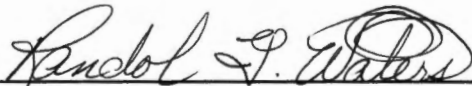
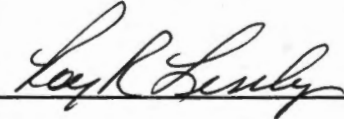


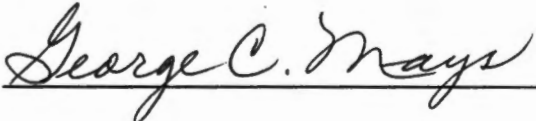
TO THE GRADUATE COUNCIL:

I am submitting herewith a thesis written by Eva Victoria Price entitled "Instructional Television, A Survey for Future Expansion of Extension Education Programs at The University of Tennessee." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural and Extension Education.


Dr. Randol G. Waters, Major Professor

We have read this thesis
and recommend its acceptance:





Accepted for the Council:


Associate Vice Chancellor
and Dean of the Graduate School

INSTRUCTIONAL TELEVISION, A SURVEY FOR FUTURE EXPANSION
OF EXTENSION EDUCATION PROGRAMS AT THE
UNIVERSITY OF TENNESSEE

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

Eva Victoria Price
December, 1995

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DEDICATION

This thesis is dedicated to
my parents, Hugh and Janis Price,
who have taught me that patience, diligence and waiting
are all indispensable if you want your dreams to come true.

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ABSTRACT

This study identified the major variables indicating the readiness of Extension personnel to utilize instructional television (ITV) as a distance education medium for expanding Extension education programs at The University of Tennessee. The concept of readiness was ascertained based on three dependent variables: general attitudes toward ITV, willingness to serve expanded audiences, and desire to learn new roles and procedures. In addition, the faculty's readiness to utilize ITV was described by: current use of ITV media, availability of ITV equipment, and experience and training as an ITV teacher. The study examined the faculty's preferred media for delivering ITV programs. It also identified the demographics of Tennessee Extension faculty and independent factors influencing faculty responses about instructional television.

A product of the study was a comprehensive instrument titled, *Instructional Television, A Survey for Future Expansion of Extension Education Programs at the University of Tennessee*. The survey employed a Likert-type attitudinal scale, a ranking scale, and a nominal demographic scale. The study was limited to educators at The University of Tennessee Agricultural Extension Service. The researcher followed standard, mail questionnaire procedures. Data were analyzed using descriptive statistics, analysis of variance, and Duncan's Multiple Range test.

The study evidenced that Tennessee Extension faculty had a positive disposition for using ITV, but they were not ready for the introduction of a statewide ITV system.

The balance of the Tennessee Extension organization was more positive in its general attitude toward ITV than it was negative. However, faculty position and district assignment influenced the strength of these attitudes.

No significant variables influenced faculty regarding their willingness to serve expanded audiences. Therefore, it should be possible to develop a statewide system without fear that faculty in rural versus urban locations may respond differently. It could also be expected that administrators, specialists, and agents -- in either youth or adult assignments -- could work together in developing the instruction and curricula for these audiences.

The least positive responses encompassed the faculty's desire to learn new roles and procedures. Differences among faculty positions and district assignments were so significant that specialized training directed to the specific needs of that population would prove to be both cost effective and productive.

This study provides a research base assessing the readiness of Extension faculty to employ statewide televised instruction technologies. The researcher made no attempt to determine if ITV was the most appropriate method for expanding the Tennessee Extension audience.

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CHAPTER I

INTRODUCTION

Need for the Study

Instructional television has seldom, if ever, come into use without some resistance from traditional instructors of public school, college, continuing education, and cooperative Extension educational systems.

In the Tennessee Agricultural Extension System, the use of television, in general, is not new to its professionals. However, during the past thirty years, Extension's production of instructional television programs has decreased, whereas the number of television sets entering the home has increased. Meierhenry [1979] reports that at least one television set is found in 74.5 million American homes or 98% of them. (In 1962, there were only 47.2 million sets in American homes and 95% were black & white)[Minnow, 1991].

Dr. Larry Whiting, Head of Information and Applied Communications at Ohio Cooperative Extension Service, cites several reasons for the shift in Extension produced instructional television programs: economics, changes in FCC public service requirements, smaller farming audience, and

less governmental funding for public television [1988]. However, Whiting continued by stating, "there is a television renaissance underway," and the use of high-tech communication technologies is setting a new pace and new possibilities for youth and adult educational programs conducted by the Extension Service [Whiting, 1988].

Television utilization occurs in countless ways throughout Tennessee's Extension programming. However, budget and time restraints make it difficult for individual county Extension agents to devote the resources necessary to effectively produce televised instruction. A statewide coordinated effort toward producing quality instructional television programs for high demand subjects could be a time and cost effective alternative to traditional teaching methods. It can substantially improve enrollment, reach large diverse audiences, allow specialized instruction, and enable the university to gain the most productive use of faculty/agent resources.

The promoters of distance delivered instruction, such as television, minimize the planning, time, and effort it takes to prepare for effective learning via distance education. "The lead time needed for setting up an instructional television system is almost always underestimated ... Perhaps the greatest lack is training for the classroom teacher in the new role he must assume with the coming of television." [Chu and Schramm, pp. 19-20]. In

determining if a statewide televised Extension instruction system should be incorporated as a distance education medium to expand Extension education programs of The University of Tennessee, the first step must be to evaluate and understand the readiness of Extension faculty toward the support, development, and implementation of such technology.

Purpose of the Study

The purpose of this study was to examine the readiness of Extension personnel to utilize instructional television as a distance education medium for expanding Extension education programs at the University of Tennessee. A report of the findings will be used to recommend modifications in the Tennessee Extension delivery system to enhance the level of teaching to an expanded Extension audience.

By documenting the readiness of Extension professionals to employ statewide televised instruction technologies, a research base is available for those who are assigned the challenge of bringing these innovations into use. Logical follow-up to this study would be the development of a strategic televised instruction plan; curriculum development and an instructional design for quality televised instruction; staff development and training requirements; and coordination of multi-county, multi-state, regional, and national efforts; ultimately resulting in new combinations of traditional and new communication technologies to deliver

high quality educational programming to Extension staff and an expanded clientele.

Objectives

The objectives of this study were:

1. Develop a demographic profile of faculty employed by the University of Tennessee Agricultural Extension Service.
2. Determine general attitudes of Tennessee Extension faculty toward instructional television, as a medium to expand traditional Extension programs; and to examine these attitudes in relation to faculty position (administrator, specialist, agent), district assignment (one through six), audience assignment (youth, adult, both youth and adult), and discipline assignment (agriculture or home economics).
3. Establish the willingness of Extension professionals to use a statewide instructional television system to serve an expanded audience; and to look at differences between rural versus urban locations, faculty position (administrator, specialist, agent), and the audience assignment (youth, adult, both youth and adult).
4. Ascertain desire of Extension professionals to learn new roles and procedures in order to facilitate a statewide televised instructional effort; and to look at relationships between faculty position

- (administrator, specialist, agent), years of experience, and district assignments (one through six).
5. Determine readiness of Extension faculty to utilize instructional television in relation to:
 - a) current use of instructional television media,
 - b) availability of instructional television equipment,
 - c) experience and/or training as a television teacher.
 6. Access preferences of Extension professionals in utilizing ITV delivery media including:
 - a) motivational and audiovisual use of the medium,
 - b) individual viewing versus group viewing of developed programs, and
 - c) sharing of faculty and productions.

Definition of Terms

BROADCAST TELEVISION -- the through-the-air transmissions which can be retrieved on the home television set.

Broadcast television includes the major networks, local networks, and educational or public broadcasting.

CABLE TELEVISION -- a system of television reception in which signals from distant stations are picked up by a master antenna and sent by shielded wire or fiber optic cables to the individual receivers. In homes, these are referred to as paying subscribers.

COMMERCIAL TELEVISION -- a mass medium designed to provide entertainment including: drama, game shows, sports, news, weather, motion pictures, public service, politics, and documentaries. It is supported by advertising revenues.

DISTANCE EDUCATION -- the various forms of study which are not under the continuous, immediate supervision of face-to-face instruction; some of which include: printed texts, correspondence courses, television, video, radio, telephone, and computer communication.

DOWNLINK -- an antenna shaped like a dish that receives signals from a satellite. Often referred to as a dish, terminal Earth station, or TVRO (television receive only) [Hogan, 1990].

EDUCATIONAL TELEVISION (ETV) -- a medium to educate or benefit a specific audience. It may be designed to provide entertainment for a selective audience. It is supported by grants, non-profit foundations, government subsidies, and individual donations. It is often referred to as public television.

INSTRUCTIONAL TELEVISION (ITV) -- a distance education medium that has as its purpose the teaching of a specific subject to a specific audience in either the home,

classroom, business, or industrial setting. The content is usually part of a formal course of study, but it may or may not be offered for credit [Crow, 1977, p.2].

INTERACTIVE TELEVISION -- a distance education medium that can employ a number of technologies including broadcast, cable, and fiber optics. Regardless of the technology used, each system allows a teacher in one location to be seen and heard by students in one or more remote locations. Students in each site can similarly respond to the teacher and to one another. [Morehouse, 1987].

NARROWCAST TELEVISION -- a televised delivery method aimed at a specific and known target group through satellite, terrestrial, cable, and closed circuit systems. [Paine, p. 61, 1989].

SATELLITE VIDEO TELECONFERENCE -- a method of coordinating group locations that involves the telecasting of a program over satellite with the opportunity for viewers to call in questions while the program is on the air. A video teleconference can involve discussions between two or more groups of presenters located at different uplink sites or studios. When there are no opportunities for viewer questions and interactions, the term **SATELLITE TELECAST** is preferred. [Whiting, 1988].

VIDEO CASSETTE RECORDER (VCR) -- an electronic recording device which stores video and audio signals on magnetic tape for playback and postproduction editing. [Wurtzel and Acker, 1989].

VIDEOCONFERENCING -- live, interactive television in which two or more locations are joined together via video and audio channels. The groups can be linked together via satellite or cable transmissions. "One-way videoconferences" have video originating from only one location, while "two-way videoconferences" have video being sent in both directions. [Wurtzel and Acker, 1989].

VIDEODISCS -- an optical platter read by a laser beam that contains video and audio programming. Videodiscs can be accessed very quickly and can provide high levels of viewer interaction. [Wurtzel and Acker, 1989].

UPLINK -- a satellite dish that transmits signals up to a satellite. [Hogan, 1990].

CHAPTER II
A RATIONALE FOR THE STUDY AS DEVELOPED THROUGH
A REVIEW OF THE LITERATURE

Television as a Distance Education Medium

"Television is a powerful medium of communication, with a tremendous ability to grab and hold attention, to inform, to entertain, and to persuade. Television communicates visually through pictures that are still or moving, abstract or concrete, and simple or full of complex detail. It communicates aurally through the spoken word, music, and sound effects. Television can also present text." [Hanson, 1989, p. 15]. Television is a unique visual medium which has been a powerful influence upon our generation [Crow, 1977, p.8].

But can it teach? "Recent research on effectiveness of television as an educational medium have proved over and over that students learn quickly and efficiently from television, and the fact that instructional television can instruct, inform, motivate, and inspire has been well established" [Maftoon, 1981]. Crow described the television teaching/learning experience as "intimate, concentrated, larger than life, and that it draws heavily from both

commercial television and the motion picture industry. Like the motion picture industry, television can involve carefully designed, written, and produced presentations that allow for a high level of precision and quality that could never be replicated in a regular classroom presentation" [1977, p.8]. To do this, would require an enormous budget, a truck full of props, expertise in a myriad of subjects, and a staff of assistants.

Regarding the use of television for education, Newton N. Minow asked this question, "Which of the following is the most important educational institution in America? (a) Harvard, (b) Yale, (c) Columbia, (d) none of the above." His answer was "none of the above." "The most important educational institution in America is television. More people learn more each day, each year, each lifetime from television than from any other source. All of television is education; the question is, what are we teaching and what are we learning? ... We are slowly getting better each year in using television for education, but too much of the time we waste television's potential to teach -- and viewer's to learn." [Minow, 1991].

General Attitudes Affecting Utilization of Instructional Television

If television's instructional communication technology has so much going for it, why are Tennessee Extension staff

and clientele not utilizing this valuable delivery method? Regardless of television's positive attributes, ITV system designers have found that some faculty resist the development of television and communication technology when they are introduced for the purpose of direct teaching. This resistance has been portrayed as direct opposition, insecurity, and mere dissatisfaction [Chu and Schramm, p. 61]. The most damaging resistance to introducing televised delivery systems came as quiet opposition from the local educators. Chu and Schramm reported an instance where faculty opposition at a Junior College became so intense that the project was abandoned [1975]. Therefore, it is argued that administrators should be concerned with these issues when implementing technological changes [Cunningham, Farquharson, & Hull, 1991].

A recent study by Stuart Weinstein [1981] compared the relationship between teacher perceptions of an instructional television delivery system and their use of televised instruction. Attitude was one variable studied. Weinstein concluded that the teacher's attitude toward instructional television had a greater influence on their use of televised instruction than any positive attributes regarded by the promoters of instructional television.

Therefore, attitudes of Extension professionals toward instructional television should be an important consideration in the process of incorporating a statewide

delivery system into county Extension programs. Chu and Schramm [1975] reviewed a number of studies which identified the dimensions of educators' attitudes toward instructional television including fear, distrust, security, and partnership.

General Attitudes in Relation to Experience as a TV Teacher

In Handleman's study [1969] comparing attitudes of teachers toward utilization of instructional television, he discovered significant differences between teachers who had taught by closed-circuit television and those who had never taught by television. The non-television teachers were significantly opposed to the use of television for teaching purposes. Their opposition could be clustered into specific areas of concern: fear of standardization and lack of creativity, mechanized education, fear of reduced importance of the non-television teacher and glamorization of the television instructor, a diminishing of student - teacher contact, and a distrust of measuring instruments used by researchers to prove the success of instructional television.

General Attitudes in Relation to Faculty Assignment

Hogan found, in 1990, that teacher attitudes were a significant variable in the success of a Two-way Interactive Delivery System for Schools (TIDSS). A major problem that

resulted from the implementation of TIDSS was alleviating teacher fears concerning job security. The reactions from teachers were so intensive that provision statements were added to teacher contracts insuring that no teacher will lose a job because of TIDSS. Four years into the program, the TIDSS project did not result in any teachers losing their jobs. In fact, teachers were hired as a result of the televised delivery system.

These fears and attitudes of teachers were also acknowledged in a study by Joe Bailey [1960] when he analyzed the development process of an instructional television system in Texas. This closed-circuit television network would have linked faculty and students of eleven colleges together. The reaction of the faculty was much the same as industrial workers to the introduction of technological delivery systems. The first reaction was a fear of job security. The second was a fear of loss of authority to the television teacher who would soon be recognized as the "expert". This attitude led to the teachers' next complaint, which was that they would be compared with the "master teacher" on television, and many saw this as an insurmountable block in their career path. Finally one teacher, who was at first eager to participate in the television project, later changed his attitude until he became a foe against the whole idea. An interview was used to determine the reason for the change which was

directly related to the attitude of his immediate supervisor. The supervisor was wholly against the project and stressed the degrading effect it would have on anyone from his department who participated in the project. Thus, the attitude of the teacher was one of self preservation.

General Attitudes in Relation to Administrative Positions

These studies indicated that if television is to play any large part in an educational system it needs strong support from the top [Chu and Schramm, 1975, p.18]. Handleman [1960, p.40] documented a historical perspective of educational television, "unlike other audio-visual programs, educational television did not begin at the grass roots. Rather it was imposed from the top down." This concept focused on one examined by Alexander Romiszowski in his study of Attitudes and Affect in Learning and Instruction. One argument addressed in his research involved the concept of the "top-down" or "bottom-up" approach to affective instruction via instructional television. The top-down approach was necessary to obtain funding, determine personnel roles and assignment, provide continuity to the total program, and establish the organizational structure which was important to the success of developing an instructional television delivery system. However, Hogan [1990] and Bailey [1960] have both shown that faculty acceptance was also critical to the success of

television as an educational delivery method. Therefore, the bottom-up approach presented some distinct advantages [Bates, 1984; Gayeski, 1989; Romiszowski, 1989]. Weinstein's study [1981] substantiated this theory in his concluding recommendations to administrators:

1. To maximize the potential use of instructional television (ITV) involve the teachers in the planning and implementation of ITV delivery systems.
2. Designing ITV delivery systems which teachers believe to be personally beneficial to their instructional setting might stimulate better attitudes toward ITV.
3. Assist teachers in adapting the existing ITV delivery systems to meet their planning needs. This could facilitate more efficient and effective use of ITV.
4. Document the innovative practices of teachers who are considered by their peers to be exemplary users of ITV programming -- their ideas may be valuable in the design and modification of ITV delivery systems.

The research concluded that effective use of instructional television required broad support -- administrative, financial and instructional [Chu and Schramm, 1975; Gayeski, 1989; Bates, 1984].

Conclusions Concerning General Attitudes Toward ITV

Most of the research about attitudes toward instructional television has been done with classroom teachers and college faculty. However, a comparison can be made between the formal classroom instructor and the non-formal Extension educator. The incorporation of a statewide televised delivery method could end privacy of the home county program and require the agents to learn new roles and procedures; it may seem to threaten the agent's position and security or denigrate his importance by turning over subject-matter expertise to an outsider; and it would require promotion of a central schedule and curriculum. By having knowledge of these attitudes and incorporating in-service training, Extension professionals can be prepared for statewide delivery of Extension programs through instructional television.

Willingness to Serve an Expanded Audience

For a classroom teacher or college professor, the classroom and students are easily identified. However, in the Extension Service, the goal of the educational program is to extend the land grant college's educational reach beyond traditional campus boundaries. Dr. Tefertiller of the University of Florida's Institute of Food and Agricultural Sciences described the Extension organization as the genius of the American Land Grant system, "it breaks

down the walls that once traditionally confined Universities" [Graddy, 1986a, p. 2].

Virtually the entire state of Tennessee becomes the campus and every Tennessean -- no matter what education or income level -- is a potential student who can profit from Extension. This massive audience is directly linked through county Extension agents to research conducted at the University of Tennessee by Extension specialists and researchers. Best of all, the information is unbiased, practical, readily available and usually without cost to the user. [Graddy, 1986a].

The Audience in Relation to Rural versus Urban Locations

Many people view the Extension Service as a rural service organization. Traditionally, the Extension Service started in rural and agricultural America where rural families and farmers were the targeted audience. However, our land-grant universities were established as public institutions to provide liberal and practical education for all people. The Extension Services were then created as the statewide educational outreach arms of these people's universities. Therefore, Extension professionals are being challenged in the nineties to serve all people, including those living in big cities [Krofta and Panshin, 1989], and to pursue and adopt techniques that will achieve greater public recognition especially among urban populations

[Miller, 1988].

The FACT Committee of USDA's Extension Service predicts that Extension audiences of the future will have a new look and attributes [DeWitt and Poley, 1991]. Their characteristics may include:

- A greater increase or shift in the proportion of low-resource clients in rural areas.
- A more visible demarcation between the haves and the have-nots based upon availability of resources, skills, and opportunities.
- A more mosaic society or culturally diverse audience.
- A decreased proportion of its audience depending upon agriculture for a livelihood.
- An audience with more clearly defined and specialized needs.
- An audience seeking a multiplicity of information providers, not only Extension.
- An audience less concerned about allegiance to geographic boundaries set by Extension, whether they be county, region, or state.
- An audience expecting to be viewed as more than just a student, but rather as a partner in a new teaching-learning model.
- An audience with needs for both information/education and a concurrent processing or application need.

The Extension Service is at a pivotal point in dealing with diverse nationwide audiences. Therefore, Extension's faculty will be challenged to work with a more pluralistic, culturally diverse audience which breaks from the traditional concept of mass society [DeWitt and Poley, 1991].

Examples of Expanded Extension Audiences

Extension professionals are always looking for new ways to disseminate information. Through the use of television, agents in Northwest Ohio have been able to attract a sizable viewing audience of 10,000 crop producers, including many people who would have never attended an Extension meeting. A television series called "The Crop Game" was produced through a coordinated effort by state, area, and county Extension professionals and the public broadcasting station. The thirteen, half-hour, programs were presented in a weekly series, and increased the traditional farm audience who would have normally attended winter meetings six to one. [Kroetz and Cole, 1978].

University of Wisconsin Extension Agents in Trempealeau County used cable television as a tool for reaching new and larger audiences. Three weekly programs were evaluated to determine, "Is anyone watching?" The evaluation evidenced not only that people were watching, but also that viewers were using the information presented. At the time of the survey, 63% of the households in the county subscribed to cable and 67% of the local access viewers tuned-in to Extension produced programs [Lang, Blacklock, and Rossing, 1986].

In 1985, so many people were watching the Extension produced "Can Do Clinic" that the weekly television program won top Nielsen ratings as the area's most-watched Saturday

daytime show. Executive producer and University of Florida Extension Home Economist, Ruth Ann Fowler reported that the viewing audience was an estimated 338,000 families in twelve counties. The television audience clientele were recorded and tracked through mailing lists obtained from telephone callers, publication requests, orders for companion booklets, mailbag tips and questions, and general fan mail. Seventy percent of the surveyed audience preferred receiving information by television, and an overwhelming ninety-eight percent of the viewers said they would not have attended a workshop or demonstration at an Extension office to receive the information [Graddy, 1986b]. (Fowler is currently employed with the University of Arizona Extension Service) [Jones, 1988].

