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CERTAIN ASPECTS OF THE STATUS OF INSTRUCTIONAL TELEVISION IN ELEMENTARY AND SECONDARY SCHOOLS IN THE STATE OF UTAH

by

James W. Daniels

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Communication

Approved:

_____
Major Professor

_____
Committee Member

_____
Committee Member

_____
Dean of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

1977

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Lastly, but first in my mind, indebted thanks to my wife Connie, and my family, who gave up home and security, so that I could undertake this endeavor 1500 miles away from their roots.

James W. Daniels

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ABSTRACT

Certain Aspects of the Status of Instructional Television
in Elementary and Secondary Schools
in the State of Utah

by

James W. Daniels, Master of Science

Utah State University, 1977

Major Professor: Dr. K. S. Sitaram
Department: Communication

The primary purpose of the study was to determine the level of teacher competence concerning instructional television and the need for university training for future teachers. The secondary purpose of the study was to determine the availability, accessibility and utilization of instructional television equipment in elementary and secondary schools in the State of Utah.

The principals of 400 elementary and secondary schools were the respondents in this study. A questionnaire was designed to acquire information on the following: (1) What degree of sophistication and types of television equipment are presently available in schools in the State of Utah; (2) what major problems are encountered by teachers using television; and (3) are the universities in the state adequately preparing teachers in the use of instructional television as an instructional medium.

The results of the survey suggest that universities should offer prospective teachers hands-on experience in television utilization and production. An overwhelming majority of school principals (91 percent) indicated that universities should be doing this job.

The results indicated what type of and how much equipment Utah schools presently have. In addition the survey showed the type of productions and programs that teachers are presently doing with television equipment. The results also identified several specific problem areas teachers now have.

(48 pages)

CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Introduction

The use of electronic media has been a part of the American education system for many years. As early as 1917, radio station WHA of the University of Wisconsin, Madison, was offering limited educational programs. The State of Utah had the distinction of pioneering the first fulltime educational radio station. In 1921 the Latter-day Saints University of Salt Lake City, began broadcasting educational programming on a continuous basis (Wood, 1977, p. 17). Radio, at that time, was seen by some educators as having the potential for reaching masses of people who could not afford the cost of formal education. The dream unfortunately was never reached. Of the 200 AM stations licensed to educational institutions, only 20 stations remained shortly after 1937 (Head, 1976, p. 124).

The disappointing history of educational radio appears to have later repeated itself in educational television. Nationally educational television has been present for well over twenty years. At first only broadcasting facilities enabled educational programs to enter the classrooms, and like any beginning experiments, failures were quite common. Additionally, as with any new technology, many educators were either misinformed or uninformed on televisions role. Some feared the medium would replace teachers in the classroom. This, along with the

combination of inexperienced educational television producers and lack of funding brought educators and public alike to levels of disillusionment.

The 1960s, however, saw the advent of small television equipment becoming available to schools. Inexpensive monitors, the one inch video tape recorder, plus cameras and camera switching capabilities all came into the market place at this time. When this occurred, the inovative educator saw the possibility of television entering the individual schools, and as a result, would better meet the specific need of the students. However, incompatable machinery, teachers untrained in the medium, equipment breakdowns, scheduling difficulties, and lack of adequate funding, all resulted in educators again being disappointed.

The late 1960s and early 70s saw rapid simplification and standardization of television equipment. This, along with lower equipment costs enabled individual schools and districts to purchase some type of television equipment. Although usage of sheer volume increased, educators finding value in the equipment were usually reserved for the football team looking at the video tape as a "game film." The average classroom teachers still could neither see how television could be used in their curricula, nor did they know how to go about it even if they did see a use.

The introduction of the 'media specialist' into schools helped televisions usage, but even here, we find television training the weakest segment of the specialists college course work.

It has long been this writers opinion that the reason for not using television in most elementary and secondary classrooms, is that

teachers simply are not trained or rarely even exposed to the potential of instructional television. If one doesn't learn to drive a car, one doesn't drive. The same is true of television utilization. It is this viewpoint that teachers are basically lacking training in television utilization and production which led to the following study.

Statement of the problem

Hilliard and Field, in their book Television and the Teacher, state the following: "The major problem is that even those teachers who recognize the potential values of television in the classroom often do not know what to use or how to use it" (Hilliard and Field, 1976, p. 8).

It has long been established that one does not utilize certain technology when one has not been trained in its utilization. Teachers, in their undergraduate university training, have generally not been exposed to the uses, potential, and application of instructional television (Gordon, 1970, p. 182). On the other hand, universities have either been totally unaware of the problem, or at least at a loss to know what to include in the training of education majors. This appears to be the central issue. First: teachers cannot begin to utilize instructional television without university training. Second: the universities cannot begin training them without knowing what to include in such instruction.

The 1973 Ford Foundation inquiry into the uses of instructional technology state the problem concisely "... we have generally neglected to train our teachers in the use of new media ..." (Armsey, 1973, p. 12).

