number of people 85 years of age or older is projected to increase from 2 million to 4 million (U.S. Census Bureau, 1996). The number of people 90 years of age or older is projected to increase from 500,000 to 1 million (U.S. Census Bureau, 1996). The number of people 95 years of age or older is projected to increase from 100,000 to 200,000 (U.S. Census Bureau, 1996). The number of people 100 years of age or older is projected to increase from 10,000 to 20,000 (U.S. Census Bureau, 1996).

1. The following information is being furnished to you for your information:

A QUESTIONNAIRE
TO STUDY IN-SERVICE EDUCATION PROGRAMS FOR
CLASSROOM TEACHERS UTILIZING INSTRUCTIONAL
TELEVISION IN PUBLIC SCHOOLS IN MICHIGAN

The purpose of this questionnaire is to obtain information relative to the In-service educational activities for the teachers in your school who are utilizing television in the classroom.

When answering the following questions, please keep in mind this definition:

IN-SERVICE EDUCATION: includes all those activities which are designed to contribute to the professional growth and competence of the classroom teachers and others in your school concerned with the utilization of television as an instructional tool.

Please include information about activities planned for individual staff members or certain groups of staff members, in addition to those activities designed for the entire teaching staff.

THE

AMERICAN

REPUBLICAN

PARTY

THE AMERICAN REPUBLICAN PARTY
IS THE ONLY PARTY THAT
STANDS FOR THE INTERESTS OF THE
PEOPLE.

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STANDS FOR THE INTERESTS OF THE
PEOPLE.

I. _____

II. Are teachers in your building continuing to use television in the instructional program?

☐ YES☐ NO

If you answered "YES" to the above question, please continue on to ITEM III.

If you answered "NO" to the above question, it is not necessary to complete the remainder of the questionnaire. However, please return it as soon as possible.

III. How many years has your school used television in the instructional program?

 years.

IV. Please check (✓) all those television stations from which you are currently receiving programs

Channel:

2 WJBK

7 WPBN

13 WZZM

3 WKZO

8 WOOD

56 WTVS

4 WWJ

9 WWTB

57 WKNX

4 WTOM

☐ 9 CKLW

72 MPATI

5 WNEB

10 WMSB

76 MPATI

6 WJIM

☐ 10 WILX

☐ Out-of-state (Please specify)

7 WXYZ

☐ 12 WJRT

☐ Other source (Please specify)

V. For whom are the television programs presented in your school? (Check all that are applicable)

☐ For selected students.

☐ For all students in a class.

☐ For teachers only.

☐ Other (Please specify) _____

1941

1942

1943

1944

1945

1946

1947

1948

1949

1950

1951

1952

1953

1954

1955

1956

1957

1958

1959

1960

1961

1962

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1975

1976

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1979

1980

1981

1982

1983

1984

1985

1986

1987

1988

VI. In what way are television programs used in your school? (Check all that are applicable)

- ☐ For total instruction (TV does all the teaching).
- ☐ For cooperative teaching (TV does much of actual teaching and classroom teacher augments the TV instruction).
- ☐ For supplemental instruction (TV program is designed and produced so as to supplement the local curriculum).
- ☐ For enrichment (TV program is considered to have educational value, but it is not designed to be a part of any specific local curriculum).
- ☐ For entertainment purposes.
- ☐ For special events (Space shots, Presidential elections).
- ☐ On a regularly scheduled basis.
- ☐ Other (Please specify).

VII. Is there in existence a planned program of In-service education activities for the classroom teachers who are using television in your school building?

Please refer to the definition on page one

- ☐ YES
- ☐ NO

If you answered "YES" to the above question, please continue on to ITEM VIII.

If you answered "NO" to the above question, it is not necessary to complete the remainder of the questionnaire. However, please return it as soon as possible.

VIII. For whom is such an In-service education program specifically designed?

- ☐ The teachers using television in our building only.
- ☐ The teachers in our school system who are using television.
- ☐ Teachers, in general, who use television in the classroom, whether in our school system or another.
- ☐ Other (Please specify) _____.

;

IX. Indicate all those persons or groups who take part in the planning of the In-service program activities for your classroom teachers using TV:

- ☐ School building principal.
- ☐ School building faculty committee.
- ☐ School system superintendent.
- ☐ Other school system administrator (Specify title) _____.
- ☐ School system faculty committee.
- ☐ Television coordinator for school system.
- ☐ Educational coordinator representing the television station.
- ☐ Joint planning committee made up of teachers from several school systems including ours.
- ☐ Other (Please specify) _____.

X. Indicate all those persons or groups who take part in the direction or "carrying out" of the In-service program activities for your classroom teachers using television:

- ☐ School building principal.
- ☐ School building faculty committee.
- ☐ School system superintendent.
- ☐ Other school system administrator (Please specify) _____.
- ☐ School system faculty committee.
- ☐ Television coordinator for school system.
- ☐ Educational coordinator representing the television station.
- ☐ Joint planning committee made up of teachers from several school systems including ours.
- ☐ Other (Please specify) _____.