Characteristics of Television Audiences

The response to questions asked by Extension educators in Trempealeau County Wisconsin ... "Is anyone watching?" and if so, "Who are they?" [Lang et al., 1986] ... is that **almost everybody watches television!** The Roper Report [Miller, S., 1989] cited that three-fourths of the adult American public watch some television every day, and that ninety-seven percent watch some television every week. It is only a mere three percent of adults who claim to watch television less than once a week.

Furthermore, the research indicated that the audiences

which were the least likely to attend Extension meetings were the most likely to use television. These audiences included such large and important target groups as the unemployed, the over 60's, youth, parents at home, the disabled, the poorly educated, dual career families, and the over extended individual [Bird, 1983; Paine, pp 60-69, 1989; Hezel, 1989; Hester and Dickerson, 1984; DeWitt and Poley, 1991; Sullins, Hoerner, Whisnant, 1989; Whiting, 1988]. Many of these potential clientele were not aware of the Extension service and its program opportunities ... thus, television created a marketing challenge for Extension professionals [Graddy, 1986b].

Conclusions Concerning an Expanded Extension Audience

Larry Whiting [1988] stated, "With most states reducing Extension operating budgets and faculty numbers, there must be more use of mass media techniques to reach people if educational programs are to be maintained or expanded." Evidence of how television can increase participation in traditional Extension activities has been documented in the comparisons of instructional television and traditional Extension programs which indicate that television increases enrollment in traditional programs and reaches large diverse audiences -- including new Extension clientele [Sunnarburg, Bradley & Hanes, 1988; Branson & Davis, 1985; Stevens, 1991]. However, it is important to remember that the

purpose of televised Extension programs should be to augment, not replace, traditional teaching methods [Lewis, 1985; Bates, 1984; Mugridge and Kaufman, 1986; Glikman, 1990]. Television is not only an educational medium but also a marketing tool to be used to strengthen, improve, and expand its image among members of the communities.

Extension educators will be challenged in the 1990's to innovate, respond, and adapt to a more pluralistic and culturally diverse audience. Appropriate use of information technology can assist Extension educators in meeting this challenge [DeWitt and Poley, 1991, p.3].

Desire to Learn New Roles and Procedures

Would Tennessee Extension educators be prepared if a statewide instructional television system were introduced? The development of such a delivery system would end the privacy of the county and district programs and require Extension professionals at all levels to learn new roles and procedures [Chu and Schramm, 1975, p. 18; Whiting, 1988; Callaci, 1975; Holt, 1991]. The research states that opposition can be anticipated from the local educators and on-campus faculty, especially those who do not have experience as a television instructor. These educators may believe that the local delivery of high quality specialized instruction via television may denigrate his or her importance by turning over much of the teaching and

demonstrating to an outsider [Bruder, 1989; Handleman, 1960, p.98; Chu and Schramm, 1975, p.61; Brown and Fortosky, 1986, p. 264].

Roles and Procedures in Relation to Position Assignment

The celebrity status gained by the television educator can quickly bring esteem for the presenting faculty and their departments [Whiting, 1988; O'Donnell, Hausman and Benoit, 1987, p. 12]. Televised teaching also forced colleagues to make their schedules and pace conform to that decided upon for the entire system. Therefore, it required them to learn new roles, to give up some of the "telling" and spend more time on the discussion, practice, and guidance that must take place on location rather than on the television channel. Some educators felt this was degrading; "particularly in upper secondary and higher education, where educators are proud of their subject-matter expertise" [Chu and Schramm, 1975, p. 118].

In Connie Dillon's study concerning "Faculty Rewards and Instructional Telecommunications," [1989] she stated that "peer pressure was alive and well in the university community." The purpose of her study was to provide insight into factors that influenced the integration of telecommunications teaching within the higher education system. In general, the faculty surveyed were positive toward telecourse teaching; however, 58% of the telecourse teachers

felt their colleagues did not perceive telecourse instruction as favorably as did the telecourse faculty themselves. A strong relationship existed between the perceived attitudes of colleagues toward telecourse teaching and the attitudes of the telecourse faculty.

Roles and Procedures in Relation to Audience Assignment

Clientele attitudes may also be a concern in counties where they have become accustomed to face-to-face teaching and are able to question or discuss at any time. When these clients were introduced to television teaching, they tended to miss the personal contact with the instructor. However, there was insufficient evidence to suggest that the lack of such contact impairs learning from instructional television [Chu & Schramm, 1975, p. 54 & 64; Gehlauf, Shatz, and Frye, 1991].

Although television appears to be a mass medium, it is known to be a very personal communication device. Gunter and Svennevig's [1987] research documented that when television entered a society, it was rapidly assimilated into the accepted social fabric [p. 15]. It even became an integral part of the family household -- almost another member of the family [p. 4]. Consequently, a personal relationship often developed between the television viewer and the television educator [Callaci, 1975].

Learning New Roles to Facilitate ITV Delivery

To prevent covert resistance to the new medium, the development of television production systems has required more of a team effort than most other educational delivery systems [Brown and Fortosky, 1986, p. 267]. In Mississippi, introducing the teaching partner or remote facilitator to their television colleagues proved invaluable. After meeting the television teacher, teaching partners felt more comfortable about calling them on the phone with questions and concerns, and they established a collegial relationship as an instructional tele-educational team [Young and McClelland, 1991].

Televised course participants as well as telecourse faculty believed that an on-site coordinator, facilitator, or teaching partner was critical to the success of the televised course [Gehlauf, Shatz, and Frye, 1991]. However, Chu and Schramm [1975] noted that the greatest lack of training for the instructional use of television was for the teaching partner in the new role he/she must assume with the coming of television [p. 20].

Evaluators of distance education systems encouraged in-service training for Extension professionals, at all levels, to prepare faculty members for the infusion of a system-wide televised instructional effort. They suggested that every Extension professional be trained to serve the role of instructional television facilitator. In most cases, the

county Extension agent was the on-site facilitator in the local office or at a down-link group viewing site. However, Extension specialists and administrators also performed this role, especially in the form of in-service training for agents or leaders and for specialized group meetings for statewide and district clientele. [Branson and Davis, 1985; Whiting, 1988; Takemoto, 1991; and Bruder, 1989.]

The researchers found that the "teaching partner" or facilitator provided local follow-up and instructional support by being present at the receiving site and by answering calls received at the local office. Whatever the duties, this person played a very important role [Holt, 1991]. The role of the local facilitator was so important that, for all practical purposes, there was no substitute for this member of the televised instructional team [Chu and Schramm, 1975].

Chu and Schramm's research review summarized several experiments comparing repeated showings of a television program with teacher-directed follow-up. The results showed that repeated showings of a television program resulted in more learning, up to a point. But teacher-directed follow-up, where available, was emphatically more effective than a second showing of the same program. Only when teacher-directed follow-up was not feasible, was a second showing recommended to improve learning [p. 33]. Decker and Morrill [1990] revealed similar findings in their evaluation of

practices influenced by video-tape.

Learning New Procedures to Facilitate ITV Delivery

One of the most important procedures that the remote educators must be prepared for is result measurement or evaluation of the viewing audience. A great deal of money is committed to developing a system-wide instructional television effort, and reliable information on what television is accomplishing is one of the priority needs of the system [Chu and Schramm, p. 21, 1975; Whiting, 1988; Young and McClelland, 1991].

In evaluating the use of satellite video teleconferencing, the Ohio Extension Service encountered several changes in procedures with both their television educators and remote educators. Dr. Larry Whiting [1988] shared some of the lessons learned from their experiences: "Faculty involved with television greatly improved their teaching (or presentation) skills, because television forced them to mold their often wordy messages into restricted time periods." As a television presenter, they soon became better communicators, which encouraged better learning. In addition to preparing the television faculty in presentation skills, "more attention should have been given to the learning environment at downlink sites. When people were gathered at a county or district Extension office or a community college, some learning activity such as a follow-

up discussion or presentation of additional information needed to be planned." Furthermore the local facilitator needed course information in advance of the televised course to prepare for follow-up so they would not "lose face" with local viewers who looked to the county agent with respect as their most knowledgeable source of information [Whiting, 1988; Kroetz and Cole, 1978].

Examples of Effective Extension ITV Systems

The Indiana Extension Service used closed-circuit television to provide clientele training in agriculture, home economics, 4-H and youth, and community development. "Distant viewing" sites were usually located a short drive away for most citizens of the state. At these sites, local Extension agents served as program hosts, interpreting the technical information, if needed, and adding a personal touch as Purdue University's on-site representatives [Branson and Davis, 1985].

The total television team concept was illustrated in an article by Marion Kroetz and Robert Cole as they described how Ohio Extension agents captured the farm audience with television [1978]. A committee of Extension agents and an area supervisor explored the possibility of using public broadcasting to deliver a program on crop production for a rural audience. An area Extension agronomist served as program host and producer, and a county agricultural agent

served as co-producer. The station provided a director and help with publicity, filming, and other technical jobs. The area agronomist introduced each program and was assisted by a state specialist or county agent in presenting the main topic. The programs encouraged viewers to seek additional information from the county agent and featured two agents each week. Information packets were prepared by the area center and distributed by the county offices. These packets contained bulletins, special publications, and worksheets for the series.

Conclusions about Desire to Learn New Roles & Procedures

There is a general consensus that faculty anxieties over television have lessened [Maftoon, 1981], and that planning for efficient and effective use of a televised delivery system demands understanding the educator who will be expected to accept and use the medium [Weinstein, 1981]. Both researchers concur in their review of literature that integration of television as a delivery method is more rapidly facilitated when:

- faculty collaborate with other colleagues and administrators on content and use of instructional television;
- faculty perceive that minimal change will be required in planning and implementing the use of televised instruction; and,

•the faculty perceive that the new and attractive television instructor will not diminish his or her role as the prime facilitator of the curriculum.

The FACT Committee (Future Application of Communication Technology) of the United States Department of Agriculture Extension Service, identified the need to utilize appropriate communication technologies to create greater client awareness and access to the Cooperative Extension System. "Weekly work patterns for clients have changed and the Cooperative Extension Service must consider similar changes for its own staff. With two-paycheck families, few can or will attend daytime events. Family structures and workplace participation of women have changed dramatically. The average U.S. household moves once every five years. Not as many people reside in rural communities, and fewer are engaged in agriculture" [DeWitt and Poley, 1991].

Extension professionals are always looking for new ways to disseminate information. They realize that direct contact with audiences may be limited; however, the mass media offers an opportunity to reach new clientele and large diverse audiences through distance delivered education. [Kroetz and Cole, 1978].

Utilizing Instructional Television

Does it matter whether faculty are currently using televised instruction when considering their readiness to

support and implement a statewide televised delivery system? The research indicated that, yes, it can be related. Indicators which can aid in determining readiness to utilize televised instruction have included: access to television equipment, use of equipment and operation skills, length of time as a television instructor, and experience as an ITV partner. [Callaci, 1975; Chu and Schramm, 1975; Handleman, 1960; Holt, 1991; Lewis, 1985; Young and McClelland, 1991.]

Faculty's Use of ITV Equipment

The director of Learning and Technology Services, Raymond J. Lewis [1985], questioned 254 college faculty to understand to what extent and in what ways they perceived that electronic technologies could contribute to the solution of important instructional problems. "Among the faculty characteristics examined in the study, extent of technology use was the most useful variable for explaining faculty responses to the questionnaire items." Faculty who made greater use of video, audio, or computer technologies were more likely to agree that these technologies could help them overcome various instructional problems. This group was also less bothered by obstacles that frustrated colleagues with little or no technology experience such as lack of training, lack of funds, lack of access to equipment, and insufficient incentives and rewards. In contrast, those making more extensive use of information

technologies were more concerned than their colleagues about obstacles that stood in the way of expanded technology use. [Lewis, 1985.]

The frequency of instructional television usage among faculty has been studied by Broussard [1977, pp. 80-82] and Maftoon [1979, pp. 120-121]. Their findings predicted that faculty utilization of ITV was significantly related to: teacher participation in instructional television workshops, the teacher's ability to operate instructional television equipment, lack of opportunity to learn how to use instructional television, teacher's access to television viewing equipment, teacher's access to a video cassette recorder, quality of television reception, quality of program content, and encouragement from supervisors to use instructional television. Further findings in Maftoon's research [p. 121] concluded that the number of "high users" of instructional television was very low, but that more than three-fourths of both users and non-users of instructional television would make extensive use of the medium if they had optimal access to television programming and equipment.

Faculty Experience as a Television Teacher

Stanley Handleman [1960] thought that teachers who had never taught as a television teacher would have an unfavorable attitude toward its efficacy as a teaching tool [p. 101]. He rejected this hypothesis when his research

revealed that teachers who had never taught by television also demonstrated significantly favorable attitudes toward the effective use of this medium. He did, however, determine that the strength of the favorable attitude was positively related to the length of time that they had been involved with televised teaching. Teachers who had taught by television were also more prepared for the complex demands of television presentation in comparison to conventional face-to-face instruction.

Utilization of Televised Delivery in Relation to Learning New Roles and Procedures

"When it comes to instructional techniques, there is a difference between face-to-face instruction and interactive televised instruction" [Gehlauf, Shatz and Frye, 1991]. Even Extension specialists who have taught clients for years in open meetings found that teaching on TV put new demands on them [Branson and Davis, 1985]. Each lesson must be honed to perfection. Delivery must be crisp and animated, language clear and free of repetitious platitudes and stale humor [Handleman, 1960, p. 100]. Televised delivery must also be more than just "talking heads" presenting a lecture. To take full advantage of the medium's strength, more audio-visual materials must be used [Gehlauf, Shatz, and Frye, 1991]. Therefore, faculty were forced to re-evaluate their visual materials (slides, overhead transparencies, charts,

and so forth). The horizontal television screen meant vertical slides could not be used. To get large enough letters on the screen also meant using only a few lines of type. Most presenters tried to cram too much into their visuals. [Whiting, 1988].

The successful TV presenters exhibited certain personal characteristics: creativity, flexibility, showmanship, self-assurance, organization, pleasing personalities, good appearance, effective teaching style, a willingness to experiment and to learn, and a dedication to working with the clientele [Holt, 1991; Branson and Davis, 1985]. However, the faculty who were the most successful with television as a medium not only had a good professional reputation -- they were willing to adapt their classroom style to a TV presentation [Branson and Davis, 1985].

Preparing the Educator to Teach on Television

To utilize a televised delivery system for all that it is worth involves much more than providing the faculty with needed equipment and then teaching them how to operate it. Callaci [1975] pointed out that knowing how to operate a camera is not the same as knowing how to communicate with a camera.

One of the most important elements of camera technique and on-air performance in general is the *ability to infuse energy into a performance*, and the most common defect is a

lack of that energy. Since the camera and the lens have a tendency to "rob" energy, it is much easier to have too much energy and have to back off than to try to add. Energy, however, must not be confused with gestures and movement. The later must be carefully controlled because on television the properties of the lens will magnify gestures and movement. Viewers are easily distracted, and the message can be lost. Body Language, on the other hand, can subtly and deliberately convey many impressions to the audience. The TV teacher who knows how to effectively work within the technical constraints of the media can take advantage of the properties of microphones and cameras and more effectively communicate the educational message. [O'Donnell, Hausman, Benoit, 1987, pp. 72-76].

To effectively communicate with the camera, it is also important to address the problems associated with "high tech" in contrast with "high touch" methods of teaching. "High tech connotes a cold, impersonal world with gadgets and mechanization. High touch, on the other hand, suggests intimacy and human interaction." [Carlson, Bogen, and Pettit 1989]. Some educators expressed a fear that televised teaching would exclude the personal relationship of face-to-face teaching. By having knowledge of this concern, television educators were trained to use the television to establish a personal rapport with the viewer. For instance, "the technique of taping from the learner's

point of view is called 'subjective' video. Trained producer-directors and camera technicians taped interactions as if the learner were present in the scene." [p. 41] The actors/teachers in the scene directed their comments to the learner (the camera). Consequently, subjective video from the learner's point of view created personal involvement with people on the screen, bringing the human factor to televised instruction.

Education is a process that flows between teachers and learners. Aliza Duby [1991a] explained that, "The ideal situation in educational television (ETV) is when the production of ETV programs is handled by educationalists." However, she found that production of educational television was far from this ideal situation: either educationalists stuck to formal ETV formats and lost their audience because their program lacked attractive features, or worse the TV producers were experts in entertaining TV and sacrificed educational principles for entertaining presentation" [Duby, p. 71, 1991a]. Therefore, the personnel of instructional broadcasting consisted largely of educators who did not fully understand television and broadcasters who did not fully understand education. The product most needed was the combined broadcaster-educator -- yet these combinations were in short supply [Brown and Fortosky, 1986, p. 267; Chu and Schramm, 1975, p. 20].

When developing a televised distance delivery system,

Barry Willis [1989] advised instructors and administrators to be familiar with the challenges and opportunities to be encountered throughout the process. Too often, promoters of distance delivered instruction minimized the planning, time, and effort required to teach and learn effectively via distance education [Willis, 1989]. But in the end, when all the challenges and pitfalls were considered, teachers who had taught by television felt the experience improved their teaching style and "made teaching exciting again" [Handleman, 1960, p. 100].

Conclusions Concerning Current Use of Televised Instruction

"The traditional delivery methods of Extension programming -- conferences, printed material, press releases, radio, and county meetings are still important. But the new communication technologies offer interesting ways to enhance traditional delivery methods" [Stevens, 1991]. Faculty have used these new information technologies with instructional objectives that they could not accomplish on their own, or that they preferred not to perform themselves. They did not, however, want technology to perform functions they already performed well on their own or with printed materials. [Lewis, 1985.]

The FACT committee report identified a nationwide Extension scenario similar to the current situation in Tennessee. The Extension System sustains an earned record

of success which we assume that the Extension System will continue to deliver through: education and information locally, retention of partnerships with researchers in land-grant universities, and the expansion of the Extension audience by reaching new clientele. However, while reaching success in expanding the clientele, the resource base of funding from federal, state, and local sources is likely to remain constant, or decline. The resulting fewer dollars per client served will require Extension to create efficient program delivery systems. Communication technology strategies or distance delivered education is absolutely necessary to meet this need. [DeWitt and Poley, 1991].

Preferences in Instructional Television Delivery Media

Thirty years ago everyone knew that *watching television* meant watching commercial, broadcast television -- because this was the only kind of television available. Today, there are many options in the way a television set is used. So, the Television Information Office (TIO) asked the question, "When Americans think about *watching television*, what do they now *mean*?" [Miller, S., 1989].

The foremost image in the minds of Americans was still the traditional one: a program on a commercial network station (80%). The American definition of television was also expanding. The second- and third-ranking definitions included other types of television channels: cable and

public or educational television. However, to considerable numbers of television users *watching television* also meant viewing: a rented video tape, a TV program they taped earlier on their video cassette recorder (VCR), and video-recorded home movies. Adults even considered playing computer games using their television monitor as "watching television" [Miller, S.. 1989]. The options of television continue to change and expand -- and Americans are taking advantage of their televisions for all that they are worth.

Since the 1950's, Extension professionals have also been eager to use the air waves of television to deliver their educational and marketing programs. Initially, broadcasting networks were the only means for televised delivery of Extension programs, features, and promotional spots [Whiting, 1988].

Today, leaders who are assigned the task of designing televised delivery systems are faced with increasingly greater challenges. They must probe deeper than whether to transmit televised conferences via satellite, or selecting broadcast versus cable for in-home delivery, or preparing for interactive videodisc advancements, or to simply purchase prepared videocassettes for group viewing or home loan. [Callaci, 1975; Gayeski, 1989; Brown and Fortosky, 1986]. "The recent advent of satellite, fiber optics, and a plethora of playback devices has caused an exponential increase in the possibilities for delivering the television

signal. Although these latest technologies have expanded the potential for using television in distance education, they have also complicated the decision making process." [Brown and Fortosky, 1986].

Audiovisual versus Motivational Use of Television

Before a commitment to televised instruction can be made, adopters must assess the most appropriate and cost-effective *approach* to developing a televised delivery system. Research in distance education has divided the intended use of instructional television into two distinct pedagogical approaches: audiovisual instruction and motivational television. [Callaci, 1975; Brown and Fortosky, 1986; Bates, 1984].

Audiovisual Television

The use of television as an audiovisual tool is much like using an overhead transparency, a slide show, or film presentation. In this approach, the educator is the center of the communication activity and the television is simply an electronic audiovisual viewing device [Callaci, 1975, p. 2-2]. Television "clips" are often used by educators strictly for their visual attributes, and they talk to the video just as they would talk to a slide. Video tapes or video cassettes are the most often used application of this delivery approach. They are used for image magnification,

to view special situations or procedures, for self-evaluation by playing back an action or activity, and to send information from one place to another (often in place of a tour). Advancements in technology are also expanding television's capacity to be used as an audiovisual tool. In the case of narrowcast television by either closed-circuit, microwave, or satellite transmission, the teacher remains the center of the teaching activity; the television is simply the tool used to put the student and the teacher in the same place at the same time. [Bates, 1984; Brown and Fortosky, 1986; Callaci, 1975; Decker and Morrill, 1990; Stevens, 1991; Hermann, 1991].