Utah is no exception, inasmuch as this appears to be a nationwide problem. Presently there is a lack of research concerning the state of instructional television in Utah. As far as this writer knows there is only one systematic survey of a local nature which indicates that instructional television training has been weak for instructional media specialists who have graduated from Utah State University. In this study the Instructional Media alumni rated "lack of television training" as their third most frequent problem (Grant, 1977). Other than this survey, there is no known recent systematic survey which attempts to obtain the information sought for in this report.

Like any other profession, teachers also need to thoroughly understand the tools used in their trade. With television as one of these tools, it is logically assumed that teachers should be knowledgeable in this area. If they are not, then there is a problem in their college preparatory training.

Therefore it was the purpose of this study to identify the types of equipment, their degree of sophistication, and their present uses in Utah elementary and secondary schools. Furthermore, it was designed to determine if there is a need for college training, and if so, what content areas may be included in a program of instruction for college students enrolled in elementary and secondary colleges.

CHAPTER II

REVIEW OF LITERATURE

Technology in education

The statement below by Hess concisely indicated the significant problem that this study focuses on:

> Visualize the thousands of school administrators and teachers who literally have had thrust upon them a dazzling array of hardware about which they know little. They are sincere well-meaning people--some of them dragged kicking and screaming into the electronic age--while the learners, the wide eyed, beautiful young ... sits in passive silence.
>
> If anyone speaks for ITV, his voice comes from the grass roots, and the one word we should hear loudly and clearly is--HELP! (Hess, 1968, p. 45)

While the above deals with television, most all technology in education shares similar traits. For example, Head in his book Broadcasting in America, mentions that radio "curved downward from a peak of high promise and fervent enthusiasm toward a plateau of mediocrity and neglect" (Head, 1972, p. 213).

The reasons for this "mediocrity and neglect" are many, one of which is the fact that most educators didn't know how to use the medium.

While never having reached its dreamed potential on a mass scale, educational radio is not without its success stories. Its educational value should not be questioned. In recent years great gains have been made by no less a body than the United States Congress, as expressed in the Public Television Act of 1967. This enabled the radio facet of the Corporation For Public Broadcasting (CPB) to be created (Homet, 1976, p. 58).

The CPB, after authorizing studies of existing educational radio stations, soon initiated radio-support grants to over 80 stations. Wisconsin, Ohio, Kansas, Minnesota, and other state radio networks are all proof that radio is successfully used in educational pursuits (Homet, 1976, pp. 62-64; Educational Broadcasting, 6(2):19). Exemplary classroom uses of radio have been demonstrated at the Albany Medical College, as well as in Australia and Japan. Indeed, many successes are reported in countries other than the United States (Armsey, 1973, p. 54).

Television effectiveness as an educational tool has likewise been proven by many studies. Godwin Chu and Wilbur Schramm, in their noted research report, conclude that television can be a very effective learning tool, especially for primary and secondary students (Chu, 1967, p. 6; Reid, 1967, p. 5).

Additional technological advances have enabled greater distribution and flexibility of televised materials than in years past. The advent of community cable television entering the schools have allowed greater instructional usage. Predictions of 15 to 40 million homes being linked to cable TV by 1980, provides an unlimited potential for local instructional uses (Adler, 1973, p. 47).

The recent uses of computers and satellites have also proven highly successful. William Harley, reporting in his book, The Future of Public Broadcasting, states the possible developments.

> A future possibility for the satellites will be a low cost, national interconnection of computer banks, thus fostering the further development of existing ... transmission systems and opening up new opportunities for public access to informational and educational centers ... (Homet, 1976, p. 297)

Indeed satellites such as ATS-6 have already proven themselves feasible in experiments conducted in the Rocky Mountain, Appalachian, and Alaskan Regions (Homet, 1967, p. 298).

Technology, past and present, has always been described as "having the potential." However, as Friedlander aptly puts it, the acceptance of technology has always been "technology push" opposed to "demand pull" (Homet, 1976, p. 100). This 'push-pull' analogy refers back to the opening statement of this report, in which Hess points out that school administrators and teachers have been "thrust" into a world of technology that they know little about.

Television utilization

Educational televisions formative years in the 50s and early 60s were met with mixed feelings by many educators. The National Defense Education Act of 1958 financed hundreds of educational studies, many of which were devoted to televised education. Almost all concluded that there was 'no significant difference' (NSD) between televised and conventional instruction (Gordon, 1970, pp. 204-205).

Justifiably, educators then asked themselves; why put out the expense for television? It was only after many educators were 'turned off' to television that additional research put a new light on the earlier findings. Most notable were the studies conducted by Chu and Schramm which determined that television can be very effective. However, even prior to this, criticism began to mount against the very early studies as to their validity. The 1973 Ford Foundation Inquiry Into the Uses of Instructional Technology, concludes that past instructional

technology research and evaluation was in "murky terrain!" Almost all of the past research concluded that more information and data were needed before valid assumptions could be made. The reasons for this lack of conclusive research are outlined by Armsey.