XI. In your opinion, which, if any, of the following factors account for the success of the In-service educational program for teachers using television in your school?

- ☐ Sufficient time.
- ☐ Adequate budget allotment.
- ☐ Effective leadership.
- ☐ Meaningful topics and content.
- ☐ Interest of teachers.
- ☐ Other (Please specify) _____.

XII. In your opinion, which, if any, of the following factors hinder the success of the In-service education program for the teachers using television in your school?

- ☐ Lack of time.
- ☐ Inadequate budget allotment.
- ☐ Ineffective leadership.
- ☐ Inappropriate topics and content.
- ☐ Lack of teacher interest.
- ☐ Other (Please specify) _____.

XIII. Please explain any aspects of your In-service program for teachers using television that you consider to be unique:

ACTIVITIES :	<p style="text-align: center;">A</p> <p>Please mark with an "X" <u>all</u> the activities that are used in the television In-service program in your school or school system</p>	<p style="text-align: center;">B</p> <p><u>Rate</u> the importance to you of each activity you checked in Column "A" on a 5-point scale (5 is high - 1 is low)</p>	<p style="text-align: center;">C</p> <p>Please mark with an "X" the <u>one</u> activity most frequently used in your school's In-service program for teachers utilizing instructional television</p>
	Please complete Column "A" before going on to Column "B", etc.		
STAFF MEETINGS			
PRE-SCHOOL WORKSHOPS			
IN-SCHOOL WORKSHOPS			
ACADEMIC COURSE WORK ON TELEVISION IN EDUCATION			
STAFF RETREATS			
ATTENDANCE AT PRO- FESSIONAL MEETINGS			
INTER-SCHOOL VISITATIONS			
TEACHERS GUIDES AND MANUALS			
CONSULTANTS-SPEAKERS			
CASE STUDIES			

D.

APPENDIX D

Interview Guide

I. General Information

a. Community setting

b. School System

No. of students

No. of faculty

Administrative staff and Organization (title
and background)

Board of Education (composition of)

Policies on ITV Utilization

Policies on in-service education programs

c. School Building

Grades taught

Administrative staff and organization

II. ITV - its use in the curriculum

a. Historical Development of TV into curriculum

b. Length of time using ITV

Program source

Reception?

Casual or enrolled viewer?

c. For whom are the programs presented?

d. How are the programs used?

e. What is the school's role in program development,
production and content?

f. Has the school hired special personnel for TV use?

g. Classroom teachers using TV - No. of:

Professional training, experience and education of
teachers using TV:

III. In-service education program

A. Briefly describe in-service education for teachers
using ITV.

a. Who is responsible for planning? Who initiated TV
in-service? Centralized or decentralized?

b. How are in-service programs planned?

c. For whom are in-service programs planned?

- d. How are (or by whom) in-service programs "carried out"?
- e. How is staff involved in planning content for in-service programs?
- f. How is TV broadcaster involved in in-service program?
- g. In-service techniques used? Resources? Materials?
- h. Specific information given to teachers about classroom use of TV: (Internal or external)
- i. How do you evaluate: (1) TV effectiveness

(2) Your in-service program
(for TV)

j. What is most important thing you do of an in-service nature?

k. Orientation for new teachers?

l. Budget for: (1) TV

(2) In-service programming

m. Do you consider your in-service program successful?
(Why or why not)

APPENDIX E

Sample Letter to Parents

TELEVISION SCIENCE

Dear Parents:

Your _____ is taking TV Science this semester. To help you understand this means of teaching, I have compiled the following facts:

1. The classes (_____ students) watch 6 TV sets in the Auditorium. Each student has an excellent seat for viewing and listening.
2. The program is on from 10:15 to 10:40. The 15 minutes before and 10 minutes after the program are used for individual or class discussions.
3. Each student is allowed the use of the textbook for the entire semester. Each child is given, free of charge, a mimeographed Unit Guide to keep.
4. The Unit Guides are planned so that each page is a day's lesson on TV. The reading and vocabulary assignments are also posted on that page.
5. During the TV lesson the student is to take notes on material that seems important.
6. The assignments are as follows:
 - a. Reading every night to prepare for the next day's lesson.
 - b. Vocabulary to be written every night for the lesson.
 - c. Some activities from the Unit Guides are assigned daily.
 - e. Each child must do one project. This is due the 10th week.
7. If a student is absent he must find out what the homework is, (he already knows the reading and vocabulary from his Unit Guide) and have all work caught up when he returns. If he cannot watch Ch. 56 at home then he can ask to copy someone else's notes on the lessons he missed.
8. Tests are given at the end of a Unit, occasionally in Mid-Unit.

If you are interested in viewing the program or in visiting the class, please feel free to come over at 10:00 A.M. However, I would appreciate your checking first to be sure that there will be a lesson on TV that day.

If you have any questions, I'll be glad to answer them.

Sincerely,

Parent Signature _____

ROOM USE ONLY

~~JUL 29 1966~~

~~JAN 24 1967~~

~~JUN 23 1971~~

~~DEC 28 1987~~

~~JAN 8 1988~~

~~JAN 21 1987~~