Motivational Television

Motivational television as a delivery approach in teaching is a communication art form rather than a visual tool. Callaci [1975] clarified the difference quite succinctly, "Unlike audiovisual television, where the classroom instructor is the center of the communication activity, in motivational TV the center of communication is the medium itself." Motivational television tends to have a continuous seamless flow which should be a self-sufficient unit in itself (even when it is integrated with other media) [Bates, 1984].

Motivational delivery can be pre-taped for transmission "through-the-air" or through a video cassette

player. The approach of motivational TV teaching is designed to inspire or move the viewer to some form of action or reaction. The viewer is encouraged to participate by "following along" with a practice or procedure, and the lessons are usually complete segments of information which may stand-alone or encourage follow-up with a local facilitator. Therefore, network broadcasting, satellite conferencing, closed-circuit cable, and even video tape are delivery processes that have the potential to motivate learners to action. [Bates, 1984; Brown and Fortosky, 1986; Callaci, 1975].

Past efforts to combine motivational and audiovisual applications into one system usually resulted in failure. Each approach is unique and independent to the purpose and needs for which it is developed [Brown and Fortosky, 1986, p. 264]. The most successful designs considered whether a system was intended for audiovisual or motivational delivery, and then the equipment was selected for the specific job it was expected to do. When attempting motivational television under audiovisual circumstances, the results were disastrous. Audiovisual production at the level of home video was also insufficient -- it brought boredom and loss of credibility. Viewers knew the difference between good and bad video production and were very critical of what they saw. A high quality video product and a trained production team were imperative to

successful implementation of a televised delivery system. [Bates, 1984; Branson and Davis, 1985; Callaci, 1975; Spitzer, Bauwens, and Quast, 1989; Whiting, 1988; Whitney, 1991].

Deciding Who will Benefit from ITV Delivery Systems

Historically, little attention has been given to the development of a televised teaching system and identifying specific learning needs. The usual procedure has been to purchase video equipment and later determine what can be done with it. The same has been true about deciding who will benefit from the use of televised instruction and who will view it. In fact, careful analysis might show that television is not the appropriate solution [Callaci, 1975].

Television is a powerful, expensive mass medium; therefore, to be used efficiently, it must be used in a large way [Chu and Schramm, 1975, p. 18; Whiting, 1988, p. 21]. This has resulted in television producers who direct their goals to attract as many viewers as possible, to teach a specific message, and persuade their viewers to apply the taught message (eg. to buy products). In contrast, "Educationalists do not always aim at the wide audience. In order to teach, they attract their target audience" [Duby, 1991b, p. 192]. Therefore, when choosing between broadcast and narrowcast educational television, the key has been deciding between needing or wishing to reach any or

everybody watching at home, i.e. the 'open' audience, or aiming at particular targeted 'closed' groups with known needs. Most broadcast television has not lent itself to the latter. However, Naomi Sargent pointed out that the 'open' audience at home "needs the power of broadcast television to reach people who may not yet know what they want, who are likely to be educationally disadvantaged and frequently poor. The unemployed, the over sixties, and young people are examples of groups for whom open broadcasting will continue to be very important for the foreseeable future. Access to the arts and sciences and consumer education are examples of content areas which should be available for anyone." [Paine, 1989, p. 63].

As discussed in the section on "serving an expanded audience," television has the power to reach people who would not attend an Extension meeting. Valentine and Darkenwald [1990] studied the factors that deter participation in adult education. Six factors of deterrence to participation were studied: personal problems, lack of confidence, cost, time constraints, low personal priority and lack of course relevance. The research explicitly identified the demographics of participants and their perceived deterrent force into five clusters. The largest cluster was people deterred by personal problems. Indicating components included family and childcare responsibilities, health problems, handicaps, and uneasiness

about the location of the meeting. Eighty-one percent were female, and the group was much less likely to be employed than the sample as a whole. People deterred by a lack of confidence was the second largest cluster. The mean age of this group was higher than any other, and the percentage of members with comparatively low educational attainment was disproportionately high. This group had the lowest unemployment rate and was also disproportionately male. The middle cluster included people who were not interested in available courses. The group tended to be male, highly educated, and reported a high level of full-time employment. This group seemed to place considerable value on continued education but found existing programming irrelevant to his or her needs. A slightly smaller group were people not interested in organized education. This cluster reported the highest proportion of full-time employment, was disproportionately male, had generally high incomes, and was far better educated than any other group. The smallest cluster was people deterred by educational costs. This group appeared to be young women of moderate education and moderate means who have the confidence to participate in adult education but cannot afford the direct and indirect costs involved. [Valentine and Darkenwald, 1990.]

When Extension agents in Central Florida surveyed viewers of the "Extension Cords" and "Can-Do-Clinic" television programs (aired weekly), they discovered that

people who had never heard of Extension were participating by television. While the audience was partly homebound, it also included working mothers and others who had schedules that did not permit them to take advantage of Extension's services, and still others who did not know Extension existed before watching the program. An overwhelming ninety-eight percent of the viewers said they would not have attended a workshop or demonstration at an Extension office to receive the information. And, seventy percent said they preferred receiving the information by television. [Graddy, 1986b].

Learning at Home or Attending Group Meetings

This concern as to why some people prefer to learn at home in comparison to a group meeting or class was addressed in a report from The Annenberg/Corporation for Public Broadcasting (CPB). Television as a form of distance education may imply that distance from the class sight is a major reason for enrolling in a telecourse versus an on-campus course. However, interviews conducted with telecourse students in collegiate distance education programs revealed that distance was not the main concern. The most important barrier to participation in extended education programs was time; responsibilities at work, second; family concerns, third; and distance fourth. Therefore, students enrolling in telecourses did so because

they liked the convenience of staying home and the ability to tape and review courses in relation to personal schedules [Hezel, 1990].

Dr. Vivian Glikman [1990] also noted additional reasons why television, as a medium of distance education, can be an essential means of reaching those adults who have a poor basic education. "For these people, television is a medium which is both accessible and familiar. It offers the advantage of reaching them without cost and in their homes ... that is to say, without their having to move and without their being forced to show their ignorance to strangers." In addition, her research cited that poorly educated people were among the greatest users of television. Of course, these people looked first to television for relaxation and amusement, but it was also one of their principal tools for understanding and acquiring information about the world. The television set became the medium used to motivate this diverse group of people; and when combined with other media, counselors, and training opportunities, it has been a particularly effective means for reaching groups who would not otherwise be reached [Glikman, 1990].

The power, personal qualities, and wide acceptance of television in the American family are well documented, but can instructional television teach clientele who view at home as effectively as those who attend classes or meetings? A 1989 study by the Congressional Office of Technology

Assessment (OTA) stated that distance learning seems to be as effective as face-to-face instruction [Bruder, 1990]. Chu and Schramm [1975] recorded the evaluations of numerous research studies that addressed the effectiveness of teaching clientele at home via television. For instance, Castle used open-circuit educational television in 1963 to present lectures to physicians viewing at home. About the same time, Abbey assigned 120 nurses to either a group viewing in a hospital or to individual viewing in their homes. Those viewing at home had significantly higher achievement scores than those who viewed at a group meeting [pp. 43-45]. Extension agents in Minnesota evaluated volunteer leaders who attended traditional leader training meetings with leaders who received nutrition training in their own homes on the public broadcasting station. The experimental television leaders increased their knowledge on pretest-posttest scores but the control group showed a decline in knowledge. [Sunnarborg, Bradley and Haynes; 1988].

Extension ITV Delivery Systems in Practice

In relation to Extension delivery methods, most of the papers on instructional televised delivery systems fell into the "here's-how-we-do-it-at ..." category. The debate has now become much more sophisticated, and it appears useful information may be gained by comparing the televised

delivery systems that have been designed by Extension faculty. [Mugridge and Kaufman, 1986; Whiting, 1988].

The Indiana Extension Service identified three major educational thrusts to fulfill its mission on TV: graduate-level courses in agriculture, in-service training in specialty areas for the field Extension staff, and specialty training for general clientele in the "missions areas." Closed-circuit television provided an effective medium for statewide communication. The existing Indiana Higher Education Telecommunications System (IHETS) supplied an excellent distribution system, at a lower cost than developing a new system. The real highlight of the CES-IHETS marriage was the increased "clientele training," which offered specific educational programs to the citizens of the state. In the face of changing clientele needs and reduced travel allocations, televised instruction helped Indiana Extension professionals in fulfilling their commitments to the citizens of the state. [Branson and Davis, 1985].

The University of Minnesota explored instructional televised delivery from an audiovisual approach which incorporated home video check-out, television broadcast, and satellite broadcast. Video capture of Minnesota's annual agricultural situation and outlook conference has been used to broaden the audience and include more educators in a traditional delivery method. Through the use of satellite,

the conference was made available statewide to enthusiastic participants who wanted to view the live presentation. A video capture of the conference presentations and highlights was used by county agents to augment other programs with a short video segment at their convenience. The video was also made available for check-out by farmers, vocational agriculture instructors and agribusiness from county Extension offices, local libraries, and local video stores. The highlights version of the conference was utilized by six satisfied television stations in Minnesota and the Dakotas. The television, video, satellite combination system has worked well to expand the Extension audience, include other educators in program delivery, and shorten delivery time of voluminous and perishable information [Steven, 1991].

Sunnarborg, Bradley, and Haynes [1988] reported the use of public broadcast television to teach a series of leader training lessons. In this case, motivational television was needed to increase participation in leader training opportunities and to reach a wider audience. The television leader training increased volunteer staff from 5 to 300. Participants pre-registered to participate. Each leader received a training packet containing lesson plans and resource materials and was told when to view the television training. Since the training offered no opportunity for social interaction or answering questions, the training packet was an important resource to the leader teachers. It

included specific objectives, activities, a bibliography, an evaluation form, and tip sheets for teaching others. Television allowed training to cross county lines, improved enrollment, reached large, diverse audiences, and saved Extension agents a great deal of time and money. In this case, television leader training was more time and cost effective than traditional meetings [Katz, 1985].

Individual Viewing versus Group Viewing

Although both individual viewing and group viewing have been proven to be highly effective delivery methods for televised instruction, Stephen Brown [1984] raised an important issue with respect to the design of the televised program. His study focused on the use of video cassette delivery of motivational televised courses. He questioned whether the tapes should be designed primarily for group or for individual use or was a compromise possible? His findings revealed obvious response differences from the participants, depending on whether they viewed as individuals or in groups.

In the case of group use, "Interactions between the student and the video were minimized, while interactions and discussions between the students were maximized. Thus, the video was used as a stimulus rather than a teaching vehicle. The students probably learned as much from each other as from the programme itself." Individual students, on the

other hand, had to rely entirely on their own ability plus the video. The individuals were more concerned with finding the "right" answers to what were intended to be open-ended questions. This was exhibited in a preoccupation with factual accuracy, note-taking, and a much greater use of the pause and rewind facilities on their cassette players. They tended to concentrate on recording what happened and less on discussing why it happened or what its implications might be. These important findings suggest that video-cassettes for individual use will result in more student/video interaction than those for groups. Tapes designed for individual use should have clear concise objectives with factual responses rather than open-ended interaction. However, video production for group viewing should encourage learning through the examination and exchange of ideas by making provisions for students to stop, interrupt, and discuss the topic as often and for as long as they wish. [Brown, S., 1984].

Brown concludes by suggesting that attempts to compromise motivational televised production for both group viewing and individual viewing will most likely be counter-productive. There seems to be two alternative directions of development for educational video production: highly student-interactive programs for individual use and more open-ended stimulus material for group use [pp. 51-52].

Delivery Options for ITV Instruction

The equipment or delivery options for disseminating ITV courses may be predetermined by the selected instructional approach. On the other hand, the equipment and options that are currently available may be significant to the designers who must develop the instructional television delivery system. [Bates, 1984; Gayeski, 1989].

Video Cassette Recorders

As more households acquire video-cassette recorders, educators must explore new options for distributing cassette materials. It may be possible to replace postal distribution and library loans with in-house delivery through either broadcast transmissions or cable transmissions for off-air recording and at-home viewing. Video-cassette material can be distributed in the same way as broadcast television but it may be very different in appearance. [Brown, S., 1984].

Broadcast Networks

When broadcast television is used in distance education, it has some specific educational roles:

(1) "Broadcasting still has distinct distributional advantages over other forms of television (cable, satellite, cassettes, discs)" [Bates, 1984, p. 30]. Access is virtually universal. Therefore, for learners, the cost of

broadcast distribution is free, since nearly everyone already has a television set [Meierhenry, 1979]. (2) Broadcast programs publicize educational opportunities offered by a distance education or Extension system, hence boosting recruitment. And, (3) the programs increase motivation and interest in learners who are usually working in isolation by using the attractive and interesting forms of presentation common to television production [Bates, 1984].

Satellite Downlink

Satellite has the strong feature of being able to cover great distances -- in fact, it makes telecommunications almost independent of distance. Programs delivered via satellite are usually produced live and are designed to engage participants in problem-solving and active questioning. These programs differ radically from conventional educational broadcasts. The use of telecommunications focusses on what cannot be delivered in other ways -- it is particularly important where the target audience is scattered geographically or where the knowledge changes too fast to "package" it in the traditional delivery methods. It is not a "cheap" form of television production but decreasing satellite transmitting fees are making telecasts more economical also. [Forsythe, 1984; Whiting, 1988].

Cable Systems

The expansion of cable systems provides a leap from three or four television channels to ten times that number or more. This expansion increased the time available for delivering educational programs through the air-waves, and it created more convenient viewing times as well. Cable also allows programs to be directed to quite small audiences by means of "narrowcasting." In this form, cable's obvious advantage is in being able to branch-out into off-campus teaching and possibly reach potential students that are inaccessible by other means. [Forsythe, 1984].

Sharing of Faculty and Productions

The proliferation of televised alternatives has resulted in a lack of appropriate designs and information [Connochi, 1969; Gayeski, 1989]. However, there is one common thread to all the televised alternatives. More than any other teaching method, television has the potential to foster the sharing of expert faculty across county and state borders. In fact, Extension faculty can now teach anywhere in the world. [Stevens, 1991; Sunnarborg, Bradley, Haynes, 1988; Whiting, 1988].

Extension established a program by which successful video presentations developed in each state might be shared, and in 1988 had more than 2,000 video titles in a national database. Advancements were also being made toward

increasing the effectiveness of satellite technology. Extension faculty have been encouraged to reduce duplication of efforts by coordinating satellite broadcasts to provide information to regional and national audiences. [Geasler, 1987; Whiting, 1988].

Conclusions Concerning Preferred ITV Delivery Media

The future holds a tremendous potential for Extension. "By becoming more advanced in information communications, we can be an educational force in the 21st century" [Astroth, 1990]. Before long, clientele may be able to remain at their own homes, enroll for a course by computer, use the family or business telephone to call in questions, and interact with the instructor and other participants while watching an interactive televised educational program [Branson and Davis, 1985].

Thirty years ago, educators were divided as to the benefits and use of television. One group viewed television as just another medium over which education can be carried, while the other group visioned television to be the most powerful medium of communication our civilization had ever possessed [Connachie, 1969]. Today, we know that whether television will be used as an audiovisual tool or as motivational TV, its effectiveness is directly related to the intended purpose and conditions under which it is produced. Each production format has its strengths and

weaknesses, and when used properly, both techniques will improve instruction and facilitate learning. Since proponents of the different approaches will argue endlessly as to which is better, the question to be asked is not "which is best?" but "which can do the job we determined must be done?" [Callaci, 1975; Gayeski, 1989; Holt, 1991].

Summary

Mescal Johnston [1982] stated, "If we accept as Extension's ultimate responsibility the creation of change for the masses, we must reach the masses. We can reach them, teach them, create desirable behavior changes through mass media; and we can stop singing that 'mass-media-only-create-awareness' song." Today, we have something better than Johnston's "mass media" to reach the masses, and that is "distance education" through educational media.

Instructional television is one medium that can be used to deliver Extension's educational programs to an expanded audience. However, budget and time restraints make it difficult for individual educators to devote the resources necessary to effectively produce televised instruction. Therefore, the development of ITV delivery systems that deliver quality programs for high demand subjects can be an efficient alternative to traditional teaching methods.

A critical component in developing an ITV delivery system is understanding the readiness of the educators who

will be using the system. The success or failure of ITV delivery systems have been affected by the educators implementing the system. Therefore, understanding the readiness of Extension educators to utilize instructional television for future expansion of Extension education programs is an important consideration in planning for such a system.

In determining *readiness* to utilize instructional television, the first consideration would be evaluating the available equipment. If the educator does not have the needed equipment, they cannot be *ready* to use it. This also provides a starting point for system designers to predict development costs and to determine what, if any, equipment can be used or adapted to defray these costs.

Understanding the *readiness* to use instructional television is also more complicated than knowing what equipment is available. Other factors to consider include: general attitudes toward instructional television, willingness to serve an expanded audience, and desire to learn new roles and procedures. Collectively, these three variables can help predict the *readiness* of educators in an organization to utilize instructional television.

A closer look at the individual variables and their relationship with certain characteristics of the educators is also important. Studies have found that influencing factors can include: position assignment, years of

experience, experience with the technology, and distance from the main campus. By knowing the educators' concerns, system designers can alleviate much of the tension during the development and training phases of production.

The plethora of communication technologies has expanded the potential for using television in distance education. They have also complicated the decision making process. Before a commitment to televised instruction can be made, adopters must assess the most appropriate and cost effective approach to developing a televised delivery system.

Decisions will need to be made in relation to whether it will be used as an audiovisual tool for instructional support or as a motivational teaching medium that can stand alone. Deciding who will benefit from the system will aid in determining whether the system is designed for individual viewing or group viewing. Consideration should also be given to ITV designs and productions from other states and agencies. The sharing of lessons learned and materials developed can increase the effectiveness of the technology by reducing duplication of efforts and coordinating available resources. Finally, the educators who will be using the system should be included, and not left-out, of the design process. By discovering their preferences in television options, designers will gain knowledge in relation to how comfortable the facilitators feel towards use of the equipment.

Extension is not an advocate of any particular point of view; its philosophy is to lay the groundwork so that people can make their own decisions. At the same time, Extension educators work to create self-awareness and to accelerate the learning process [Mugridge and Kaufman, 1986]. To do this, Extension educators in Tennessee must decide if there is a future for instructional television in the expansion of Extension education programs at the University of Tennessee. Careful analysis of the organization's needs may reveal that television is not the appropriate solution to program delivery problems. Careful analysis may also be the key to deciding which media to use, and the different ways in which each medium should be used; so that a delivery system is developed in concert with the needs of the organization, its educators, and the clientele.

CHAPTER III

METHODS AND PROCEDURES

The purpose of this study was to determine the "readiness" of Extension faculty, at the University of Tennessee Agricultural Extension Service, to utilize instructional television for future expansion of Extension Education Programs. This chapter details who participated in the study, the design and instrumentation of the study, and analysis, collection, and treatment of the data.

Population and Sample

The population for this study comprised faculty employed by the University of Tennessee Agricultural Extension Service in April, 1995. This population consisted of county and area agents, administrators, state and area specialists, and 4-H Center Managers.

It was important that all faculty members have input into this study so that administrators, specialists, agents and camp managers would all be represented. However, it was not feasible to elicit input from every faculty member. A sample of the population was used in the study. The size of the sample representation was determined using a formula

from McCall [1982]. To obtain a 95 percent confidence level that the results would represent the entire population, the sample must include a minimum of 220 participants.

This study was exempted from review and approved by the human subjects committee at the University of Tennessee. A list of the target population was obtained from the department of Extension Communications in November, 1994.

A simple random sample was selected from the target population. This process provided all employees in the population an equal and independent chance to participate in the study. Two hundred thirty participants were selected from a population of 521 employees. Permission to survey the population was obtained from the Dean of the Agricultural Extension Service.

Design of Study

A descriptive/correlational design was selected for this study. The data collected describes the readiness of Tennessee Extension faculty to utilize instructional television based on: inclinations in general attitudes toward television as a teaching medium, willingness to serve an expanded audience, desire to learn new roles and procedures, current of ITV media, and preferences in ITV delivery media.

Instrumentation

No studies were found which measured the readiness of Extension professionals to utilize television as a teaching method. Therefore, a major product of this study was a comprehensive instrument specifically designed to examine the concept of readiness to use instructional television. The resulting questionnaire employed a Likert-type attitudinal scale and a nominal demographic scale. The instrument consisted of a series of statements to which the subjects were asked to react.

The questions were divided into three groups. The first measured the utilization of instructional television by the subject such as daily, weekly, monthly, occasionally and never. The second elicited responses to attitudes and readiness attributes based on five levels of agreement to the proposed statement from strongly agree to strongly disagree. The statements were both positively and negatively stated to avoid biasing or leading the respondents. The statements were also categorized to parallel the objectives of the study. The third group employed a rank scale, from one through ten, of television delivery and viewing preferences.

The last section of the questionnaire requested certain demographic data of the sample. This background information provided necessary data to help interpret the research findings and possible relationships in the sample population.

In developing a suitable instrument to measure these objectives, the researcher designed the questionnaire, *Instructional Television, A Survey for Future Expansion of Extension Education Programs at The University of Tennessee*. The statements were gleaned from an extensive review of current and historical literature. Books, dissertations, theses, journals, and Extension reports were evaluated for statements relating to attitudes and readiness to utilize instructional television. A copy of the instrument is in Appendix A. The instrument mailed to participants was reduced to a booklet (5½ by 8½ inches).