1. The ambiguity of the definition of instructional technology.
2. The tendency--accidental, intentional, or sometimes simply convenient--to treat instructional technology and television as synonymous ...
3. The repeated inconclusiveness and tentativeness of the findings ...
4. The fragmentation of the research ...
5. Different interpretations of the same research. (Armsey, 1973, pp. 17-18)

The Educational Television Facilities Act of 1962 and later the Public Broadcasting Act of 1967 put new life back into educational and instructional television. The acts "poured millions of dollars into building and improving physical facilities for educational telecommunication operations across the nation" (Wood, 1977, p. 55).

The technological advances, along with increased support from private and government sources, still has had little effect upon the individual teachers. It is the teachers who play a key role in whether any use of television is a success or failure.

> Research has shown that the attitude of the classroom teacher plays a substantial role in the final success of any television lesson. A television lesson viewed by the class of a teacher who is resistant toward television has little chance of being effective. (Diamond, 1964, p. 204)

Gordon states that "a live classroom teacher can ruin an otherwise excellent televised lesson with little effort." Gordon goes on to say:

> ... a classroom teacher (or surrogate) may--intentionally or unintentionally--sabotage any TV lesson in a number of ways ... they may be overt or devious, well meaning, or malicious. (Gordon, 1970, p. 183)

The Ampex Corporation (a large manufacturer of television equipment) also sees the need for teacher training. Dr. Richard H. Bell, Corporate Education Council for the corporation points out that teachers should have a thorough understanding of the learning materials of instructional technology. To do this the "institutions of the country must begin to prepare today ... the tasks are too large to be carried out on an in-service basis, and the teacher colleges must meet this challenge" (Educational/Instructional Broadcasting 1(1):17-18).

Wood and Wylie in their text, Educational Telecommunications, clearly point to the classroom teacher as the "keystone upon which the success of the entire learning situation depends" (Wood, 1977, p. 302).

Teacher training

Most teachers' resistance to television, or any technology for that matter, has been well documented. Recently a study of the Richmond school system in Virginia determined that 90 percent of the teachers hadn't used television in over a year. A reported 52 percent had never used it at all (Times Dispatch, September 25, 1976).

The International Council for Educational Development, in a paper prepared for the Corporation for Public Broadcasting, concludes: "We have generally neglected to train our teachers in the use of new media and, with other factors, this has resulted in resistance to the technology as a regular feature in many classrooms" (Armsey, 1973).

From broadcasters, educators, and private industry, the call appears to be clear for teachers to be trained in television usage.

> What is required ... is the development of an academic climate in which every classroom teacher using ITV for any purpose is able to use it effectively as possible. (Gordon, 1970, p. 183)

Diamond, in his book, A Guide to Instructional Television, simply states, "until qualified personnel (teachers) are available, a school system may not be ready to make use of the medium" (Diamond, 1964, p. 188).

Diamond goes on to say that educators must not only inform teachers of televisions potential, but that they need to develop positive attitudes towards the medium within their own curriculum (Diamond, 1964, p. 204).

Inasmuch as instructional television appears to have similar problems nation wide, Utah finds itself no exception. The survey conducted by Grant (mentioned earlier) appears to bear this out. Other than Grant's survey, this study has as its problem the fact that no additional information was available concerning the status of instructional television in Utah.

The effectiveness of television has been determined, the need for teacher training determined. The significance of this study is its supplying of information not available in any current literature. The results of this should provide Utah educators the information needed for further decision making concerning teacher preparation at the college level.

CHAPTER III

METHODOLOGY

Importance of the study

It was the purpose of this study to determine areas of difficulty that teachers appear to have with instructional television. Secondly it was the purpose of the study to identify the availability, accessability and utilization of instructional television equipment in elementary and secondary schools in the State of Utah.

Respondents

The targets of the survey were 400 elementary and secondary Utah school principals. In addition, a certain number of directors of special education and vocational training institutions were included in the list of respondents. Principals were chosen for their ability to respond to the "overall" picture of their schools.

From the respondents four categories were established. They were: A, elementary schools; B, junior high schools; C, senior high schools; and D, other schools. This later category was a combination of the other three and consisted of the vocational and special education centers.

The instrument

The survey consisted of 17 questions (see Appendix) and contained two open ended questions dealing with areas of problems that teachers have with television and also the need of television training

for teachers. The questionnaire basically centered around four areas. First, size and type of school; second, the type of equipment presently available in the schools, and the degree of sophistication of present equipment; third, types of programs now produced at the local school level; fourth, areas of apparent difficulty teachers have with equipment.

Procedure

Respondents were selected from the 1976-77 Utah Public School Directory, published by the Utah State Board of Education.

Of the 546 elementary, middle school, junior high, and senior high schools in the state, 400 questionnaires were mailed on April 27, 1977 (72 percent of the population).