Reliability, Validity, Data Analysis Procedures

The Likert procedure for reliability is based upon internal consistency. After administering a pilot study of the instrument, Cronbach's *Coefficient Alpha* was used to test whether the respondents who score high on the overall survey also score high on each item. This procedure eliminates ambiguous items and those which do not produce the same results as the rest of the survey. Content and face validity was checked by three distance educators and a pilot field test.

Thirty Extension professionals were selected to receive the pilot test. (Note, the thirty pilot participants were not included in the 230 selected for the random sample.) The pilot group was not identified in any special manner,

the same methods and procedures were administered to this group as the actual sample.

A cover letter, postage-paid return envelope, and survey instrument were mailed to each selected participant. A code number was assigned to each survey to facilitate follow-up with non-respondents, and confidentiality was assured to each respondent. Four weeks after the initial mailing, a second letter, instrument, and return envelope were sent to all non-respondents encouraging them to participate in the study.

Twenty-five participants responded in the pilot test which predicted the researcher could anticipate an 83% response rate. Cronbach's *Coefficient Alpha* was used to test the internal consistency and reliability of the data. A consistency coefficient of 0.00 would indicate no consistency and a coefficient of 1.00 would indicate perfect internal consistency. Based on this measure, the researcher sought a minimum Cronbach Alpha coefficient score of 0.60 as acceptable. The first scale, attitudes toward instructional television, was very consistent (0.89), and no items were deleted for the final survey. Three scales were adjusted by deleting items until each reached a minimum internal consistency score of 0.60. These scales included: willingness to serve an expanded audience, desire to learn new roles and procedures, and preferences in viewing opportunities. The initial instrument contained seventy questions, and only six

items were dropped to produce a reliable and valid instrument.

The survey instrument was restructured with the remaining sixty-four statements. Minor editorial changes were made in part 6 to obtain the desired demographic data. In the pilot test, the respondents did not circle "all that apply" as requested. A chart was designed to simplify the needed information. The instrument was reprinted and distributed to the sample population.

Collection of Data

Identical procedures of distribution as those followed in the pilot study were followed in the distribution of the final questionnaire. An addition made to the general instructions informed the reader that participation in the study was voluntary. The participants were also given the opportunity to withdraw from the study. This was done so they would not be bothered with follow-up mailings if they did not want to participate.

Two hundred thirty survey instruments were mailed to the sample population in April, 1995. A cover letter encouraging participation and candid responses accompanied each survey. A postage-paid return envelope was enclosed to aid the respondent. Four weeks after the initial mailing, a second letter, instrument, and return envelope were mailed to sixty non-responding employees. A reproduction of the

final questionnaire appears in Appendix A, as well as a copy of the letters that accompanied the instrument which are in Appendix B.

A total of 214 surveys were returned, a 93 percent response rate. Six of the selected participants were no longer employed with Extension and removed from the respondents. An additional eight participants elected to withdraw from the study. Consequently only 200 respondents provided useable data. Still, an 87 percent response rate was commendable and well above the anticipated goal by four percent.

In order to determine if response bias existed, an analysis of eight key variables was administered on early and late respondents. The early respondents totalled 129, and there were 71 late respondents. No significant differences were found with the exception that early respondents were younger than late respondents, and the early respondents had a slightly more positive attitude in desire to learn new roles and procedures than late respondents. Although these variables did produce slightly different responses, the substantive difference was minimal. There was not sufficient data to indicate response bias.

Since late respondents are similar to non-responders [Miller and Smith, 1983], additional follow-up with the sixteen non-respondents was not necessary. Therefore, it was assumed that results for this study were generalizable

to the population from which it was drawn -- Tennessee Extension faculty.

Treatment of the Data

Since this was a descriptive/correlational study, the measures of central tendency and measure of relationships in the attitudinal scales were examined. Data were analyzed using the Statistical Package for the Social Sciences (SPSS Release 4.1) on the IBM 3081 mainframe computer at the University of Tennessee Computer Center.

As in the pilot study, Cronbach's *Coefficient Alpha* was used to test the internal consistency prior to examining the data. A minimum internal consistency score of 0.60 was sought by the researcher for items in parts two through five. The internal consistency scores for these scales were: part 2) general attitudes toward ITV, 0.82; part 3) willingness to serve an expanded audience, 0.68; part 4) desire to learn new roles and procedures, 0.64; and part 5) preferences in viewing opportunities, 0.55. Although three of the four scales met the researcher's minimum requirement of a 0.60 alpha coefficient, each scale and the parallel objective was examined independently and items were deleted until the most reliable score was obtained. An examination of each scale and the objective it measures follows.

In the analysis of the *general attitudes toward ITV*,

dropping four items would increase the alpha coefficient from 0.81 to 0.87. This reduced the scale from fourteen statements to ten reliable statements. By dropping four items from the *willingness to serve an expanded audience* scale, the alpha coefficient increased from 0.68 to 0.75. The remaining six items were used to indicate willingness to serve an expanded audience. The third scale, examining *desire to learn new roles and procedures*, was reduced from eleven items to six consistent statements. This increased the alpha coefficient from 0.64 to 0.71. The last scale, *preferences in ITV delivery media*, could not be increased by dropping items. Since it did not meet the researcher's minimum standard of 0.60, the items were examined independently rather than as a homogeneous group. The statements which were removed from the study are noted in the instrument (Appendix A). These are identified as "item deleted."

Eleven items were eliminated because they did not seem to measure what the researcher intended to measure. Two items were dropped when they received almost unanimous acceptance from the population. These items were:

#33. The entire state of Tennessee is the Extension campus, and every Tennessean no matter what education or income level is a potential student who can profit from Extension.

#41. Competent teaching of important subjects can be viewed by clientele through television in counties where that subject has not been targeted.

When analyzing data in parts one and five, frequencies and percentages were calculated for each of the individual

statements. These descriptive statistics included: *utilization of ITV media and tendencies indicating preferred ITV delivery and viewing mediums*. The demographic data were measured using frequency and percentages. These nominally scaled variables document descriptive statistics of the respondents.

The dependent variables in this study include the three attribute scales related to: general attitudes toward ITV, serving an expanded audience, and new roles and procedures. Also reported in the study were descriptive variables: current use of ITV media, availability of ITV equipment, experience and training as a television teacher, ITV delivery preference, and demographic data. The independent variables were selected from the demographic data. These were faculty position, district assignment, discipline assignment, audience assignment, length of employment, and office location.

A one way analysis of variance was used to determine if significant differences existed between the independent and dependent variables. A probability level of 0.05 was used to test for significance. In cases of a significant difference, the Duncan's Multiple Range test was administered to identify pairs of variables significantly different at the 0.05 level.

CHAPTER IV

PRESENTATION AND DISCUSSION OF DATA

Description of Variables

The purpose of this chapter is to document the data collected through the instrument, *Instructional Television, A Survey for Future Expansion of Extension Education Programs at the University of Tennessee*. The principal concern of this study identified major factors or variables which could be used to interpret the *readiness* of Extension personnel to utilize instructional television as a distance education medium.

The concept of *readiness* was ascertained based on three dependent variables: inclinations in general attitudes toward instructional television (ITV), willingness to serve an expanded audience, and desire to learn new roles and procedures. An attitudinal scale examined faculty responses for each dependent variable. Readiness was also described using the variable, current ITV experience and utilization.

In general, Tennessee Extension faculty can be described as slightly positive toward the use of instructional television. This overall *readiness* to utilize ITV, as determined by examining the three attitudinal scales, is

cited in Table 1.

The table illustrates the range of possible scores and respondents' scores for each scale. The mid-point indicated positive and negative relationships between respondents' mean score and the possible range in the scale. A score greater than the mid-point indicated a more positive attitude. The mid-point on the first scale, *general attitude toward ITV*, was 30. Therefore, the group was slightly positive toward ITV with a mean score of 33.9. Their *willingness to serve an expanded audience* was only slightly positive also. The mean score of 20.89 was extremely close to the mid-point of 18. The *desire to learn new roles and procedures* was even less positive. The mid-point was 18 and the group's score was just 19.91.

Table 1 provides the base information for objectives two through five. Additional data in subsequent tables illustrates dissimilarities among the respondents and the relationship to selected independent variables. Significant differences in the degree of positive tendencies are documented with the specific objectives.

The study was both descriptive and correlational. Therefore, certain data were identified in a descriptive manner. These data included the demographic characteristics identified in objective one, current ITV experience and utilization described in objective five, and preferences in ITV delivery media documented in objective six.

TABLE 1. Overall Range, Mean Scores and Standard Deviations for the Three Attitudinal Scales.

Attitudinal Scale	Range		Mid-point	Respondents	
	possible	actual		mean*	s.d.
General Attitudes Toward ITV	10-50	16-50	30	33.99	6.63
Willingness to Serve an Expanded Audience	6-30	7-30	18	20.89	3.50
Desire to Learn New Roles and Procedures	6-30	10-28	18	19.91	3.34

*A mean score greater than the mid-point indicated a more positive attitude. A mean score below the mid-point, indicated a negative attitude.

Objectives

This study provides a research base for those who are assigned the challenge of bringing televised instruction technologies into use. The survey findings parallel the six objectives of the study. The objectives are presented sequentially. Following each objective is a brief enumeration of the findings and a table summarizing the findings.

Objective 1

Develop a demographic profile of faculty employed by the University of Tennessee Agricultural Extension Service.

Demographic Profile of Respondents

Certain demographic characteristics provided important information for interpreting the results of this study. Table 2 reports the demographic profile of faculty participating in this study.

Faculty position. Over two-thirds (69.5 percent) of the respondents were agents. Administrators, specialists and 4-H center managers comprised 30.5 percent of the sample group.

Districts. The distribution of the faculty among the districts was proportional to actual distribution of the population. Districts one and two were the largest: one comprised 24.5 percent, and two comprised 22.5 percent of the faculty. Districts three and four had the smallest percentage participating in the study. District three had

TABLE 2. Demographic Profile of Respondents

Characteristic	Number*	Percent
Faculty Position		
Administrator	10	5.0
4-H Center Manager	2	1.0
Specialist	49	24.5
Agent	<u>139</u>	<u>69.5</u>
Total	200	100.0
District		
One	49	24.5
Two	45	22.5
Three	19	9.5
Four	18	9.0
Five	34	17.0
Six**	<u>35</u>	<u>17.5</u>
Total	200	100.0
Office Location		
City over 50,000	66	33.0
Suburb of City over 50,000	6	3.0
Town or city 10,000-50,000	41	20.5
Rural town under 10,000	<u>87</u>	<u>43.5</u>
Total	200	100.0
Length of Employment		
Less than 3 years	22	11.0
3-7 years	30	15.1
8-15 years	41	20.6
16-25 years	71	35.7
More than 25 years	<u>35</u>	<u>17.6</u>
Total	199	100.0
Gender		
Male	120	60.0
Female	<u>80</u>	<u>40.0</u>
Total	200	100.0
Age		
Under 30 years	17	8.6
30-44 years	87	43.9
45-55 years	65	32.8
Over 55 years	<u>29</u>	<u>14.7</u>
Total	198	100.0

*Frequencies will not sum to 200 due to some respondents choosing not to answer a question.

**If the office was located on the U.T. Knoxville campus, respondents were asked to answer with District 6.

9.5 percent, and district four was the smallest with 9.0 percent. District five comprised 17 percent of the respondents. Employees located on the U.T. Knoxville campus were asked to mark district six as their district (17.5 percent). The demographic profile also provided information on office location, length of employment, gender, and age.

Office location. To determine which respondents worked in a predominately urban area and which served a predominately rural audience, the office location was described using four categories. Offices located in predominately urban areas included 33 percent in cities over 50,000 and 3 percent in suburbs of cities over 50,000. Offices located in generally rural areas consisted of 20.5 percent in towns or cities 10,000 to 50,000 and 43.5 percent in a rural town under 10,000. The purpose of dividing the classifications into the four areas was to provide detailed documentation for future research.

Length of employment, gender, age. These findings were also indicative of general characteristics of the population. Slightly over half of the respondents have worked fifteen years or longer (54.4 percent), whereas 46.7 percent have been employed less than fifteen years with Extension. The majority of the sample was male (60 percent). The faculty under 30 years of age are in the minority (8.6 percent). However, the largest age representation was those 30-44 years old (43.9 percent).

Objective 2

Determine general attitudes, of Tennessee Extension faculty, toward ITV as a medium to expand traditional Extension programs;

and

to examine these attitudes in relation to faculty position (administrator, specialist, agent), district assignment (1-6), audience assignment (youth, adult, both youth and adult), and discipline assignment (agriculture or home economics).

General Attitudes Toward ITV

As noted in Table 1, the sample group as a whole was inclined to have a slightly positive attitude toward ITV. Table 3 illustrates the relationship between the general attitude toward ITV and selected demographic variables.

Faculty position. A significant relationship existed between faculty position and general attitude toward ITV. Administrators and specialists were significantly more positive than agents were in regard to general ITV attitude. The responses from administrators and specialists were about the same (one group was not significantly different from the other).

District assignment. Faculty in districts one and four were less positive in their general attitude toward ITV than faculty in districts two, three, five, and six. Faculty in district six had the most positive attitudes toward ITV.

Audience assignment and discipline assignment. The concept that these variables influence general attitudes toward ITV was rejected in this study. The probability

TABLE 3. Relationship Between General Attitudes Toward ITV and Selected Demographic Variables.

Demographic Variable	n*	mean**	s.d.	f	p
Faculty Position					
Administrator	10	38.80A	4.44	9.80	.0001
Specialist	49	36.67A	5.85		
Agent	139	32.76 B	6.65		
District					
One	49	31.22A	6.50	6.18	<.0001
Two	45	34.80 B	5.99		
Three	19	34.74 BC	7.18		
Four	18	30.72A	6.05		
Five	34	33.94AB	5.83		
Six***	35	38.11 C	6.13		
Agent Assignment by Audience					
Youth	37	33.00	5.93	.065	.9368
Adult	71	32.68	7.17		
Both Youth & Adult	26	32.38	6.63		
Agent Assignment by Discipline					
Agriculture	80	32.81	6.65	.047	.8285
Home Economics	54	32.56	6.83		
Specialist Assignment by Discipline					
Agriculture	31	35.74	6.02	1.89	.1779
Home Economics	8	39.00	5.81		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters beside them are significantly different as calculated using the Duncan's Multiple Range Test.

***If the office was located on the U.T. Knoxville Campus, respondents were asked to answer with District 6.

values were greater than 0.05, therefore, no significant differences were found in relation to these variables and faculty's attitude toward the use of ITV.

Objective 3

Establish the willingness of Extension professionals to use a statewide ITV system to serve an expanded audience;

and

to look at differences between rural versus urban locations (cities over 50,000 and their suburbs versus cities and towns under 50,000), faculty position (administrator, specialist, agent), and audience assignment (youth, adult, both youth and adult).

Willingness to Serve an Expanded Audience

As seen in Table 1, the overall willingness of Extension faculty to serve an expanded audience was slightly positive. The relationship of this variable with selected demographic variables is presented in Table 4. Due to the small number of respondents located in offices in a suburb of a city over 50,000 (3 percent), this variable was combined with cities over 50,000.

Office location, faculty position, audience assignment.

The probability values were used to accept or reject the null hypotheses. A score greater than 0.05 indicated no significant difference in the respondents. Therefore, neither office location, faculty position, nor audience assignment were influencing factors on willingness to serve an expanded audience.

TABLE 4. Relationship Between Willingness to Serve an Expanded Audience and Selected Demographic Variables.

Demographic Variable	n	mean	s.d.	f	p
Office Location					
City/Suburb>50,000*	71	21.48	3.42	1.64	.1959
City 10,000-50,000	41	20.68	4.06		
Town < 10,000	87	20.51	3.16		
Faculty Position					
Administrator	10	22.20	2.97	1.89	.1539
Specialist	48	21.46	3.72		
Agent	139	20.59	3.40		
Agent Assignment by Audience					
Youth	37	19.70	3.45	1.80	.1693
Adult	71	21.00	3.08		
Both Youth & Adult	26	20.62	3.99		

*Due to the small number of respondents located in offices in a suburb of a city over 50,000 (3 percent), this variable was combined with cities over 50,000.

Objective 4

Ascertain desire of Extension professionals to learn new roles and procedures in order to facilitate a statewide televised instructional effort;

and

to examine relationships between faculty position (administrator, specialist, agent), years of experience, and district assignments (1-6).

Desire to Learn New Roles and Procedures

The overall tendency of the faculty was only slightly positive in their desire to learn new roles and procedures, as shown in Table 1. The relationships between this variable and three demographic variables is documented in Table 5.

Faculty position. This variable contributed significantly in relation to the desire to learn new roles and procedures. Administrators and agents were considered similar in their responses, and administrators were considered similar to specialists as well. However, specialists were significantly more positive than agents in regard to learning new roles and procedures.

Length of employment. The number of years that faculty had been employed with the Agricultural Extension Service was not a significant factor in regard to their desire to facilitate ITV by learning new roles and procedures.

District assignment. Significant differences were seen in district assignments and desire to learn new roles and procedures. Agents in district one were less positive than

those in district two toward learning new roles and procedures, but there was little difference between agents in districts two, three, four, and five. The greatest difference was in district six. This district consisted primarily of administrators and specialists on the University of Tennessee Knoxville Campus. Those respondents were significantly more positive than the other respondents concerning their desire to learn new roles and procedures.

TABLE 5. Relationship Between Desire to Learn New Roles and Procedures and Selected Demographic Variables.

Demographic Variable	n*	mean**	s.d.	f	p
Faculty Position					
Administrator	10	20.70AB	2.83	10.51	<.0001
Specialist	48	21.65 B	3.10		
Agent	137	19.23A	3.25		
Length of Employment					
Less than 3 years	21	19.29	3.61	0.38	.8231
3-7 years	30	19.93	3.35		
8-15 years	41	19.96	3.88		
16-25 years	70	19.84	3.10		
over 25 years	34	20.41	3.08		
District					
One	47	18.68A	3.30	4.80	.0004
Two	45	20.11 B	3.41		
Three	19	19.63AB	2.54		
Four	18	18.67AB	2.83		
Five	33	20.12AB	3.56		
Six	35	21.91 C	2.82		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

*Means with different letters are significantly different as calculated using the Duncan's Multiple Range Test.

Objective 5

Determine readiness of Extension faculty to utilize ITV in relation to: current use of ITV media, availability of ITV media, and experience and/or training as an ITV teacher.

The research data analyzing this objective is presented through three procedures. First, a descriptive analysis of Extension faculty's ITV utilization is described by the specific variables: current use of ITV media, availability of equipment, and experience/training as an ITV teacher. Second, a visual overview compares the three attitudinal scales in relation to the specific variables that describe ITV utilization. Third, and the most lengthy, an independent examination of each specific variable describes ITV utilization in relation to each attitudinal scale:

- 1) general attitudes toward ITV,
- 2) willingness to serve an expanded audience, and
- 3) desire to learn new roles and procedures.

Procedure 1-A

Current Use of ITV Media

Table 6 provides a presentation of the faculty's utilization of ITV described by current use of ITV media. Overall, the regular use of televised instruction on a daily, weekly, or monthly basis was minimal. A closer look at the individual variables gives a more detailed explanation concerning participants who use ITV media on a

TABLE 6. Respondents' Utilization of Instructional Television Described by Current Use of ITV Media.

Statement Regarding ITV Utilization	Number*	Percent
Use of Television for Awareness or Marketing of Extension Programs		
Daily	1	.5
Weekly	5	2.5
Monthly	14	7.0
Occasionally	87	43.5
Never	<u>93</u>	<u>46.5</u>
TOTAL	200	100.0
Television of Any Form for Direct Teaching in Group Meetings		
Daily	4	2.0
Weekly	8	4.0
Monthly	30	15.0
Occasionally	137	68.5
Never	<u>21</u>	<u>10.5</u>
TOTAL	200	100.0
Provide Clientele with Extension Produced ITV Programs via Cable or Broadcast Networks		
Daily	2	1.0
Weekly	3	1.5
Monthly	4	2.0
Occasionally	62	31.2
Never	<u>128</u>	<u>64.3</u>
TOTAL	199	100.0
Extension Produced ITV Videos Loaned for In-Home or Office Use		
Daily	3	1.5
Weekly	5	2.5
Monthly	20	10.0
Occasionally	107	53.8
Never	34	17.1
Not Available	<u>30</u>	<u>15.1</u>
TOTAL	199	100.0

*Frequencies will not sum to 200 due to some respondents choosing not to answer a question.

regular basis, an occasional basis, and those who never use ITV as an educational delivery method.

Television for marketing or awareness. This variable was the third most frequently used medium. Only 10 percent of the sample group used television for marketing or awareness of Extension programs on a regular basis (daily, weekly, monthly). Those who used it occasionally included 43.5 percent, and those who never used television for awareness or marketing compiled 46.5 percent of the sample.

Television for direct teaching in group meetings. Television, in any form, was used more frequently for teaching in group meetings than any other ITV delivery medium. Those who used ITV for group presentations on a regular basis (daily, weekly, monthly) compiled 21 percent, and those who used some type of television occasionally included 68.5 percent of the respondents. Only 10.5 percent of the respondents never used television, of any form, for direct teaching in group meetings.

Production of ITV programs on cable/broadcast networks. This variable revealed the least frequently used form of ITV utilization. Less than 5 percent of the respondents used this delivery medium on a daily, weekly, or monthly basis. Thirty-one percent used the networks for occasional distribution, and 64 percent never provided clientele with Extension produced ITV programs via cable or broadcast networks.

Instructional video tapes loaned for home or office use. The second most frequently used method of ITV utilization comprised loaning video tapes. Fourteen percent loaned Extension produced video tapes on a daily, weekly, or monthly basis. Those whose clientele borrowed tapes on an occasional basis included 53.8 percent of the Extension faculty. The respondents who never used this method of delivery compiled 17.1 percent, and those who did not have tapes available for loan to clientele included 15.1 percent.

Complete data regarding the utilization of instructional television by Tennessee Extension faculty are documented in the preceding Table 6.

Procedure 1-B

Availability of ITV Equipment

When examining the faculty's current use of ITV, as described by the availability of ITV equipment, over half of the respondents had access to three of the four types of ITV equipment. A closer look at the individual variables is presented in Table 7. This analysis provides a more detailed explanation concerning respondents with ITV equipment available in their local office, those with personal ITV equipment, those who must borrow ITV equipment and those with no access to ITV equipment.

Access to a video cassette recorder (VCR). The VCR was the most available ITV equipment, as reported by members of

TABLE 7. Respondents' Utilization of Instructional Television Described by Availability of Equipment.

Statement Regarding ITV Utilization	Number*	Percent
Access to VCR to Record or View Televised Programs and Tapes		
Local Office	137	68.5
Personal	14	7.0
District Loan	27	13.5
Other	5	2.5
None Available	<u>17</u>	<u>8.5</u>
TOTAL	200	100.0
Access to Video or Television Production Equipment		
Local Office	61	30.5
Personal	15	7.5
District Loan	47	23.5
Local Production Studio	15	7.5
Other	8	4.0
None Available	<u>54</u>	<u>27.0</u>
TOTAL	200	100.0
Access to a Smart Classroom or Equipment to Link Audiences		
Yes	79	39.5
No	<u>121</u>	<u>60.5</u>
TOTAL	200	100.0
Access to Satellite Downlink for Group Conferences and Meetings		
Local Office	17	8.5
Another Facility in County	87	43.5
Facility in Neighboring County	31	15.5
None Available	<u>65</u>	<u>32.5</u>
TOTAL	200	100.0
Record of Clientele with Satellite Reception Capabilities		
Yes	2	1.0
No	<u>198</u>	<u>99.0</u>
TOTAL	200	100.0
If Optimal Access to ITV Equipment Were Available, Would Make More Use of ITV		
Yes	98	49.0
No	14	7.0
Unsure	<u>88</u>	<u>44.0</u>
TOTAL	200	100.0

*Frequencies will sum to 200 respondents.

the sample group. Those with VCR equipment in their local office included 68.5 percent of the respondents. Seven percent had personal equipment that could be used to record or playback televised programs and video cassette tapes. Agents who could borrow equipment from the district office and specialists who could borrow equipment from the communications department comprised 13.5 percent of the group. The percent who had some other access included 2.5 percent. This access was explained as borrow from a friend, borrow from an organization, borrow from the school system, and rent from a video store. Only 8.5 percent did not have access to VCR equipment.

Access to video or television production equipment.

Over two-thirds of the faculty had access, in some way, to ITV production equipment. Those with equipment in the local office included 30.5 percent. Those who had to borrow equipment (by using their personal equipment, borrowing from the district, or using a production studio) comprised 38.5 of the respondents. Four percent did not have access to ITV production equipment within the system. They listed borrowing from a friend and rental as their only source of ITV production equipment. Twenty-seven percent had no access to ITV production equipment.

Access to a smart classroom or equipment to link audiences. This was the least available form of ITV equipment. Only 39.5 percent had access to equipment that

would allow them to link audiences together for group presentations at the same time. Those who did not have access to a smart classroom, closed-circuit, or cable linkage totaled 60.5 percent of the faculty.

Access to satellite downlink for group conferences.

This was the second most accessible form of ITV equipment. Although only 8.5 percent had this capability in their local office, 43.5 percent had access to another facility in the county. And, 15.5 percent could downlink satellite transmissions at a facility in a neighboring county. Almost one-third of the faculty (32.5 percent) did not have access to satellite downlink equipment.

Records of clientele with satellite reception capabilities. Only two respondents, or one percent, of the sample kept records of clientele who could receive Extension produced instructional television in their homes via a satellite dish.

Optimal access to ITV equipment and increased use.

Faculty were asked if they would make more extensive use of instructional television, provided they had optimal access to television programming and equipment. The group was divided in their responses. Forty-nine percent, almost half, replied with a positive, yes, answer. Only 7 percent replied no, they would not increase ITV use. However, there were 44 percent who were unsure if optimal access to television programming and equipment would result in more

extensive use of instructional television.

Procedure 1-C

Experience and Training as an ITV Teacher

Table 8 provides a presentation of the faculty's current ITV use described by their experience and/or training as an ITV teacher. Overall, the sample population received some training as ITV teachers, but they lacked confidence as ITV teachers. A closer look at the individual variables gives detailed explanations concerning respondents' experience and training as ITV teachers.

Experience as ITV teachers. Faculty expressing confidence in his or her role as an ITV teacher comprised less than half of the sample group. Only 13.5 percent felt confident, and 28.5 percent were somewhat confident. In contrast, 6.5 percent were insecure, and 12 percent were somewhat insecure. Over a third of the group (39.5 percent) had no ITV teaching experience. Therefore, they could not predict how confident or insecure they would be teaching on television.

Training received in teaching and/or using ITV.

Respondents were asked how many forms of training they had received in teaching and/or using ITV. Almost half of the group (45.5 percent) indicated they had received no ITV training. Ten percent had enrolled in graduate courses on this subject, and only 5.5 percent had taken undergraduate

TABLE 8. Respondents' Utilization of Instructional Television Described by Experience and Training as an ITV Teacher.

Statement Regarding ITV Utilization	Number*	Percent
Experience as an ITV Teacher, the On-Camera Presenter		
Confident	27	13.5
Somewhat Confident	57	28.5
Somewhat Insecure	24	12.0
Insecure	13	6.5
No Experience	<u>79</u>	<u>39.5</u>
TOTAL	200	100.0
Training in Teaching and/or Using Instructional Television		
Graduate Courses	20	10.0
In-service Training	71	35.5
Undergraduate Courses	11	5.5
Self-taught	64	32.0
No Training*	91	45.5
TOTAL RESPONDENTS = 200**	**	**
Number of Training Classes Received		
Formal Courses	27	13.5
Self-Taught or In-service	87	43.5
No Training*	<u>86</u>	<u>43.0</u>
TOTAL	200	100.0

*The number of respondents receiving "no training" are not equal in the two analyses due to five respondents who marked no training and at least one other type of training received.

**Respondents were asked to mark "all that apply" in relation to "Training as a TV Teacher." Therefore, frequencies will sum greater than 200 respondents participating in the study.

courses in instructional television. About a third of the faculty (35.5 percent) had received in-service training on teaching and/or using ITV, and almost another third (32 percent) had pursued some form of self-training (Table 8).

In further analysis of the training received, data were collapsed to look at the group as a whole. Graduate and undergraduate courses, when combined, had been acquired by 13.5 percent of the group. The in-service group and the self-taught group were also combined to total 43.5 percent. As a result of this analysis, only 43 percent had actually received no training. Five respondents indicated they received no training who also marked that they received at least one other type of training.

Procedure 2

A Visual Overview Comparing the Three Attitudinal Scales In Relation to the Specific ITV Descriptive Variables

As noted in Table 1, the overall concept of *readiness* to utilize instructional television examined three dependent variables based on: general attitude toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures. Therefore, to describe the *readiness* of Extension faculty to utilize instructional television equipment in relation to use of ITV media, availability of ITV equipment, and experience/training as an ITV teacher, the data must be compared to the three

attitudinal scales (general attitude, serving an expanded audience, and learning new roles and procedures). These data are summarized in the next eight tables.

We have seen in Table 1 that general attitude toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures are slightly positive attitudes among the sample population. We have also seen in Tables 6-8 that regular use of ITV media was minimal, availability of equipment was moderate, and almost half of the faculty had no experience/training as ITV teachers.

Therefore, what relationships, if any, exist between readiness to utilize instructional television and current utilization of instructional television?

A visual overview of these relationships is presented in Table 9.

Table 9 illustrates the relationships between the dependent attitudinal variables and the descriptive nominal variables. A "Y" for "yes" indicates a significant relationship between these variables at the <0.05 probability level. A "N" for "no" means that the attitudinal scales -- for general ITV attitude, serving an expanded audience, and learning new roles and procedures -- were not influenced by these nominal variables. A discussion and table detailing each relationship is presented in Procedures 3A through 3C.

TABLE 9. Visual Overview of the Readiness to Utilize ITV Based on Three Attitudinal Scales in Relation to Current Utilization of Instructional Television.

Utilization of ITV Descriptive Variables	Readiness Attitudinal Scales		
	General Attitude	Expanded Audience	New Roles & Procedures
<u>Availability of Equipment</u>			
VCR to Record/Playback Tapes	N	N	N
TV Production Equipment	N	N	N
Smart Classroom	Y	Y	Y
Satellite Downlink	Y	N	Y
Clients with Satellites	N	N	Y
Optimal Access to Equipment	Y	Y	Y
<u>Experience as a TV Teacher</u>			
Confidence Teaching with TV	N	Y	N
Training Teaching with TV	Y	Y	Y
<u>Utilization of Television</u>			
Awareness & Marketing	Y	N	Y
Group Meetings	N	N	N
Producing Network Programs	N	N	N
Home Loan of Video Tapes	Y	N	Y

Y = Yes, there was a relationship between the attitudinal scale and the descriptive variable at the <0.05 probability level.

N = No, the attitudinal scale was not influenced by the variable.

Procedure 3-A

Readiness of Extension Faculty to Utilize ITV Based on Three Attitudinal Scales in Relation to Current Use of ITV Media

Three tables examine the relationship between readiness to utilize ITV, as described by the three attitudinal scales, and current use of instructional television media as a program delivery method. A separate analysis illustrates the relationship between the current use of ITV media and each attitudinal scale: general attitude toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures. The number of faculty who used ITV media daily or weekly, were combined for these analyses.

General attitudes toward ITV and current use of ITV media. The relationship between the readiness to utilize ITV and general attitudes toward ITV was measured by studying the current use of ITV media. Table 10 illustrates the significant differences in these variables.

Marketing and awareness. Respondents who used television for marketing and awareness on a daily or weekly basis had more positive attitudes toward ITV than the respondents who never used it for marketing or awareness. There were no significant differences between the respondents who used television monthly or occasionally and the other two groups.

Group meetings or broadcast/cable media. There were no significant relationships between general attitudes toward

TABLE 10. An Analysis Between General Attitudes Toward ITV and Current Use of ITV Media.

Independent Variables	n*	mean**	s.d.	f	p
Use of TV for Marketing and Awareness of Extension					
Daily/Weekly	6	39.00A	7.38	3.08	.0286
Monthly	14	36.21AB	5.90		
Occasionally	87	34.60AB	6.22		
Never	93	32.75 B	6.85		
Television for Direct Teaching in Group Meetings					
Daily/Weekly	12	37.00	7.06	1.13	.3390
Monthly	30	33.93	6.78		
Occasionally	137	33.94	6.72		
Never	21	32.62	5.42		
Extension Produced ITV Programs on Broadcast/Cable					
Daily/Weekly	5	39.00	10.34	1.03	.3814
Monthly	4	34.50	5.51		
Occasionally	62	33.62	6.73		
Never	128	33.91	6.47		
Home Loan of Instructional Video Tapes					
Daily/Weekly	8	41.00A	4.34	4.18	.0028
Monthly	20	37.20A	6.81		
Occasionally	107	33.26 B	6.58		
Never	34	33.12 B	5.98		
Not Available	30	33.37 B	6.58		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters beside them are significantly different as calculated using the Duncan's Multiple Range Test.

ITV and the use of television, in any form, for direct teaching in group meetings. There were also no significant relationships between general ITV attitudes and Extension produced ITV programs for broadcast or cable media.

Home loan of instructional video tapes. The regular use of this media was significantly related to general attitudes toward ITV: the more often the tapes were loaned to clientele, the more positive the general attitude for ITV. The faculty using this delivery method on a daily/weekly and monthly basis were similar. The faculty who used this delivery method occasionally, never, or did not have them available were also similar. However, the two groups of faculty were significantly different.

Willingness to serve an expanded audience and current use of ITV media. Table 11 analyzes the relationship between willingness to serve an expanded audience and current use of ITV media as a program delivery method. Three of the variables approached significance in this relationship; however not one met the researcher's criteria. In order to expect a significant difference, the probability level must be less than 0.05. Therefore, the researcher rejected the concept that willingness to serve an expanded audience is affected by current use of ITV media. The variables that determined current use of ITV media included: use of television for marketing and awareness, television for direct teaching in group meetings, Extension produced

TABLE 11. An Analysis Between Willingness to Serve an Expanded Audience and Current Use of ITV Media.

Independent Variables	n*	mean**	s.d.	f	p
Use of TV for Marketing and Awareness of Extension					
Daily/Weekly	6	23.50	1.76	1.57	.1988
Monthly	14	21.64	3.27		
Occasionally	86	20.88	3.63		
Never	93	20.61	3.38		
Television for Direct Teaching in Group Meetings					
Daily/Weekly	12	22.17	3.64	2.61	.0526
Monthly	30	22.00	3.31		
Occasionally	136	22.72	3.34		
Never	21	19.67	3.97		
Extension Produced ITV Programs on Broadcast/Cable					
Daily/Weekly	5	24.20	1.92	2.17	.0923
Monthly	4	19.50	4.20		
Occasionally	61	21.18	3.28		
Never	128	20.63	3.50		
Home Loan of Instructional Video Tapes					
Daily/Weekly	8	22.50	2.98	2.34	.0567
Monthly	20	21.25	3.35		
Occasionally	106	20.98	3.06		
Never	34	21.29	3.99		
Not Available	30	19.27	3.99		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters beside them are significantly different as calculated using the Duncan's Multiple Range Test.

ITV programs for broadcast or cable media, and home loan of instructional video tapes.

Desire to learn new roles and procedures and current use of ITV media. The two variables indicating significance in the general attitudes toward ITV were also significant in this comparison: marketing/awareness and home loan of tapes. The desire to learn new roles and procedures in relation to the faculty's current use of ITV media is illustrated in Table 12.

Marketing and awareness. The respondents who used television for awareness and marketing on a daily or weekly basis were significantly more positive toward learning new roles and procedures. The respondents who used this media monthly, occasionally, or never were similar and less positive in their responses.

Group meetings or broadcast/cable. No significant relationships were found in either the use of television for direct teaching in group meetings, or the production of ITV programs for broadcast or cable media. Therefore, the desire to learn new roles and procedures was not influenced by either of these variables.

Home loan of tapes. A significant relationship was seen in the home loan of instructional video tapes. The respondents whose clients borrowed instructional video tapes on a daily/weekly basis were significantly more positive toward learning new roles and procedures. The respondents

TABLE 12. An Analysis Between Desire to Learn New Roles and Procedures and Current Use of ITV Media.

Independent Variable	n*	mean**	s.d.	f	p
Use of TV for Marketing and Awareness of Extension					
Daily/Weekly	6	23.33A	4.63	3.63	.0141
Monthly	14	20.00 B	3.94		
Occasionally	86	20.30 B	3.16		
Never	91	19.31 B	3.19		
Television for Direct Teaching in Group Meetings					
Daily/Weekly	11	22.00	3.74	2.43	.0665
Monthly	30	19.43	3.58		
Occasionally	135	20.01	3.28		
Never	21	18.86	2.80		
Extension Produced ITV Programs on Broadcast/Cable					
Daily/Weekly	5	23.20	5.17	2.03	.1113
Monthly	4	19.25	4.65		
Occasionally	61	19.51	3.48		
Never	126	20.02	3.12		
Home Loan of Instructional Video Tapes					
Daily/Weekly	8	23.25A	3.65	2.69	.0327
Monthly	20	20.35 B	2.98		
Occasionally	106	19.77 B	3.23		
Never	32	19.13 B	3.54		
Not Available	30	20.13 B	3.34		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters beside them are significantly different as calculated using the Duncan's Multiple Range Test.

who used this method monthly, occasionally, never, or did not have them available were similar in their responses and less positive than the first group.

Procedure 3-B

Readiness of Extension Faculty to Utilize ITV Based on Three Attitudinal Scales in Relation to Available ITV Equipment

The relationship between readiness to utilize ITV, as described by the three attitudinal scales, and availability of instructional television equipment is summarized in three tables: general attitude toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures.

General attitude toward ITV and availability of ITV equipment. Table 13 analyzes of the comparison between the dependent variable *general attitude toward ITV* and the descriptive variable *availability of equipment*.

Video cassette recorders or ITV production equipment. Access to a VCR was not significantly related to differences in general attitudes toward instructional television. Likewise, the availability of ITV production equipment had no significant effect on this population's general attitude toward ITV. However, significant differences existed in relation to three of the remaining four variables.

Smart classroom. Respondents with access to a smart classroom had significantly more positive general attitudes

TABLE 13. An Analysis Between General Attitudes Toward ITV and Availability of ITV Equipment.

Independent Variables	n*	mean**	s.d.	f	p
Access to a VCR					
Local Office	137	33.35	6.66	1.03	.3941
Personal Equipment	14	35.50	5.88		
District Loan	27	35.59	6.74		
Other	5	35.40	6.23		
None Available	17	34.88	6.90		
Access to ITV					
Production Equipment					
Local Office	61	33.54	6.95	0.65	.6627
Personal Equipment	15	32.27	6.32		
District Loan	47	34.53	6.04		
Local Studio	15	36.07	7.51		
Other	8	34.88	3.76		
None Available	54	33.78	6.99		
Access to a Smart Classroom					
Available	79	35.86A	6.37	10.96	.0011
Not Available	121	32.76 B	6.54		
Satellite Downlink Capabilities					
Local Office	17	36.06A	6.22	3.81	.0111
Another Facility	87	34.95A	6.49		
Neighboring County	31	34.68A	5.88		
None	65	31.80 B	6.84		
Records of Clients with Satellite Reception Capabilities					
Have Records	2	42.50	10.6	3.37	.0680
No Client Records	198	33.90	6.57		
Optimal Access to ITV					
Would Increase Use	98	35.20A	6.57	4.14	.0173
Would Not Increase	14	34.86AB	8.08		
Unsure	88	32.49 B	6.22		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters are significantly different as calculated using the Duncan's Multiple Range Test.

toward ITV than the respondents without access to a smart classroom.

Satellite downlink capabilities. Respondents with access to this media were significantly more positive concerning their general attitude toward ITV than the respondents without access to a satellite downlink. The data indicated no significant differences in whether the downlink capabilities were in the local office, another facility in the county or in a neighboring county.

Records of clients with satellite reception capability. The difference between respondents who did and did not maintain such records only approached significance. It did not meet the prescribed <0.05 criteria, the research showed no significant relationship in regard to this practice and the faculty's general attitude toward ITV.

Optimal access to ITV equipment. This, however, was a significant variable. Respondents were asked whether they would make greater utilization of ITV if optimal access to the equipment were available. Those who answered yes indicated significantly more positive general attitudes to ITV than those who were unsure. Table 13 also cited no significant differences between either the respondents who answered yes to this statement or the respondents who answered no. Furthermore, the differences in the respondents who answered no or the respondents who answered unsure were not significant either.

Willingness to serve an expanded audience and availability of ITV equipment. Table 14 compares the relationship between willingness to serve an expanded audience and the availability of ITV equipment. Two of the variables had a significant influence on the willingness to serve an expanded audience: access to a smart classroom and optimal access to ITV equipment.

Video cassette recorder or ITV production equipment. Access to a VCR was not significantly related to the faculty's willingness to serve an expanded audience. Furthermore, the researcher rejected the premise that availability of ITV production equipment influenced the faculty's willingness to serve an expanded audience. The probability score for access to ITV production equipment was greater than 0.05.

Smart classroom. This was a significant variable. The respondents with access to a smart classroom were significantly more positive in regard to serving an expanded audience than the faculty without access to the equipment.

Satellite downlink capabilities or records of clients with satellite reception capabilities. Neither variable showed significant influence on how positive nor how negative the faculty responded to serving an expanded audience. Therefore, no relationship existed between willingness to serve an expanded audience and either having access to satellite downlink equipment or records of clients

TABLE 14. An Analysis Between Willingness to Serve an Expanded Audience and Availability of ITV Equipment.

Independent Variables	n*	mean**	s.d.	f	p
Access to a VCR					
Local Office	136	20.79	3.30	0.79	.5310
Personal Equipment	14	22.00	3.11		
District Loan	27	21.41	4.74		
Other	5	20.20	3.11		
None Available	17	20.12	2.71		
Access to ITV					
Production Equipment					
Local Office	60	21.25	3.39	1.92	.0927
Personal Equipment	15	20.47	3.72		
District Loan	47	20.70	2.73		
Local Studio	15	22.80	3.26		
Other	8	22.00	3.46		
None Available	54	20.07	3.93		
Access to a Smart Classroom					
Available	78	21.51A	3.17	4.22	.0413
Not Available	121	20.49 B	3.00		
Satellite Downlink Capabilities					
Local Office	17	22.00	2.76	1.27	.2863
Another Facility	86	20.99	3.74		
Neighboring County	31	21.19	3.36		
None	65	20.32	3.26		
Records of Clients with Satellite Reception Capabilities					
Have Records	2	24.50	2.12	2.21	.1390
No Client Records	197	20.85	3.46		
Optimal Access to ITV					
Would Increase Use	98	21.95A	2.92	9.84	.0001
Would Not Increase	14	19.79 B	5.81		
Unsure	87	19.87 B	3.23		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters beside them are significantly different as calculated using the Duncan's Multiple Range Test.

with satellite reception capabilities.