This writer has worked for four and a half years as Producer/Director of Instructional Television, University of Wisconsin Stevens Point. It is the opinion of this writer that certain schools could be identified as having an extremely low potential for having any sort of television equipment. These are the schools with few students and faculty members. Those schools with a student population of under 25, and those with a staff of under 5 were eliminated. A more representative picture of respondents in Utah schools were selected from the Utah Public School Directory. All school districts in the state were represented, as well as were each school level within each district.

Limitations

Obviously the study is confined to the State of Utah and the results cannot be applied to users of instructional television in

other states. In addition principals may not have been the only ideal persons to send the questionnaire to. The local school media specialists, audio-visual coordinator, speech teacher, or others involved with media more directly, may have been in a better position to answer certain facets of the questionnaire with first hand knowledge.

Of the four categories established in the questionnaire, the response rate of the vocational and special education schools was too few to draw valid conclusions. The results, however, of this category, are included in this report so as to provide a total picture of the response figure.

CHAPTER IV

FINDINGS

Of the 400 questionnaires, and within the four categories established, 306 were returned. Elementary schools accounted for 174 of the responses. This response is 47 percent of all elementary schools. There were 69 responses from junior high schools. This figure represents 80 percent of all junior high schools. In the high school category there were 53 responses which accounts for 55 percent of all senior high schools.

In addition there were 10 responses from the fourth category. Table 1 shows the response rate to the questionnaire. Table percentages refer to total responses in that category.

Table 1. Schools responding to the questionnaire

	Total schools in state	Responses	
		Number	Percent
Elementary	367	174	47
Junior High	100	69	80
Senior High	98	53	55
Other[a]	--	10	--

[a]Vocational and special education

Television equipment is present in an over-all average of 70 percent of the schools responding. Results indicate that 55 percent of the elementary schools, 85 percent of the junior high and 94 percent of the senior high schools surveyed, have television equipment. Table 2 further depicts the conclusions.

Table 2. Schools reporting television equipment

	Total responses	Affirmative responses	
		Number	Percent
Elementary	174	97	55
Junior High	69	60	85
Senior High	53	50	94
Other	10	7	70

Results further indicate type of video tape recorders that are being used in the schools. As Table 3 shows, there are over twice as many three-fourths inch video cassette recorders in use as there are the one-half inch reel to reel video tape recorders.

Table 3. Type of video tape recorders

	1/2" VTR		3/4" VTR		Other VTR		
	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %	Total VTR's
Elementary (N = 97)*	23	29	53	66	4	5	80
Junior High (N = 60)*	11	21	40	75	2	5	53
Senior High (N = 50)*	20	34	34	58	4	6	58
Other (N = 7)*	3	37	5	63	0	0	8

*Total schools indicating TV equipment.

Tabulation of the results (Table 4) total 1,098 monitors, 356 video tape recorders, and 172 cameras. Over-all averages; each school has over 5 monitors, 1 video tape recorder, and close to 1 camera. Junior and senior high schools have more equipment than elementary schools.

Table 4. Amounts of video equipment

	Monitors		VTRs		Cameras	
	n	X	n	X	n	X
Elementary (N = 97)*	353	4	126	1.44	49	.56
Junior High (N = 60)*	406	6.9	119	2	56	.94
Senior High (N = 50)*	322	6.9	98	2	66	1.4
Other (N = 7)*	17	2	13	1.6	8	1
Equipment totals	1,098		356		172	

*Total schools indicating TV equipment

Portable television equipment is reported in 27 percent of the high schools. This compares to 4 percent and 5 percent respectively for junior and elementary schools. Table 5 indicates that large portions of Utah schools do not have portable battery operated television equipment.

Schools having higher levels of television sophistication is exemplified by those schools having television studios and multiple camera switching capabilities. Table 6 results show 21 percent of responding high schools have television studios, and Table 7 shows 22 percent have switching capabilities. Over-all indications are that the higher the level of education, the more sophisticated the equipment capabilities.

Table 5. Schools having battery operated portable television equipment

	Total responses	Affirmative responses	
		Number	Percent
Elementary (N = 97)*	174	5	5
Junior High (N = 59)*	69	2	4
Senior High (N = 50)*	53	13	27
Other (N = 7)*	10	2	25

*Total schools indicating equipment

Table 6. Schools having television studios

	Total responses	Affirmative response	
		Number	Percent
Elementary (N = 97)*	97	2	2
Junior High (N = 60)*	59	0	0
Senior High (N = 50)*	50	10	21
Other (N = 7)*	7	1	12

*Total schools indicating TV equipment

Table 7. Schools having camera switching capabilities

	Total responses	Affirmative response	
		Number	Percent
Elementary (N = 97)*	97	1	1
Junior High (N = 60)*	60	6	10
Senior High (N = 50)*	50	11	22
Other (N = 7)*	7	1	13

*Total schools indicating TV equipment

Table 8 results indicate schools having capabilities of playing back video tapes on distribution systems. One third of all schools appear to have this capability.