Optimal ITV access. Responses to this statement showed a significant influence upon willingness to serve an expanded audience, as seen in Table 14. The respondents who would increase ITV use were significantly more positive toward serving an expanded audience than the respondents who were unsure or those who would not increase use of instructional television. The groups who answered no or unsure to this statement were similar in their responses.

Desire to learn new roles and procedures and availability of ITV equipment. The third analysis in procedure 3-B compared desire to learn new roles and procedures with the availability of ITV equipment. The findings illustrated in Table 15 were very similar to the analysis in Table 13 between general attitudes toward ITV and availability of ITV equipment. Once again, two variables did not have a significant influence on the sample group's desire to learn new roles and procedures: access to a video cassette recorder nor availability of ITV Production Equipment.

The remaining four variables, however, indicated a significant influence on the faculty's desire to learn new roles and procedures. A probability score <0.05 identifies the significant variables in Table 15.

TABLE 15. An Analysis Between Desire to Learn New Roles and Procedures and Availability of ITV Equipment.

Independent Variables	n*	mean**	s.d.	f	p
Access to a VCR					
Local Office	134	19.66	3.49	1.57	.1846
Personal Equipment	14	21.07	2.59		
District Loan	27	20.96	3.02		
Other	5	18.40	2.30		
None Available	17	19.76	3.07		
Access to ITV					
Production Equipment					
Local Office	60	19.70	3.54	1.72	.1321
Personal Equipment	15	19.73	3.10		
District Loan	46	19.80	2.89		
Local Studio	15	21.67	4.18		
Other	8	22.00	3.21		
None Available	53	19.49	3.18		
Access to a					
Smart Classroom					
Available	77	21.03A	3.28	15.01	.0001
Not Available	120	19.20 B	3.19		
Satellite Downlink					
Capabilities					
Local Office	17	21.06A	3.40	3.55	.0154
Another Facility	85	20.47A	3.45		
Neighboring County	30	19.87AB	3.30		
None	65	18.91 B	2.99		
Records of Clients					
with Satellite					
Reception Capabilities					
Have Records	2	25.50A	3.54	5.79	.0171
No Client Records	195	19.86 B	3.30		
Optimal Access to ITV					
Would Increase Use	98	20.87A	3.32	8.80	.0002
Would Not Increase	14	19.50AB	4.20		
Unsure	85	18.82 B	2.90		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters beside them are significantly different as calculated using the Duncan's Multiple Range Test.

Smart classroom. Respondents having access to a smart classroom were significantly more positive toward learning new roles and procedures than those who did not have access to a smart classroom.

Satellite downlink capabilities. Respondents with access to a satellite downlink in their own county (local office or another facility) were significantly more positive than those without access to this equipment, concerning new roles and procedures. (There were no significant differences between those who had to travel to a neighboring county and the other groups.)

Records of clients with satellite reception capability. The faculty who maintained records of clients who could receive satellite programs, were significantly more positive in their desire to learn new roles and procedures than those who did not maintain such a list. Due to the low number of respondents (one percent of the sample group), this relationship should be interpreted with caution.

Optimal access to ITV equipment. In this comparison of variables, the faculty who were unsure about their increase in ITV use were significantly less positive toward learning new roles and procedures than the group who would increase their ITV use. The faculty who would not increase their ITV use, if they had optimal access, were similar to both: those who would use more ITV and faculty who were uncertain about whether they would make more extensive use of ITV.

Procedure 3-C

The Readiness of Extension Faculty to Utilize ITV Based on Three Attitudinal Scales in Relation to Experience and/or Training as an ITV Teacher

The relationship between readiness to utilize ITV, as described by the three attitudinal scales, and experience and/or training as an ITV teacher is summarized in Table 16. The table is subdivided into the three attitudinal scales: general attitudes toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures.

Respondents indicated all forms of training they had received in teaching and/or using ITV. Since the frequencies for this variable totalled greater than 200, the data were collapsed for purpose of analyzing the population as a whole (see Table 8). The researcher combined similar types of training. This process selected only the highest level attained by each faculty member. The respondents who completed graduate or undergraduate courses were identified as "formal classes." Faculty who completed in-service training were combined with self-taught faculty. Those who received no training were left as a solitary group.

General attitudes toward instructional television. The readiness to utilize ITV as described by general attitude toward ITV was studied in relation to ITV teaching experience and/or training as an ITV teacher.

TABLE 16. An Analysis of Readiness to Utilize ITV Based on Three Attitudinal Scales in Relation to Experience and Training as an ITV Teacher.

Scale and Variable	n*	mean**	s.d.	f	p
<u>General Attitudes Toward Instructional Television:</u>					
Experience as TV Teacher					
Confident	27	34.59	7.36	2.20	.0699
Somewhat Confident	57	35.95	7.12		
Somewhat Insecure	24	32.58	6.71		
Insecure	13	32.38	5.44		
No Experience	79	33.05	5.93		
Training in ITV					
Formal Classes	27	35.00A	6.79	6.91	.0013
Self-Taught/In-service	87	35.59A	6.38		
No Training	86	32.05 B	6.40		
<u>Willingness to Serve an Expanded Audience:</u>					
Experience as TV Teacher					
Confident	27	23.07A	2.04	3.40	.0103
Somewhat Confident	57	20.81 B	3.94		
Somewhat Insecure	23	20.57 B	3.92		
Insecure	13	20.46 B	2.72		
No Experience	79	20.37 B	3.24		
Training in ITV					
Formal Classes	27	22.04A	3.47	8.24	.0004
Self-Taught/In-service	87	21.56A	3.53		
No Training	86	19.70 B	3.36		
<u>Desire to Learn New Roles & Procedures:</u>					
Experience as TV Teacher					
Confident	27	20.44	3.61	1.31	.2673
Somewhat Confident	57	20.54	3.50		
Somewhat Insecure	22	19.82	3.70		
Insecure	13	19.77	3.56		
No Experience	78	19.32	2.94		
Training in ITV					
Formal Classes	27	19.70AB	3.45	5.64	.0042
Self-taught/In-service	87	20.67A	3.53		
No Training	86	18.91 B	3.37		

*n = 200. Frequencies may not sum to 200 due to some respondents choosing not to reply to a statement.

**Means with different letters are significantly different as calculated using the Duncan's Multiple Range Test.

Experience as an instructional television teacher.

This variable approached significance in relation to the participants' general attitudes toward ITV. However, since the probability score was slightly greater than 0.05, the researcher rejected any significant relationship.

Training in teaching and/or using ITV. On the other hand, this significant variable influenced faculty's general attitudes toward ITV. Those who received training -- whether formal classes, in-service, or self-taught -- had significantly more positive general attitudes toward ITV than the group who received no training. Cited earlier in Table 8, the group who had received no training comprised 43 percent of the respondents.

Willingness to serve an expanded audience. The second step in procedure 3-C examined the willingness of Extension faculty to serve an expanded audience and ITV teaching experience and/or training as an ITV teacher.

Experience as an ITV teacher. Since the probability value was less than 0.05, the researcher accepted the premise that a relationship existed between willingness to serve an expanded audience and experience as an ITV teacher. The respondents who were confident as television teachers were significantly more positive in their willingness to serve an expanded audience than the other groups. Table 8 indicated that only 13.5 percent of the faculty felt confident in their experience as ITV teachers or on-camera

presenters. Table 16 also showed no significant difference between this variable and the groups who were somewhat confident, somewhat insecure, insecure, or having no experience.

Training in teaching and/or using ITV. This significant variable also influenced the willingness to serve expanded audiences. Those who received training -- whether formal classes, in-service, or self-taught -- were significantly more positive in regard to serving an expanded audience than the group who received no training.

Desire to learn new roles and procedures. The last analysis in procedure 3-C examined the desire of Extension faculty to learn new roles and procedures in relation to ITV teaching experience and/or training as an ITV teacher (see Table 16).

Experience as an ITV teacher. The probability value greater than 0.05 indicated that experience as an ITV teacher was not significantly related to the desire of Extension faculty to learn new roles and procedures. Therefore, the researcher rejects the premise that faculty who are more confident as ITV teachers will have more positive attitudes toward learning new roles and procedures.

Training in teaching and/or using ITV. However, this significant variable did relate to faculty's desire to learn new roles and procedures. The faculty who received in-service training or were self-taught showed significantly

more positive responses in regard to serving an expanded audience than the group who had received no training. Those who completed formal classes in teaching and/or using ITV were similar to the group who received in-service training or were self-taught. However, those completing formal courses were also similar to those who received no training.

Objective 6

Assess preferences of Extension professionals in utilizing ITV delivery media including:

- a) motivational and audiovisual use of the medium,**
- b) individual versus group viewing of developed programs, and**
- c) sharing of faculty and productions.**

The final objective provides a descriptive assessment analyzing preferences of Extension professionals in utilizing ITV delivery media. Two procedures illustrate the data analysis.

Procedure 1

Responses Regarding Instructional Functions of ITV Media

Procedure 1 is a descriptive analysis of the nine attitudinal statements. The statements are divided into three groups according to the instructional functions and concerns of ITV program delivery. A separate table parallels each of these divisions: a) motivational and audiovisual use of the medium, b) individual versus group viewing, and c) sharing of faculty and productions.

In this procedure, respondents answered each statement based on how strongly they agreed or disagreed with a statement. The scores ranged from one (strong agreement) to five (strong disagreement), and the mid-point (3.0) indicated a neutral or undecided response. The exact statements are in Appendix A, part 5 of the survey instrument.

Motivational or audiovisual. When using television as motivational technique or as an audiovisual tool, the group was not in strong agreement or disagreement with either media (illustrated in Table 17).

Audiovisual use of instructional television. Audiovisual media provides instructional support or supplements a group meeting situation. The faculty tended to agree that ITV use "as a supplement to a group meeting makes for more effective learning than agent produced county programs alone." This statement received a low score of 2.47. A score of one (1) would indicate the faculty were in strong agreement with the statement. Therefore, Extension faculty tended to agree with using television as an audiovisual tool.

Motivational use of instructional television. The statement regarding the "power of broadcast television to reach people who may not yet know what they want," described the motivational use of ITV media. The faculty were in less agreement with using broadcast television as a motivational

TABLE 17. Mean Scores and Standard Deviations for Responses Regarding Utilization of ITV as a Motivational Technique or Audiovisual Tool.

Variable	Respondents	
	mean*	s.d.
The use of television as a supplement to a group meeting situation makes for a more effective learning situation than agent produced county programs alone.	2.47	0.89
Extension needs the power of broadcast television to reach people who may not yet know what they want, and who are likely to be educationally disadvantaged and frequently poor.	2.52	0.82
Clientele's in-home use of instructional television should be limited to borrowing instructional tapes, because Extension cannot afford to compete with commercial broadcast television.	3.27	0.93

*The mean score indicates the respondents' level of agreement or disagreement with each statement.

The attitudinal scale ranged from 1 through 5.

- 1 = Strongly Agree
- 2 = Agree
- 3 = Undecided
- 4 = Disagree
- 5 = Strongly Disagree

technique. Table 17 showed that the overall mean for the sample population was 2.52. (Strong agreement with this statement would indicate a positive attitude toward motivational use of the medium.)

The group slightly disagreed (3.27) with the statement "in-home use of ITV should be limited to borrowing instructional tapes, because Extension cannot afford to compete with broadcast television." This would seem to indicate that faculty were slightly positive toward utilizing broadcast television for instruction. A low mean score (between 1 and 3) would indicate that the faculty preferred limiting the use of ITV to home loan of instructional tapes. The comparison of motivational broadcast television to home loan of video tapes was important, since video tapes can be either audiovisual or motivational depending on the design.

Individual versus group viewing. Three statements in Table 18 indicate faculty preferences when considering ITV viewing media for individual viewers or group audiences.

Group viewing. When asked if "maintaining participation records through face-to-face contacts was more important than reaching as many viewers as possible," the group rated the statement a 3.58. This indicated slight disagreement with the need to place more importance on group contacts. If they had agreed with the statement, it would have indicated a stronger desire to know who was participa-

TABLE 18. Mean Scores and Standard Deviations for Responses Regarding Utilization of ITV Media for Individual versus Group Viewing Delivery.

Variable	Respondents	
	mean*	s.d.
The need to maintain participation record through face-to-face contacts is more important than the goal of reaching as many viewers as possible.	3.58	0.62
Satellite and cable telecommunications capitalize on the opportunity to bring groups of people from different locations into one place at the same time.	2.16	0.55
The ideal learning situation would be for clientele to be able to remain at their own home, enroll in the class by computer, and use the family or business telephone to call in questions and interact with the instructor and other participants while participating in an interactive televised educational program.	2.84	0.97

*The mean score indicates the respondents' level of agreement or disagreement with each statement.

The attitudinal scale ranged from 1 through 5.

- 1 = Strongly Agree
- 2 = Agree
- 3 = Undecided
- 4 = Disagree
- 5 = Strongly Disagree

ting in Extension programs than to reach as many individual viewers as possible with the information.

The faculty tended to agree that satellite and cable telecommunications allowed faculty to capitalize on the opportunity to bring groups of people together. The low mean score of 2.16 showed agreement with the statement, as seen in Table 18. This indicated a positive attitude among the respondents toward using ITV media for bringing groups of people together into one place at the same time.

(Satellite media has both motivational and audiovisual functions depending on the design.)

Individual Viewing of ITV Media. Individual viewing was addressed in the statement regarding clientele being able to "remain at their own homes and participate with the instructor and other participants through an interactive televised educational program." The respondents were in less agreement (2.84) with the ideal learning situation being individual viewing of Extension programs in their homes.

Sharing of faculty and productions. Table 19 addresses the respondents agreement or disagreement with sharing faculty or sharing productions.

Sharing of faculty. The statement regarding sharing of faculty was the one delivery variable in which the faculty shared the most agreement. Even though the score was only 2.05, this moderately positive reaction was the one variable

TABLE 19. Mean Scores and Standard Deviations for Responses Regarding Utilization of ITV Media for Sharing of Faculty and Productions.

Variables	Respondents	
	mean*	s.d.
More than any other teaching method, instructional television has the potential to foster the sharing of expert faculty across county, district, and state boundaries.	2.05	0.63
Money saved by using productions generated from other states or agencies offsets any loss of credibility to the University of Tennessee Extension Service.	2.99	0.93
Problems in scheduling make the widespread use of television across the state highly impractical.	3.00	0.92

*The mean score indicates the respondents' level of agreement or disagreement with each statement.

The attitudinal scale ranged from 1 through 5.

- 1 = Strongly Agree
- 2 = Agree
- 3 = Undecided
- 4 = Disagree
- 5 = Strongly Disagree

(from all nine delivery preference variables) which received the most positive reaction from the faculty. The respondents tended to agree that "more than any other teaching method, ITV has the potential to foster sharing of expert faculty across county, district, and state boundaries."

Sharing of productions. However, the degree of agreement that respondents' granted to this variable was quite different compared to the sharing of faculty. The strength of agreement concerning sharing of productions rated a mean score of 2.99 as seen in Table 19. This indicated a profoundly low level of agreement toward the sharing of ITV productions. Therefore, the faculty were almost neutral toward deciding whether the sharing of productions from other states and agencies would off-set any "loss of credibility to the University of Tennessee Extension Service."

Furthermore, the respondents were generally undecided concerning practicality and problems in scheduling a state-wide televised educational program. This item received a 3.0 which was neither positive or negative. Therefore, Table 19 indicated that the faculty were neutral toward the widespread use of instructional television across the state.

Procedure 2

Ranked Preferences in ITV Viewing and Delivery Media

Procedure 2 is a presentation of data in the form of rank scales. This descriptive data indicated the respondents' preferred methods to view and deliver ITV programs. Participants examined a list of television media, then ranked their preferences from one (first) through ten (last). Two tables illustrate the means, standard deviations and rank order for the respondents.

Television viewing preference. Respondents were asked, "If YOU were to VIEW an instructional program on television, which method would YOU prefer to receive the information?" The mean scores and the rank order for the group are cited in Table 20.

The use of video cassettes, in any form, received the top three rankings (home loan, first; recorded from network or cable station, second; or viewed at a group meeting, third). The middle group consisted of public broadcast (4), satellite downlink in home or office (5), satellite downlink in group meeting or conference (6), and specialized cable programming (7). The last three choices were commercial broadcast television, group meetings connected by closed-circuit television, and interactive video disks (8, 9, and 10, in order).

TABLE 20. Respondent Preference in Viewing an Instructional Television Program.

Television Viewing Medium	rank*	Respondents		
		n**	mean	s.d.
Commercial Broadcast Television	8	188	6.36	3.06
Public Broadcast Television	4	186	5.26	2.68
Specialized Cable Programming	7	184	5.79	2.43
Home Loan Video Cassettes	1	190	3.66	2.50
Personally Record from Broadcast or Cable to View Later on VCR	3	187	4.40	2.58
View a Video Tape Used by Instructor at a Group Meeting	2	186	4.30	2.81
Satellite Downlink in Home or Office	5	185	5.63	2.75
Satellite Downlink in Group Meeting or Conference	6	188	5.64	2.55
Closed-Circuit Television for Connecting Group Meetings	9	186	6.38	2.41
Interactive Video Disks	10	185	7.30	3.10

*Rank Choice Range = 1 through 10, 1 being first and 10 being last.

**n = 200. Frequencies may not equal 200 due to some respondents choosing not to reply to a statement.

Instructional television delivery preferences.

Furthermore, the research examined the faculty's selection preference for delivering an instructional television program. The respondents' delivery preferences paralleled the ranked list of preferred viewing media.

Table 21 illustrates the rank order of preferred delivery media. Again, the use of video cassette tapes were the faculty's top three choices: home loan, first; record a demonstration or event to present at a group meeting, second; and use of a prepared video tape to augment a group meeting, third. There were minor differences in the middle range. These included specialized cable programming (4), satellite downlink to group meetings (5), public broadcast (6), and satellite downlink in homes and offices (7). The three items ranking eight through ten were the least preferred delivery media: closed circuit television for connecting groups, commercial broadcast, and interactive video disks.

Utilization of ITV media options. The plethora of televised delivery options also have many different instructional functions. For example, a video cassette tape can be used in individual or group viewing, it can be motivational media or an audiovisual tool, and it can allow faculty to cross county and state boundaries.

Therefore, this study made no attempt to delineate the media options and preferences into the three descriptive

TABLE 21. Respondent Preference in Delivering an Instructional Television Program.

Television Delivery Medium	rank*	Respondents		
		n**	mean	s.d.
Commercial Broadcast Television	9	185	7.00	3.01
Public Broadcast Television	6	184	5.89	2.54
Specialized Cable Programming	4	183	5.51	2.36
Home Loan Video Cassettes	1	187	3.44	2.52
Record a Demonstration or Off-Site Activity to Present at a Group Meeting or Workshop	2	189	3.69	2.43
Use a Purchased or Prepared Video Tape at a Group Meeting or Workshop	3	186	3.77	2.65
Satellite Downlink to Homes, Offices, and Other Sites	7	185	5.94	2.53
Satellite Downlink to Group Meetings or Conference	5	188	5.76	2.48
Closed-Circuit Television for Connecting Group Meetings	8	185	6.20	2.32
Interactive Video Disks	10	184	7.43	2.81

*Rank Choice Range = 1-10, 1 being first and 10 being last.

**n = 200. Frequencies may not equal 200 due to some respondents choosing not to reply to a statement.

areas or instructional functions (motivational or audiovisual, group or individual viewing, and sharing of faculty or productions). The data, however, presented a descriptive analysis about the members of the sample population and their instructional television preferences. This information will provide a valuable resource base for those who are assigned the task of developing an ITV delivery system.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A Review of the Study

Need for the Study

The principal concerns of Extension education are to anticipate change and to create change. Therefore, Extension educators continuously examine their areas of discipline to anticipate needs and prepare educational opportunities that will prepare their audience to meet those needs. As a result, the entire state of Tennessee becomes the Extension campus, and every Tennessean no matter what education or income level is a potential student who can profit from Extension. Providing educational programs of this magnitude is a tremendous assignment.

Distance education through educational media equips Extension educators with delivery methods that empower them to accomplish this monumental task. New innovations and high-tech communication technologies have expanded the possibilities of distance delivered education. This study focused on one method of distance education, instructional television.

Television has the power to enable the University to

gain the most productive use of faculty/agent resources. It can reach large diverse audiences, improve enrollment in traditional programs, and allow specialized instruction in areas where that subject has not been targeted. However, budget and time restraints make it difficult for individual county extension agents to devote the resources necessary to effectively produce televised instruction. A statewide coordinated effort toward producing quality instructional television programs for high demand subjects could be a time and cost effective alternative to traditional teaching methods.

Instructional television has seldom, if ever, come into use without some resistance from traditional instructors in any education system, including Cooperative Extension education systems. Therefore, the first step toward incorporating a statewide televised Extension instruction system must be to evaluate and understand the readiness of Extension faculty toward the support, development, and implementation of such technology.

Purpose and Objectives of the Study

The purpose of this study was to identify major factors or variables which could be used to interpret the readiness of Extension personnel to utilize instructional television as a distance education medium for expanding Extension education programs at the University of Tennessee.