Table 8. Schools having closed circuit distribution systems

	Total responses	Affirmative response	
		Number	Percent
Elementary (N = 97)*	96	34	35
Junior High (N = 60)*	59	18	31
Senior High (N = 50)*	48	18	38
Other (N = 7)*	7	1	13

*Total schools indicating TV equipment.

Survey tabulations indicate 82 percent of the elementary, 93 percent of the junior high, and 76 percent of the senior high schools do not permanently store television equipment. Location where equipment is

usually placed is shown in Table 9. The instructional media or materials center appears to be where the majority of equipment is being kept.

Results further show that a majority of schools are doing instructional video tape programs (Table 10). Elementary schools appear to do most video taping of speeches and plays, while junior and senior high schools show the greatest use in the area of recording athletic type events.

Recording of 'off air' programs by schools is being done by a slight majority of the schools responding (52 percent). Of the schools that do record, an over-all average of 1.57 hours per week is being recorded (Table 11). High schools record a weekly average of 2.15 hours, 1.15 hours for junior high schools, and 1.5 hours for elementary schools.

Results indicate elementary schools as having an average of 2.27 teachers with some television training. Junior high results show 1.5, while senior high schools results show an average of 2 teachers per school. Table 12 displays results of schools with teachers who have television training. Table 13 shows that the majority of principals feel that teachers are not confident in using television as an instructional tool.

Table 14 tabulations indicate that 91 percent of the respondents favor university course work in instructional television for those entering the teaching profession.

Table 9. Schools not permanently storing television equipment and location of equipment

	Storage	Location of equipment									
		I.M.C.		AV room		Library		Classroom		Other	
	% not permanent	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %
Elementary (N = 97)*	82	34	36	15	16	17	18	23	24	6	6
Junior High (N = 60)*	93	27	39	19	28	11	16	12	17	0	0
Senior High (N = 50)*	76	13	31	9	21	8	19	9	21	3	7
Other (N = 7)*	63	2	25	1	12	1	12	3	38	1	12

*Total schools idicating TV equipment.

Table 10. Schools producing instructional video tape programs and types of programs

	Schools producing		Types of programs									
			Demo		Athletic		Speech/plays		Lecture		Other	
	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %	Responses	Cat. %
Elementary (N = 97)*	29	30	15	32	5	11	16	36	5	11	5	11
Junior High (N = 60)*	34	57	27	26	28	27	26	25	17	16	7	6
Senior High (N = 50)*	34	70	17	15	30	26	13	11	22	19	0	0
Other (N = 7)*	6	75	6	75	0	0	0	0	0	0	2	25

*Total schools indicating TV equipment.

Table 11. Schools that record "off air" programs and hourly amount of "off air" program material

	Total responses	Off air affirmative responses		Hours per week	
		Number	Percent	N	$\bar{X}$
Elementary (N = 97)*	97	39	3	52.25	1.50
Junior High (N = 60)*	60	41	68	47.25	1.15
Senior High (N = 50)*	50	30	60	64.25	2.14
Other (N = 7)*	7	2	28	1.5	1.5
Totals	215	111	52	165.25	1.57

*Schools indicating TV equipment.

Table 12. Schools and number of teachers having television training

	Total responses	Schools affirmative responses		Average teachers per school
		Number	Percent	$\bar{X}$
Elementary (N = 174)*	174	51	29	2.27
Junior High (N - 69)	69	40	58	1.5
Senior High (N = 53)*	53	38	72	2.0
Other (N = 10)*	10	2	20	1.98

*Total schools responding with and without equipment.

Table 13. Principals who feel that teachers are confident in using television as an instructional tool

	Total responses	Affirmative response	
		Number	Percent
Elementary	97	39	40
Junior High	60	22	37
Senior High	50	20	40
Other	10	3	30
Totals	217	84	Mean - 39

Table 14. Principals favoring hands-on television course work at the university level

	Total response	Affirmative response	
		Number	Percent
All school categories	306	288	91

In the area of problems teachers appear to have with instructional television, survey results establish categories of difficulty. The elementary schools responding suggest teachers are weakest in areas of production techniques and the production of local instructional materials. Junior and senior high schools similarly indicate this as causing the most problems for teachers. Table 15 further indicates equipment usage as an area of second most concern. Teacher motivation and education, along with integration of instructional televsion into the curriculum, are additional problem areas established by the results.