The objectives of this study were:

1. Develop a demographic profile of faculty employed by the University of Tennessee Agricultural Extension Service;
2. Determine general attitudes of Tennessee Extension faculty toward instructional television as a medium to expand traditional Extension programs; and to examine these attitudes in relation to faculty position, district assignment, audience assignment, and discipline assignment;
3. Establish the willingness of Extension professionals to use a statewide instructional television system to serve an expanded audience; and to look at differences between rural versus urban locations, faculty position, and the audience assignment;
4. Ascertain desire of Extension professionals to learn new roles and procedures in order to facilitate a statewide televised instructional effort; and to look at relationships between faculty position, years of experience, and district assignments;
5. Determine readiness of Extension faculty to utilize instructional television in relation to:
 - a) current use of instructional television media,
 - b) availability of instructional television equipment, and
 - c) experience and/or training as a television teacher;
6. Access preferences of Extension professionals in utilizing ITV delivery media including:
 - a) motivational and audiovisual use of the medium,
 - b) individual viewing versus group viewing of developed programs, and
 - c) sharing of faculty and productions.

Design and Sample

The research for this study was based on a descriptive/correlational design. The study was limited to educators at The University of Tennessee Agricultural Extension Service. These included five hundred twenty-one administrators, specialists, agents, and 4-H center managers. To provide

all employees an equal and independent chance to have input into the study, the researcher invited a random sample of 230 participants to participate. Ninety-three percent of the participants responded; however, six of these respondents were no longer employed, and eight elected to withdraw from the study. Therefore, 87 percent or 200 of the responses were useable. Only sixteen participants did not respond.

Instrumentation

A major product of the study was a comprehensive instrument titled, *Instructional Television, A Survey for Future Expansion of Extension Education Programs at The University of Tennessee*. The resulting questionnaire was specifically designed to examine the concept of readiness to use instructional television. The instrument consisted of a series of statements to which the faculty were asked to react. The statements were gleaned from an extensive review of current and historical literature. The survey employed a Likert-type attitudinal scale, a ranking scale, and a nominal demographic scale.

The questionnaire was reviewed by the researcher's graduate committee and then sent to the Human Subjects Committee at the University of Tennessee for approval. Content and face validity were checked by three distance educators and a pilot field test. Thirty Extension

professionals tested the pilot instrument (these were not part of the sample). The researcher administered the same methods and procedures to this group as the actual sample. Minor revisions were made to the instrument, and the survey was sent to the sample population. Standard, mail questionnaire procedures were followed. A cover letter, numbered survey, and postage-paid return envelope were mailed to each subject, assuring confidentiality and encouraging participation and candid responses. Four weeks later, a second cover letter, survey, and postage-paid return envelope were mailed to all non-respondents.

Data Analysis Procedures

Data for the study were analyzed using the Statistical Package for the Social Sciences (SPSS Release 4.1) on the IBM 3081 mainframe computer at The University of Tennessee Computing Center. The researcher compared early and late responders to determine if response bias existed. No significant differences were found. Internal consistency and reliability in the data increased by dropping thirteen items. Alpha levels for the three attitudinal scales were: attitudes, 0.87; audience, 0.75; and procedures, 0.71. A one way analysis of variance and Duncan's Multiple Range Test were used to determine if significant differences existed between the independent and dependent variables (probability levels for the rejection of null hypotheses

were <0.05).

Description of Variables

The study examined three dependent variables: general attitudes toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures. It also reported certain descriptive variables: current use of ITV media, availability of ITV equipment, experience and training as an ITV teacher, ITV delivery preferences, and demographic data.

Independent variables were selected from the demographic data. These included faculty position (administrator, specialist, agent, or 4-H center manager), district assignment (one through six), discipline assignment (agriculture or home economics), audience assignment (youth, adult, or both youth and adult), office location (rural versus urban), and length of employment.

A Review of the Findings

The concept of *readiness* was ascertained based on three dependent variables: inclinations in general attitudes toward ITV as a teaching medium, willingness to serve an expanded audience, and desire to learn new roles and procedures. Data obtained from these variables were presented in the form of three attitudinal scales. Readiness was also described using the variable, current ITV

experience and utilization. Finally the study compared current ITV experience and utilization to the three attitudinal scales.

Additional data evaluating faculty preferences in ITV delivery media were identified in a descriptive manner to provide a research base for those assigned the challenge of bringing these innovations into use. The findings of this study parallel the six objectives and are presented sequentially.

Demographics

The demographic profile of the survey participants was indicative of the general characteristics of the Extension organization. The majority of faculty were agents, 69.5 percent, whereas administrators, specialists, and 4-H Center managers comprised 30.5 percent of the population. The majority were male (60 percent). Faculty under 30 years of age comprised the minority (8.6 percent); however, the largest age representation, 43.9 percent, consisted of faculty 30-44 years old. Slightly over half of the respondents worked fifteen years or longer. The majority of the offices were located in predominantly rural areas (64 percent) as compared to metropolitan or urban locations (36 percent). The distribution of faculty among the districts was also proportional to actual distribution of the population. The six districts separate the state into units

which facilitate supervision of educational programs and providing in-service training. The representation of districts from largest to smallest were: one, two, six, five, three, and four (district 6 comprised the faculty who work on the University of Tennessee, Knoxville campus).

Readiness for Use of ITV

In general, the ITV study revealed that Tennessee Extension faculty were slightly positive toward the use of instructional television. However, were they ready to use instructional television?

In regard to the three attitudinal scales, the faculty's responses registered closer to the neutral value than to the positive value. Comparatively, the group as a whole was not negative either. Therefore, Extension faculty had a positive disposition for using instructional television, but they were not ready for the introduction of a statewide instructional television delivery system.

A closer look at the findings related to each individual objective more clearly defines respondents' lack of readiness.

General Attitudes Toward ITV

The second objective examined inclinations in general attitudes toward ITV. The population as a whole was slightly positive. However, faculty position and district

assignment influenced the strength of these attitudes. Administrators and specialists had stronger positive attitudes than agents, but the administrators and specialists were about the same (one group was not significantly stronger than the other). The faculty in districts one and four were also less positive in their attitude toward ITV than faculty in districts two, three, five, and six.

On the other hand, audience assignment nor discipline assignment indicated a significant influence on respondents having positive general attitudes toward ITV. Therefore, it appeared that both adult and youth agents as well as agriculture and home economics faculty did not differ significantly with regard to their attitude toward ITV.

Willingness to Serve an Expanded Audience

The third objective determined the willingness of Extension professionals to serve an expanded audience. If a statewide instructional television system was employed, relationships with three demographic variables would be of concern: office location (rural versus urban), faculty position (administrator, specialist, or agent), and audience assignment (youth, adult, or both youth and adult). This study revealed no significant relationships between these variables and the willingness of the population to serve an expanded audience. The importance of this finding will be

discussed with the conclusions and implications.

Desire to Learn New Roles and Procedures

The fourth objective examined the *readiness* of Extension faculty to facilitate an ITV delivery system. The development of a statewide, televised, instructional effort would require Extension professionals to learn new roles and procedures. Therefore, information obtained from this variable provides important data to those assigned the task of implementing such systems.

The data in this study ascertained that the overall tendency of the population was ever so slightly positive in their desire to learn new roles and procedures. (A mean score of 18 indicated a neutral or undecided position on this attitudinal scale. The mean score of Tennessee Extension faculty was 19.91.)

Once again, faculty position and district assignment were the prevailing variables of influence. In this situation, specialists were more positive than agents, in regard to learning new roles and procedures. However, administrators and agents were considered similar in their responses, and administrators were considered similar to specialists, also.

The agents in district one were less positive than those in district two toward learning new roles and procedures, but there was little difference between agents

in districts two, three, four, and five. The greatest difference was in district six. This district consisted primarily of administrators and specialists on the University of Tennessee, Knoxville campus. These respondents were significantly more positive than the others in their desire to learn new roles and procedures.

The length of employment with the Agricultural Extension Service was not a significant factor regarding desire to learn new roles and procedures. Therefore, employees who have many years experience and those who have been recently employed should be similar in their attitudes toward learning new roles and procedures.

ITV Utilization and/or Experience

The fifth objective analyzed the *readiness* of Extension faculty to utilize instructional television in relation to current use of ITV media, availability of equipment, and experience and/or training as an ITV teacher.

Current Use of ITV Media

Overall, the regular use of televised instruction on a daily, weekly, or monthly basis was remarkably minimal. The most frequently used ITV medium was for direct teaching in group meetings as instructional support (21 percent used this method more than just occasionally). Fourteen percent loaned Extension produced video tapes on a daily, weekly, or

monthly basis. This was the second, most frequently used method of ITV utilization. Only ten percent of the population used television for marketing or awareness of Extension programs on a regular basis. And, less than five percent of the respondents had used cable or broadcast networks for regular production and distribution of Extension education programs to their clientele.

Availability of ITV Equipment

Generally, the equipment most available to the faculty included a video cassette recorder and access to a satellite downlink. The equipment least available to the faculty were smart classrooms or other equipment to link audiences. Only two respondents maintained records of clientele with satellite reception capabilities. If given optimal access to television programming and equipment, a large representation (44 percent of the group) did not know if they would use the ITV equipment if it were provided. Only 7 percent responded no, they would not increase their ITV use.

Experience and Training as an ITV Teacher

When asked to describe his or her experience as a television teacher, over half the population responded with somewhat insecure or with no experience. They were also asked to identify all training received in teaching and/or using instructional television. A large percentage, 43

percent, received no training; self-taught and in-service training comprised 43.5 percent; and the smallest representation (13.5 percent) acquired collegiate instruction (graduate courses actually received more response than undergraduate courses).

ITV Utilization and Experience Compared to the Three Attitudinal Scales

When examining the utilization and experience of Tennessee Extension educators with ITV, the study indicated the following:

- 1) faculty were not currently using ITV media,
- 2) faculty had limited access to ITV equipment,
- 3) faculty had limited experience as ITV instructors, and
- 4) almost half the faculty received no training in teaching with or using ITV media.

These indicators of utilization and experience with ITV media were indicative of rather negative traits. However, the three *readiness* scales -- general attitude toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures -- indicated slightly positive attitudes among the sample population. Therefore, what relationships, if any, exist between readiness to utilize instructional television and current ITV utilization or experience with instructional television?

Current use of ITV media. The study rejected the premise that willingness to serve an expanded audience was influenced by current use of ITV media. It also found that

neither the use of television for group meetings nor the production of network programs were related to either faculty's general attitude toward ITV, willingness to serve an expanded audience, or desire to learn new roles and procedures.

However, two ITV utilization variables were related to the general attitudes toward ITV. Extension faculty who used television for awareness or marketing on a daily basis had significantly more positive general attitudes toward ITV than the faculty who never used it. The faculty whose clientele borrowed instructional video tapes on a daily, weekly, or monthly basis had more positive general attitudes toward ITV than those who used this delivery medium occasionally, never, or did not have it available.

Desire to learn new roles and procedures was also influenced by these two variables. The daily or weekly use of television for awareness and marketing and loaning of instructional tapes to clientele were indicators of faculty with significantly more positive attitudes toward learning new roles and procedures when compared to the other faculty.

Availability of ITV equipment. When comparing the three attitudinal scales to the availability of ITV equipment, a distinct relationship existed between faculty with access to smart classrooms and general ITV attitudes, willingness to serve expanded audiences, and desire to learn new roles and procedures. The faculty with access to smart

classrooms were more positive than the faculty without access to smart classrooms.

The respondents who would increase their use of instructional television, if they had optimal access to equipment, were also significantly more positive on all three scales. The respondents who would not increase ITV use and those who were unsure responded less positively regarding general attitudes toward ITV, willingness to serve expanded audiences, and desire to learn new roles and procedures.

Access to satellite downlink capabilities was related to a more positive general ITV attitude and less reluctance toward learning new roles and procedures. However, it was not relative to faculty's willingness to serve expanded audiences.

The respondents who maintained records of clientele with satellite downlink capabilities were more positive in their desire to learn new roles and procedures than those who did not maintain such records. This variable was not related to significant differences in respondents' general attitudes toward ITV or their willingness to serve expanded audiences. Caution should be used when projecting these findings to the total population because only two of the two hundred respondents maintained these records.

Neither access to a VCR nor access to ITV production equipment was a significant factor in either general

attitude toward ITV, the willingness to serve an expanded audience, or the desire of faculty to learn new roles and procedures. Therefore, faculty without access to such equipment were similar in their responses to all three attitudinal scales.

Experience and/or training as an ITV teacher. A comparison of the three attitudinal scales with experience as a television teacher showed a significant relationship to willingness to serve an expanded audience. The faculty who felt the most confident as ITV teachers were more positive toward serving expanded audiences than the faculty who felt less confident, insecure, or had no ITV teaching experience.

Experience as an ITV teacher was not a significant influence on either general attitude toward ITV or desire to learn new roles and procedures. It appeared that both faculty with confidence as an ITV teacher and faculty without confidence as an ITV teacher were slightly positive in desire to learn new roles and procedures. It also appeared that both groups had slightly positive general attitudes toward an ITV delivery system.

The faculty who received no training in teaching and/or using instructional television were significantly less positive on all three attitudinal scales than the faculty who took formal classes, in-service training, or were self-taught. Therefore, lack of training in utilizing ITV media

was related to having less positive general attitudes toward ITV, being less willing to serve an expanded audience, and having less desire to learn new roles and procedures.

ITV Delivery Preference

The last objective examined the faculty's preferred media for delivering educational programs via television. Television is a very expensive delivery medium that can be used in many different ways. Therefore, information on delivery preferences can help the designers of ITV systems to prepare the educators who will be using it.

ITV Instructional Functions

The various forms of television media have different instructional functions in education. For example, a video cassette tape can be used as motivational media that stands alone, or it can be an audiovisual tool to aid an instructor; it can be used for individual or group viewing; and it can allow faculty to cross county and state boundaries by coordinating and sharing ITV productions.

Motivational versus audiovisual ITV media. The respondents were positive toward using television as an audiovisual tool. They tended to agree with the statement, "The use of television as a supplement to a group meeting makes for more effective learning than agent produced county programs alone."

The faculty were in less agreement with using broadcast television as a motivational technique to reach people who may not yet know what they want. However, they slightly disagreed with the statement indicating that the "in-home use of instructional television should be limited to borrowing instructional video tapes, because Extension cannot compete with commercial broadcast television." This was indicative of a slightly positive attitude toward the use of broadcast television for instruction.

Group viewing versus individual viewing. The faculty indicated a positive attitude toward bringing groups of people together by using satellite and cable telecommunications. The faculty also indicated slight disagreement with placing more importance on the face-to-face contacts in comparison to reaching as many people as possible. However, the respondents were in less agreement with the ideal learning situation being individual viewing of Extension programs while remaining in their own homes.

Sharing of faculty and productions. The respondents were in moderate agreement with the statement, "More than any other teaching method, ITV has the potential to foster sharing of expert faculty across county, district, and state boundaries." In comparison to all the ITV delivery preference variables, the faculty were in more agreement with this one item regarding delivery of educational programs through the use of televised media.

In contrast, the faculty indicated a profoundly low level of agreement toward the sharing of ITV productions. They were almost undecided concerning the money saved by sharing productions from other states and agencies in comparison to off-setting any loss of credibility to the University of Tennessee Extension Service.

Furthermore, the respondents were absolutely neutral concerning the widespread use of instructional television across the state. This item asked the respondents to consider the problems in scheduling a statewide televised education program. The respondents were literally undecided in the determining the practicality of distributing instructional television across the state.

Preferred ITV Viewing and Delivery Media

The study researched whether similarities existed between the media that respondents preferred when viewing television and their selection of a medium for delivering an instructional television program. The two scales were not identical, but they did parallel one another. The use of video cassettes, in any form, received the top rankings (home loan, record from a network station, and augment instruction at a group meeting). The middle range included specialized cable programming; public broadcast; and satellite downlink to group meetings, homes, or offices. The last group included closed circuit television for

connecting group meetings, commercial broadcast, and interactive video disks.

The study made no attempt to delineate the preferred media options into the three instructional functions. The data simply provided descriptive information and a valuable resource base about the population because each ITV delivery option has more than one function in education.

Conclusions and Implications

General Attitudes Toward ITV

The balance of the Tennessee Extension organization was slightly more positive toward utilizing television for instruction than it was negative.

This conclusion supports the fact that not all attitudes toward television are negative. It also confirms other research and strengthens many contentions found in the literature.

Administrators Differ from Agents

In Tennessee, the general attitudes of administrators toward ITV were significantly more positive than the agent educators.

The significant difference in attitudes between administrators and agents should be taken into consideration before planning an ITV delivery system. According to Bailey [1960], when administrators have a negative attitude toward using television for instruction, their influence may impose false viewpoints among their staff. The attitude of the

faculty may simply be a reflection of their immediate supervisor as a form of self preservation.

However, in Tennessee, the situation was reversed, and the administrators had significantly more positive general attitudes toward ITV than the agent educators. Therefore, we must consider Romiszowski's argument concerning the concept of the "top-down" or "bottom-up" approach to affective instruction via instructional television [1989]. Without administrative support, a delivery system is almost impossible to implement, but faculty acceptance is also critical to the success of television as an educational delivery method. Therefore, the bottom-up approach has some distinct advantages that should be considered in Tennessee [Weinstein, 1981]. These include:

- involve the agents in the planning and implementation of the ITV delivery system,
- design delivery systems which agents believe to be personally beneficial to their needs,
- help the agents adapt and obtain needed equipment, and
- identify innovative ITV practices of agents who are considered by their peers to be exemplary users of television -- their ideas may be valuable in the design and modification of the delivery system.

Specialists Differ from Agents

The general attitudes toward ITV among the specialists were significantly more positive than agents' general attitudes.

Specialist responses toward learning new

roles and procedures were more positive than agent responses.

Educators attitudes toward ITV have a greater influence on their use of instructional television than any positive attributes regarded by promoters of instructional television [Weinstein, 1981]. Researchers evidenced that local educators may fear loss of authority to the television teacher who would soon be recognized as the "expert." These educators may believe that local delivery of high quality specialized instruction via television may denigrate his or her importance by turning over much of the teaching and demonstrating to an outsider [Bailey, 1960; Bruder, 1989; Handleman, 1969]. In contrast, the celebrity status gained by the television teacher can quickly bring esteem and recognition to the local county programs. Teaching by television requires that all faculty learn a new role -- to give up some of the "telling" and spend more time on the discussion, practice, and guidance that must take place locally. To prevent covert resistance to the new medium, the development of a televised production system will require a coordinated team effort between administrators, specialists, and agents.

Differences Between Districts

Districts one and four had less positive general attitudes toward ITV utilization than the other districts.

District one had the least positive attitude

regarding their desire to learn new roles and procedures.

Support must be secured at the local level, before initiating a televised delivery system in these districts.

Generally, the educators who are the farthestmost removed from the main campus are the ones who have the most to gain from an ITV delivery system. However, faculty in district one were the farthestmost removed and were less positive than the other districts regarding attitudes toward ITV and desire to learn new roles and procedures.

These educators may fear that a statewide televised delivery method would end privacy of the county or district program. Or, negative attitudes may simply be direct opposition, insecurity, or mere dissatisfaction. Chu and Schramm [1975] concur that the most damaging resistance to a televised delivery system could be quiet opposition from the local facilitators.

District six was significantly more positive than the other districts regarding general attitudes toward ITV and desire to learn new roles and procedures.

District six comprised faculty working on the University of Tennessee, Knoxville campus. The faculty in district six indicated moderately positive general attitudes toward ITV and only slightly positive responses toward learning new roles and procedures. However, in Tennessee, district six was the group most ready for an instructional television system.

Differences Between Assignments

There were no significant differences among the faculty regarding their willingness to serve an expanded audience, in relation to: rural versus urban assignments, faculty position, and audience assignment.

Television is an expensive mass medium. Much of the literature acknowledges that to be used efficiently, it must be used in a large way. For this reason, the study examined the willingness of Extension professionals to serve an expanded audience. The study revealed that it should be possible to develop a statewide system without fear that faculty in a rural location may respond differently from those in urban settings. It could also be expected that administrators, specialists, and agents -- in either youth or adult assignments -- could work together in developing the instruction and curricula for these audiences.

Readiness for a Statewide ITV Delivery System

Are Tennessee Extension educators prepared for the introduction of a statewide ITV system? No, they are not.

Can they be prepared for an instructional television system that crosses boundaries and facilitates the sharing of demanding work loads? Yes, they can be.

The development of a television production system requires more of a team effort than most other educational delivery systems. The lead time needed for setting up these systems is almost always underestimated, and the greatest

lack of training is most often for the teaching partner in the new role he/she must assume with the coming of television. The literature stated that there is no substitute for in-service training, at all levels, to prepare faculty members for the infusion of a system-wide televised instructional effort.

Training the Faculty

The differences among district assignments and faculty positions were so significant in Tennessee that specialized training directed to the specific needs of that population would prove to be both cost effective and productive.

Weinstein's research documented that planning for efficient and effective use of a televised delivery system demands understanding the educator who will be expected to accept and use the medium [1981]. Knowing the differences among Tennessee Extension educators and possible reluctance to learn new roles and procedures will be very helpful for those who will be preparing the training. For instance, a televised in-service training could be presented to all educators and connect them by satellite at the same time. This scenario could also result in failure.

Current Utilization and Use of ITV Media

The current utilization of instructional television and the faculty's training in using ITV media were remarkably minimal.