Table 15. Areas of teacher difficulty using television as an instructional tool

	Percent	Identified problems
Elementary	55	Production techniques, producing own materials
	18	Equipment usage
	6	How to integrate materials with the curriculum
	7	Poor reception of the state TV network
	6	Lack of time to use TV and scheduling problems
	4	Teacher motivation and education
	4	Equipment shortage
Junior High	43	Production techniques, producing own materials
	22	Equipment usage
	2	Integration of materials with the curriculum
	7	Lack of time to use TV and scheduling problems
	4	Poor reception of the state TV network
	11	Teacher motivation and education
	9	Equipment shortage
Senior High	47	Production techniques, producing own materials
	21	Equipment usage
	9	Integration of materials with the curriculum
	4	Lack of time to use TV and scheduling problems
	2	Poor reception of the state TV network
	11	Teacher motivation and education
	4	Equipment shortage
Other schools	40	Producing own materials, production techniques
	40	Equipment usage
	20	Integration of materials with the curriculum

Table 16 shows results based on comments made by the respondents. The suggestion that college education majors have course work in instructional television usage represents over 20 percent of the comments. This is followed by the suggestion that teachers need hands-on experience.

Table 16. Areas of expressed concern and need

	Percent	Identified problems
Elementary	20	Should have required university courses in TV
	16	Teachers need hands on experience/produce own materials
	12	How to apply TV to the classroom curriculum
	8	District help in terms of money for equipment
	7	State TV network reception, better course course development
	8	Supply schools with inservice workshops
	4	Viewer education
	5	Better programming needed
	2	Repair and maintenance of equipment
	7	TV has no value in elementary schools
Junior High	20	Should have required university courses in TV
	27	Teachers need hands on experience/produce own materials
	27	How to apply TV to the classroom curriculum
	12	District help in terms of money for equipment
	10	Supply schools with inservice workshops
	5	State TV network reception, better course development
Senior High	24	Should have required university courses in TV
	27	Teachers need hand on experience/produce own materials
	7	District help in terms of money for equipment
	31	How to apply TV to the classroom curriculum
	7	Supply schools with inservice workshops
	2	State network reception, better course development
	2	TV has no value in senior high schools
Other schools	20	How to apply TV to the classroom curriculum
	40	Should have required university courses in TV
	30	Teachers need hands on experience/produce own materials
	10	Supply schools with inservice workshops

CHAPTER V

DISCUSSION AND CONCLUSIONS

Implications

Results of the survey suggest that the universities in the State of Utah should be providing instruction to future teachers in the use of television as an instructional tool. Of the 400 questionnaires mailed, 306 were returned. This figure represents a 76 percent return of the instrument. Furthermore, the 306 responding represents 53 percent of all the schools in the State of Utah. This rate of return seems to provide a reliable foundation for making assumptions on the entire population. While the range of results from the category of schools consisting of vocational and special education centers was too small to make reliable conclusions, the other categories do lend themselves to interpretation.

This survey, for the first time, gives an idea as to "what's out there?" and "what do our educators think about it?" The principals of Utah schools provide us with a clear conclusion by the 91 percent (Table 14) response favoring a program of television instruction for education majors. Not only do the educators suggest a course of instruction, but through their comments, (Tables 15, 16) offer content areas that they feel should be included.

Production techniques, teachers producing their own materials, and equipment uses are the "nut and bolt" type courses that could easily be implemented, and in fact are offered throughout the universities in Utah. The universities of Brigham Young, Utah, Utah State, and the Colleges of Weber and Southern Utah State all offer these basic production type courses. However, they are not required of students enrolled in education, and perhaps justifiably so, as these courses are aimed at and oriented to commercial broadcasting (Weber State College, 1977, p. 143; University of Utah, 1976, p. 82). On the graduate level, Brigham Young University appears to be the only educational institution in the state offering specific emphasis on classroom instructional television development (BYU, 1977, p. 108). Besides this one instance, there appears to be no other university which is teaching education majors the development of instructional television materials and their utilization in specific curricula.

This study seems to be important inasmuch as it supports the indications above. Universities and colleges in the state do not appear to be effectively preparing teachers in television usage. The 91 percent response calling for the universities to prepare teachers in this area appears to be a clear call for the state universities to act.

If things continue as is, what potential does instructional television have for growth? If teachers are indeed, lacking the training needed to effectively use television, then they simply will not use it. If they don't use it, then there is no justification for future purchases of television equipment. Of course, what really is at

issue is the apparent lack of training that the teachers can obtain, either in-service or at the college level. If there simply are no effective programs offered, the haphazard use of instructional television is likely to continue.

Along similar lines of thought are the indications of this study which conclude that a rather high percentage of schools do have teachers with television training (Table 12). While at first glance this appears to be a positive sign, it is undercut by results which show less than two teachers per school with such training. This is far inadequate for the potential of instructional television to take root. These conclusions are again significant, for they show inadequacies in the current teacher training programs.

In summary, the results of this study suggest that teachers should have training in the production and utilization of instructional television materials; that those who do have training are far too few; that administrators admit this deficiency, and through this survey, have voiced their appeal to the universities to do something about it.

But let us step back a moment and look at what schools with television are doing. Are they using television effectively? While the results indicate that most schools with television are indeed doing local instructional video tapes (Table 10), we can see that on the junior and high school level most of the television being done is in the area of recording athletic related events. This supports an earlier premise, but in no way is meant to be derogatory towards the physical education programs. On the contrary, these departments should be commended for taking the lead in instructional television usage. What is

significant from these results, is that television is not being used in core type courses such as english, history, math, and the sciences.

Certainly television can be used for more than critiquing purposes in speeches, plays, and athletic events, as this study suggests (Table 10). The significance here again is the implication that television is not being used in the core areas and that teachers do not know how to adapt television to their disciplines. This, in turn, suggests training as a possible solution.

Further significance of this study is its findings as to what is presently available to teachers in the schools. Those entering the teaching profession can now have an idea as to the state of instructional television. The findings show that most schools appear to have television equipment (Table 2). As might be expected, the frequency of equipment, and its degree of sophistication rises with grade level (Tables 3, 4, 5, 6, 7, 8). The significance of this can be viewed in two ways. First, those entering the secondary level of education are more likely to encounter newer equipment, greater numbers of equipment, greater flexibility of production techniques, and greater capabilities of distributing the video tape once it is produced. This could indicate that students enrolled in secondary education may have a greater need for a television program of instruction since they will likely encounter television. However, a second view can also be claimed, that a greater need appears to be in the elementary levels, and therefore any university program should aim its efforts at those with the greatest need. In any case, this study points out areas which must be analyzed in greater detail.

Along similar lines are the findings which suggest some interesting developing trends. First there is a significant movement toward the three-fourths inch video cassette (Table 3). In just a few short years since its introduction, video cassette recorders appear to have gained solid support in the schools, with over twice as many VCRs as one-half inch reel to reel machines. Again one could easily assume that teacher training emphasize the VCR, yet with still large numbers of reel to reel machines available one cannot dismiss their importance or usefulness. It is only common sense that instruction on video tape recorders would cover both types of machines.

Another obvious trend is the growth of the battery-operated portable television equipment. While its frequency is low in the elementary and junior high level, over a fourth of the senior high schools report having such equipment (Table 5). This has valuable implications for any proposed program of instruction, for although similar, the new area of electronic field productions requires additional training. Its potential for education is exhaustive, for no longer is a teacher confined to the classroom, but through the use of the portapak, one can enter the community for a variety of educational experiences. Its special characteristics, production techniques, and application in the educational process should be looked at with special care. Any proposed university program could not overlook this element and its unique facets.

Similarly, the greater numbers of television studios and multiple camera switching capabilities rises with grade level. Although still numerically small, this availability should not be overlooked.

Education students, especially media specialists, should be made aware of its capabilities. However, since its availability is presently sparce, undergraduate students need not be trained in depth concerning this more complex area of television production.

Of interest was the response that over a third of all schools have television distribution capabilities (Table 8). This suggests that perhaps administrators have planned for television in newer schools. This high expenditure item would appear to be a signal that there are those individuals who are planning for increased television use in the future. Again, any instructional program should contain elements of distribution use. This is of importance for those entering the media specialist field. More than likely the specialist would be responsible for the distribution systems operation, care, preventive maintenance and service scheduling.

Of equal importance for the future media specialist is the significant finding of where television is located (Table 9). First one can conclude that most television equipment is not stored permanently in one single location. Furthermore, it is primarily not located where one might think--the audio-visual room. The instructional media center, the library, and the classroom are indicated as locations where the television equipment is usually stored.

This is of major importance for several reasons. One, that the equipment appears to be out in the open where the students can see its presence and use it. Secondly, by being able to determine where the equipment is, one can draw conclusions as to who might be responsible

for its use and operation. If indeed the instructional media centers, classrooms, and the library are where the television equipment is being kept, then the media specialist, classroom teachers, and the librarian are most likely to be the individuals who will utilize and who will likely be responsible for television. These findings are important for they suggest library personnel also may need to be trained in instructional television usage, along with the classroom teacher and the media specialist.

The recording of programs "off air" has been practiced for many years. Assumptions have been that it is a wide spread habit of schools, copyright violation or not. Findings in this study indicate that over half of the schools are practicing "off air" recording (Table 11). This suggests that education on the entire issue is needed. The copyright question and legal ramifications must be spelled out to the educator. The answer may be unknown or debatable, but all facets should be explored. The significance of this result is that it is a widespread practice to show recording of "off air" programs in the classroom.

This study, of course, has many limitations. Discussed earlier, the principals may not have been the key person to respond. Teachers and media specialists may have been in a better position to provide information. In any case what is significant is the picture this study gives as to the state of instructional television in schools. Accomplished in this study is the indications as to what equipment is available, its type, its degree of sophistication. We have an idea of who has what, where it is located and who will likely be responsible for

the equipment. We know what is presently being done with the equipment and in what grade levels the strong and weak areas are. Determined are specific suggestions made by the school principals on what problem areas currently are causing teachers the most difficulty. Most important, determined is an overwhelming voice calling for the state universities and colleges to provide instruction in the development and utilization of instructional television.

Recommendations

This study appears to show that a program of instruction is needed. However, on the basis of a single work, one cannot justify expenditures of time, talent, facilities, and monies. More information is certainly needed. To obtain such information, the following actions are recommended:

1. That further research be conducted in order to seek teachers opinions, attitudes, and knowledge concerning instructional television utilization.
2. That additional studies seek information on financial and administrative support from school board members.
3. That attitudes and opinions from the student sector be determined.
4. That from Utah universities and colleges, the departments of communication, education, and instructional media be studied for the purpose of staff/facility availability.

Upon completion and analysis of the gathered information, development of a program of instruction should occur. Recommendations concerning such a program of instruction are:

1. That students enrolled in elementary and secondary education be required to take basic courses in the program of ITV instruction.
2. That the program be developed basically for the undergraduate student.
3. That basic and advanced courses be offered with emphasis on simple one camera/VTR, audio, and lighting equipment that teachers will likely encounter.
4. That the university departments of communication, education, and instructional media jointly develop such a program.
5. That the production of television graphics and photography be a separate unit of instruction.
6. That audio and duplication techniques be included.
7. That the operation, care, maintenance, and storage of soft and hardware be included.
8. That an advanced unit be developed in the area of multiple camera and studio techniques, including electronic editing.
9. That a unit be developed concerning the unique facets and capabilities of portable television equipment.
10. That distribution system design, maintenance, and usage be included for media specialists.
11. That integration and utilization techniques of specific disciplines be included.

12. That graduate level units include theoretical and research aspects of educational broadcasting.
13. That graduate level units include system design and analysis/evaluation techniques.

Studies done in the United States and in other countries have shown that television is an effective tool for instruction. Efforts should be made to teach the prospective teacher how to use this tool in the classroom. With new technology appearing everyday, the role of the teacher should be one of including this new technology into effective teaching. Only our colleges and universities can provide this education and training to the teachers.

Based on the results of this study and the recommendations above, it is again emphasized that the university level disciplines of communication, education, and instructional media work together for any proposed program of instruction. The goal is to better prepare teachers. The Carnegie Commission on Education Television has stated that televisions role in education has the best opportunity to serve the American society (Carnegie Commission, 1967, p. 11).

Television is not diminishing or going away. The higher educational institutions of this state must begin to examine the future needs of teachers in a technological world. It is hoped that this study will contribute to that examination.

CHAPTER VI

ADDITIONAL SUGGESTED RESEARCH

To cover further aspects of instructional television, additional research should be conducted into the following areas:

1. Identification of teacher attitudes and working knowledge of the medium.
2. Determination of student attitudes toward instructional television.
3. Usage and present applications in vocational and special education centers.
4. Specific role identification of the media specialist concerning television in schools.
5. Determination of staff and facility availability of Utah universities and colleges for the purpose of indicating whether a program of instruction is possible.
6. Determination of technological trends within Utah schools and the instructional television industry.
7. Identification of the common and most frequent television technical problems.
8. Identification of equipment service centers within the state.
9. Identification of poor reception areas of state educational broadcast stations and facility requirements to overcome poor reception.

10. Determination of other state universities and colleges offering a course of instruction.
11. Identification of content areas of such programs.

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APPENDIX

Questionnaire

1. What is your school population? under 500___, 500-1500___, 1500-2500___, over 2500___.

2. Type of school? Elem.___, Jr. High___, Sr. High___, Other___.

3. Does your school have television equipment? (monitors, videotape recorders, cameras, etc.) yes___, no___ If no, answer 13, 16, and 17.

4. What type of videotape recorders does your school have? half inch___, 3/4 video cassette___, other___.

5. Approximately how many of the following pieces of video equipment does your school have? monitors___, videotape recorders___, cameras___.

6. Does your school have battery operated portable video equipment? (portapaks) yes___, no___

7. Does your school have a TV studio? yes___, no___

8. Does your school have a two or more camera system with switching capabilities between the cameras? yes___, no___

9. Does your school have a cable distribution system to classrooms for the playback of video tapes from one centra location? yes___, no___

10. Is the TV equipment permanently set up in one location? yes___, no___. If not, where is the TV equipment usually stored in the school? IMC___, AV room___, library___, Dept. or classroom___, other___.

11. Does your school produce video tape programs for instructional classroom use? yes___, no___. If yes, what type of programs are usually recorded? demonstrations___, lectures___, athletic___, speeches or plays___, other___, (specify)_____

12. Do you record "off air" programs for classroom use? yes___, no___ If yes, about how many hours per week___, per month___.

13. How many teachers or media personnel have had at least one formal college course or workshop in television production and/or TV performance?_____

14. In what area do teachers appear to have the most difficulty with using TV in the classroom? (producing own materials, playbacks, talent, etc.)

15. Do the majority of teachers feel confident in using TV as an instructional tool? Yes___, no___.

16. Do you feel elementary/secondary education majors, as part of their university course work, should have some hands-on experience with TV? (simple hook-ups, how to record, etc.) Yes___, no___.

17. Comments: What do you feel needs to be done in the over-all area of television education for teachers?