However, the three readiness scales of general attitude

toward ITV, willingness to serve an expanded audience, and desire to learn new roles and procedures indicated slightly positive attitudes among the sample population. Therefore,

unlike other studies, the relationship between the availability of equipment, use of equipment, and experience or training as a television teacher were not dominant influences in the readiness of Tennessee Extension educators to support and implement an ITV system.

There were, however, several variables which showed significant influence in relation to *readiness* to utilize instructional television and current utilization and experience with ITV media.

For example, video tapes were the primary delivery preference. The study also cited that access to VCR equipment was not an influential factor in the attitudinal relationships either. Yet, when we examine current utilization, were they being used effectively? No, in fact, faculty rated VCR equipment the most available source of equipment, but the educators reported they were not currently using the tapes available. Additional research into the problem might reveal that the tapes must be assessable, provide needed information, and have easy-to-follow loan procedures.

Optimal Access to ITV Equipment

Provided they had optimal access to ITV equipment, would Extension educators make more use of televised delivery methods?

Some said they would, and others said they would not, but the "unsure" participants were significantly less positive and more neutral in their responses. When comparing responses to the faculty who replied with a definite yes or no to this statement, the unsure group was significantly less positive in regard to each of the three attitudinal scales. Their scores for each scale were only slightly positive and were almost neutral.

One implication is that the "unsure" group might not know what to do with the equipment, if they had it. Therefore, it would seem that the need for in-service training would be of most benefit to this group. However, the "unsure" respondents were also the group with the least positive responses toward learning new roles and procedures.

Instructional Concerns in Selecting ITV Media

Tennessee Extension faculty tended to favor the audiovisual use of television for instructional support over the motivational media techniques.

They preferred group viewing as compared to developing educational programs for individual distribution and reception (such as through broadcast, cable, or loan of tapes).

The most remarkable traits about Tennessee educators concerned the sharing of faculty and productions.

In selecting an ITV delivery system, this study did not set forth to determine which instructional approach would be the best. Before committing to televised instruction,

detailed assessments must be made to determine the most appropriate and cost-effective approach using this medium. Decisions about who will benefit, who will view it, and specific learning needs may actually show that television is not the appropriate solution. Therefore, this study simply gathered initial data into the preferences of the staff.

Sharing of Faculty and Productions

Tennessee Extension educators agreed that, "more than any other teaching method, television has the potential to foster the sharing of expert faculty across county and state borders."

However, they were the least positive and were almost neutral toward the use of productions from other states and agencies.

They were also undecided as to the practicality of scheduling an instructional television program to be distributed across the state.

Although these are not opposing dichotomies, the differences in level of agreement toward sharing of faculty and sharing of productions is significant.

Through tele-communications, Extension educators can now teach anywhere in the world. What is holding back this boundless system? It appears that Extension faculty are loyal to their institution, counties, and their state. It also appears that problems in communication and planning could hinder the implementation of an ITV delivery system.

The responses of Extension educators concerning sharing

of faculty and sharing of productions are notable considerations when evaluating the *readiness* of Extension faculty to implement and facilitate a statewide ITV delivery system.

The proponents of the different delivery approaches will argue endlessly as to which is better.

The question to be asked is not "which is best?", but "which can do the job we determined must be done?"

General Recommendations

This study provides a research base for these and many other questions concerning the readiness of Extension faculty to employ statewide televised instruction technologies. Logical follow-up to this study would be the development of: a strategic televised instruction plan, curriculum and staff development, training requirements, and an instructional design for quality televised instruction. The coordination of multi-county, multi-state, regional, and national efforts could ultimately result in new combinations of traditional and innovative communication technologies to deliver high quality educational programming to Extension staff and an expanded clientele.

Recommendations for Further Study

1. A similar study should be conducted in the future to verify the reliability and content validity of the instrument, *Instructional Television, A Survey for Future Expansion of Extension Education Programs at the University of Tennessee*.

2. Similar studies might be done in other states to determine readiness of their faculty for instructional television, or as a comparison to the findings in this study.
3. Similar studies should be done, by modifying the terminology of the instrument, to yield a measure of other delivery systems and technologies.
4. If a statewide televised instruction system is implemented, a similar study should be conducted to determine changes in the attitudes, preferences, experience, and utilization of instructional television by Extension faculty.
5. Additional research should be conducted to determine what is the desired outcome for instructional technologies in Tennessee, and then examine the instructional approaches to implement those technologies.
6. Additional research should be conducted to determine the attitudes and perceptions of Extension's clientele, and to examine their readiness to accept televised instruction as a learning opportunity.

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APPENDICES

Appendix A

Final Survey Instrument

I NSTRUCTIONAL T E L E V I S I O N



**A Survey For
Future Expansion of Extension Education Programs
At The University of Tennessee**

(Actual instrument was reduced to a 5½ by 8½ inch booklet.)

INSTRUCTIONAL TELEVISION

A Distance Education Medium For Expanding Extension Education Programs At The University of Tennessee

In the Tennessee Agricultural Extension System, the use of television, in general, is not new to its professionals. However, during the past thirty years, the use of the television set has changed. Watching television no longer means watching commercial, broadcast television only. Today, there are many options in the way a television set is used by both our clientele and by our educators as a teaching tool.

By completing this survey, you can help us determine how television is being used by Extension educators and attitudes toward the use of televised instruction. Your answers could also aid in determining whether Tennessee Extension professionals are ready to consider a system-wide televised instructional effort.

A report of these findings will be used to recommend modifications in the Tennessee Extension delivery system and will provide a research base for those who are assigned the challenge of bringing televised instruction technologies into use.

General Instructions

1. Participation in this study is voluntary. Although we value and need your input, there will be no penalty if you decide not to complete the survey. You may withdraw from the study by simply writing the word withdraw on the cover and returning the survey. (By doing this, you will not be bothered with follow-up mailings).
2. Your participation in this study will remain confidential.
No names are needed please.
3. The code number, found in the upper right hand corner, is to facilitate follow-up with nonrespondents. The number and your name will not be identified in any reports.
4. Participation in this study will require very little of your time.
The survey can be completed in about 20 minutes.
5. Please answer ALL questions to the best of your knowledge.
Be candid with your responses.
6. Please return the completed questionnaire to:

Eva V. Price
University of Tennessee
Agricultural Extension Service
511 West Second North Street
Morristown, Tennessee 37814

Part 1
UTILIZATION OF INSTRUCTIONAL TELEVISION

This section will provide information about how you currently use television, the equipment available, and your experience with instructional television. There are no right or wrong answers. Please respond by circling the letter next to the appropriate answer.

1. How often do you currently use television for awareness or marketing of extension programs?
 - a. DAILY
 - b. WEEKLY
 - c. MONTHLY
 - d. OCCASIONALLY
 - e. NEVER

2. How often do you currently use video tapes, satellite downlink, or any form of televised instruction for direct teaching of clientele in group meetings?
 - a. DAILY
 - b. WEEKLY
 - c. MONTHLY
 - d. OCCASIONALLY
 - e. NEVER

3. How often do you provide clientele with Extension produced instructional television programs which can be received in their homes via cable or broadcast networks?
 - a. DAILY
 - b. WEEKLY
 - c. MONTHLY
 - d. OCCASIONALLY
 - e. NEVER

4. How often are Extension produced instructional videos being borrowed by your clientele to be viewed in their home or office?
 - a. DAILY
 - b. WEEKLY
 - c. MONTHLY
 - d. OCCASIONALLY
 - e. NEVER
 - f. NOT AVAILABLE

5. Is equipment available that you can use to record and/or playback a television program?
 - a. LOCAL OFFICE
 - b. PERSONAL
 - c. DISTRICT LOAN
 - d. OTHER, PLEASE EXPLAIN _____
 - e. NONE AVAILABLE

6. Is equipment available which you can use to produce instructional television or video programs for your clientele?
 - a. LOCAL OFFICE
 - b. PERSONAL
 - c. DISTRICT LOAN
 - d. LOCAL CABLE OR OTHER PRODUCTION STUDIO
 - e. OTHER, PLEASE EXPLAIN _____
 - f. NONE AVAILABLE
7. Do you have access to a smart classroom or other equipment that would allow you to link audiences via a closed-circuit or satellite network?
 - a. YES
 - b. NO
8. If you wanted to downlink a satellite program for a group meeting of your clientele, how available is such a location?
 - a. LOCAL OFFICE
 - b. ANOTHER FACILITY IN THE COUNTY
 - c. FACILITY IN A NEIGHBORING COUNTY
 - d. NONE AVAILABLE
9. Do you maintain a record of Extension clientele who can receive Extension produced instructional television in their homes via a satellite dish?
 - a. YES
 - b. NO
10. If you had optimal access to television programming and equipment, would you make more extensive use of instructional television?
 - a. YES
 - b. NO
 - c. UNSURE
11. How would you describe your experience as a television teacher (the on camera presenter)?
 - a. CONFIDENT
 - b. SOMEWHAT CONFIDENT
 - c. SOMEWHAT INSECURE
 - d. INSECURE
 - e. NO EXPERIENCE
12. What training have you received in teaching and/or using instructional television? (circle all that apply)
 - a. GRADUATE COURSES
 - b. INSERVICE TRAINING
 - c. UNDERGRADUATE COURSES
 - d. SELF-TAUGHT
 - e. NO TRAINING

Part 2
ATTITUDES TOWARD INSTRUCTIONAL TELEVISION

Another important consideration in this study is to understand the attitudes of Extension professionals toward instructional television. Please circle the appropriate response to the right of each item based on how strongly you agree or disagree with the statement. Please answer all the questions.

SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree

- | | | |
|-----|---|--------------|
| 13. | A statewide instructional television delivery system will force the Extension staff member to reevaluate his/her teaching methods. | ITEM DELETED |
| 14. | The criteria for successful television teaching are the same as those for successful group presentations. | ITEM DELETED |
| 15. | The use of TV for instructional purposes is, at best, a makeshift measure in an attempt to reduce agent shortages. | SA A U D SD |
| 16. | The use of television as a method to overcome agent shortage will prevent the filling of much needed positions. | SA A U D SD |
| 17. | Funding can be best utilized by hiring additional staff than by employing a statewide instructional television delivery system. | SA A U D SD |
| 18. | Clientele will view the television instructor as the expert instead of looking to the local county agents. | SA A U D SD |
| 19. | Extension staff will lose authority to the television instructor. | SA A U D SD |
| 20. | Extensive use of state-developed television programs in clientele's homes diminishes the importance of the county extension staff. | SA A U D SD |
| 21. | Television may eliminate agent jobs, if clientele can view extension programs in their homes rather than attend traditional meetings. | SA A U D SD |

- | | | |
|-----|--|--------------|
| 22. | Extension may lose clientele, because regular clientele may choose to stay home rather than attend face-to-face meetings. | SA A U D SD |
| 23. | Extension administration may be in favor of instructional television to the masses for budgetary reasons rather than the educational needs of the clientele. | SA A U D SD |
| 24. | Instructional television is a reusable resource which compensates for the extra work and expense that goes into the TV production. | ITEM DELETED |
| 25. | The use of standardized productions from other states and agencies diminishes the credibility of the University of Tennessee Agricultural Extension Service. | SA A U D SD |
| 26. | Television adds authority to all extension professionals and the research being presented. | ITEM DELETED |

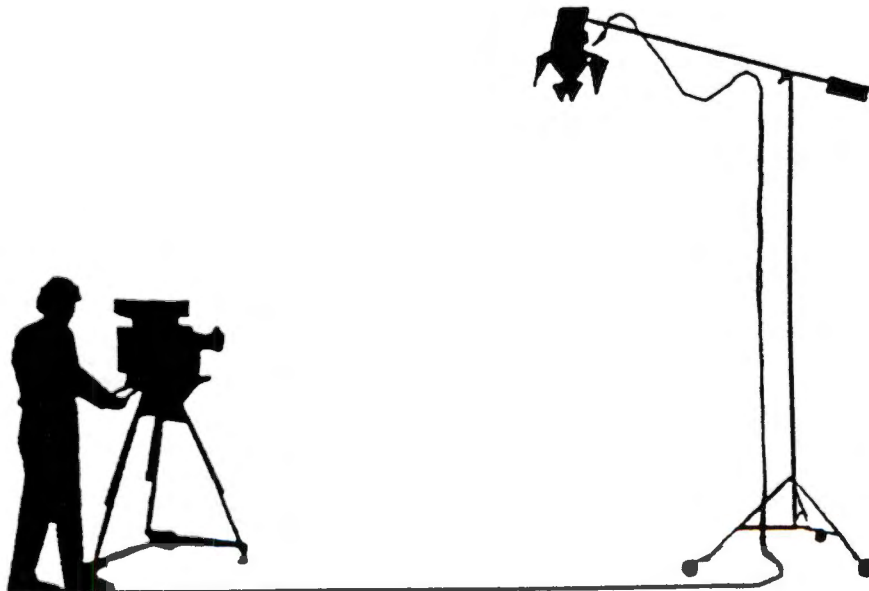
Part 3
REACHING A DIVERSE TELEVISION AUDIENCE

The Extension audience is directly linked through county Extension Agents to research conducted by Extension Specialists and Researchers at the University of Tennessee. Therefore, we would like to ask several questions about serving this audience. Please answer each item in relation to how strongly you agree or disagree with the statement. Circle the appropriate answer to the right of each item.

SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree

- | | | |
|-----|---|-------------|
| 27. | The use of televised Extension programming will help us reach more people efficiently with practical information. | SA A U D SD |
| 28. | Television makes superior teaching available to all clientele. | SA A U D SD |

- | | | |
|-----|---|--------------|
| 29. | Television can provide clientele enrichment to a degree not possible in traditional county programs. | SA A U D SD |
| 30. | Televised Extension programs can reach people who would never attend an Extension meeting. | SA A U D SD |
| 31. | Television tends to teach to an average group in order to attract a wide audience which is in conflict with Extension's goal to target the audience. | ITEM DELETED |
| 32. | The agricultural Extension Service is a rural service organization where rural families and farmers are the targeted audience. | ITEM DELETED |
| 33. | The entire state of Tennessee is the Extension campus and every Tennessean no matter what education or income level is a potential student who can profit from Extension. | ITEM DELETED |
| 34. | Televised instruction increases enrollment in traditional Extension programs. | SA A U D SD |
| 35. | Audiences which are the least likely to attend an extension meeting are the most likely to use television. | SA A U D SD |
| 36. | Television does not provide opportunities for evaluation and follow-up because there are no records of participation. | ITEM DELETED |



Part 4
 READINESS TO RELINQUISH CONTROL

The next series of questions relate to the effect of a system-wide instructional television effort on the Extension faculty. You will probably agree with some statements and disagree with others. Please circle the response that best describes how you feel.

SA = Strongly Agree
 A = Agree
 U = Undecided
 D = Disagree
 SD = Strongly Disagree

- | | | |
|-----|--|--------------|
| 37. | The development of a statewide televised delivery system would require Extension professionals at all levels to learn new roles and procedures. | ITEM DELETED |
| 38. | Planning for the use of television takes more time than it is worth. | SA A U D SD |
| 39. | Instructional television programs are available to the county staff early enough to plan for use in county planned programs. | ITEM DELETED |
| 40. | The use of instructional television will make important information available to my clients sooner than if it were delivered via a traditional program. | ITEM DELETED |
| 41. | Competent teaching of important subjects can be viewed by clientele through television in counties where that subject has not been targeted. | ITEM DELETED |
| 42. | Better use of resources (time and money) is achieved by one-on-one contact with the county agent than by using the television instructor and the county agent. | SA A U D SD |
| 43. | Hands-on workshops and result demonstrations are superior to television or videos. | SA A U D SD |
| 44. | With the use of television for group viewing at meetings, the agent becomes a mere monitor or "intellectual babysitter". | SA A U D SD |

- | | | |
|-----|--|--------------|
| 45. | The role of the local facilitator is so important that, for all practical purposes, there is no substitute for this member of the televised instructional team. | SA A U D SD |
| 46. | The best approach to instructional television is that of the instructional team -- with the TV teacher responsible for the items that television can do best and the county agent caring for those which seem to be better handled by direct contact with clientele. | SA A U D SD |
| 47. | The most successful television instructors are not necessarily the specialists or experts on the subject being taught. | ITEM DELETED |

Part 5
PREFERENCES IN TELEVISION DELIVERY SYSTEMS

Now we want to examine the many ways of using a television set to deliver educational programs to Extension's clientele. Please read each statement and circle your reaction based on how strongly you agree or disagree with the statement.

SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree

- | | | |
|-----|---|-------------|
| 48. | The use of television as a supplement to a group meeting situation makes for a more effective learning situation than agent produced county programs alone. | SA A U D SD |
| 49. | Problems in scheduling make the widespread use of television across the state highly impractical. | SA A U D SD |
| 50. | Extension needs the power of broadcast television to reach people who may not yet know what they want, who are likely to be educationally disadvantaged and frequently poor. | SA A U D SD |
| 51. | Clientele's in-home use of instructional television should be limited to borrowing instructional tapes because Extension cannot afford to compete with commercial broadcast television. | SA A U D SD |

52. The need to maintain participation records through face-to-face contacts is more important than the goal of reaching as many viewers as possible. SA A U D SD
53. Satellite and cable telecommunications capitalize on the opportunity to bring groups of people from different locations into one place at the same time. SA A U D SD
54. More than any other teaching method, instructional television has the potential to foster the sharing of expert faculty across county, district, and state boundaries. SA A U D SD
55. Money saved by using productions generated from other states or agencies offsets any loss of credibility to the University and Tennessee Extension Service. SA A U D SD
56. The ideal learning situation would be for clientele to be able to remain at their own homes, enroll in the class by computer, and use the family or business telephone to call in questions and interact with the instructor and other participants while participating in an interactive televised educational program. SA A U D SD



Today, there are many options in the way a television set may be used for instructional programs. In this section, please use the blank to the left of each option to rank your choices from 1-10, 1 being first and 10 being last.

57. If YOU were to VIEW an instructional program on television, which method would YOU prefer to receive the information. Please rank from 1-10.
- ☐ COMMERCIAL BROADCAST TELEVISION PROGRAMS
 - ☐ PUBLIC BROADCAST TELEVISION PROGRAMS
 - ☐ SPECIALIZED CABLE PROGRAMMING
 - ☐ HOME LOAN VIDEO CASSETTES OF SPECIFIC TOPICS
 - ☐ PERSONALLY RECORD A BROADCAST OR CABLE PROGRAM USING A VCR -- TO VIEW LATER AND AT YOUR LEISURE
 - ☐ VIEWING AN EXCERPT OF A VIDEO TAPE, AT A GROUP MEETING OR WORKSHOP, TO ENHANCE INFORMATION GIVEN BY INSTRUCTOR
 - ☐ SATELLITE DOWNLINK IN HOME OR OFFICE
 - ☐ SATELLITE CONFERENCE VIEWED AT A GROUP MEETING
 - ☐ CLOSED-CIRCUIT TELEVISION FOR CONNECTING GROUP MEETINGS
 - ☐ INTERACTIVE VIDEO DISKS
58. If YOU were to PREPARE an educational program that would be delivered to your clientele via televised instruction. Which delivery methods would you prefer to use. Please rank 1-10.
- ☐ COMMERCIAL BROADCAST TELEVISION PROGRAM
 - ☐ PUBLIC BROADCAST TELEVISION PROGRAM
 - ☐ SPECIALIZED CABLE PROGRAM
 - ☐ VIDEO CASSETTE OF TOPIC FOR HOME LOAN
 - ☐ USE A VIDEO CAMERA TO RECORD A DEMONSTRATION OR OFF-SITE ACTIVITY TO PRESENT AT A GROUP MEETING OR WORKSHOP
 - ☐ USING AN EXCERPT FROM A PURCHASED OR PREPARED VIDEO TAPE TO ENHANCE INFORMATION GIVEN AT A GROUP MEETING OR WORKSHOP
 - ☐ SATELLITE DOWNLINK TO HOMES, OFFICES, AND OTHER SITES
 - ☐ SATELLITE CONFERENCE TO BE VIEWED AT GROUP MEETINGS
 - ☐ CLOSED-CIRCUIT TELEVISION FOR CONNECTING GROUP MEETINGS
 - ☐ INTERACTIVE VIDEO DISKS

Part 6
BACKGROUND INFORMATION

Finally, we would like to ask some questions about yourself. Your answers will be treated confidentially and anonymously. This information is needed to help us interpret the results. Please circle the letter(s) that describes your response.

59. What is your area of responsibility?
(Please circle all that apply.)

A. ADMINISTRATION

- a. DEAN, ASSISTANT DEAN, ASSOCIATE DEAN
- b. DISTRICT SUPERVISOR
- c. ASSOCIATE DISTRICT SUPERVISOR HOME ECONOMICS
- d. ASSOCIATE DISTRICT SUPERVISOR AGRICULTURE

B. 4-H CENTER MANAGER

C. SPECIALIST STAFF (CIRCLE ALL THAT APPLY)

STATE SPECIALIST	AREA SPECIALIST
a. AGRICULTURE b. FOUR-H c. HOME ECONOMICS d. CRD* e. OTHER _____	a. AGRICULTURE b. FOUR-H c. HOME ECONOMICS d. CRD* e. OTHER _____

D. AGENT STAFF (CIRCLE ALL THAT APPLY)

COUNTY AGENT	AREA AGENT
a. ADULT AGRICULTURE b. 4-H AGRICULTURE c. ADULT HOME ECONOMICS d. 4-H HOME ECONOMICS e. CRD* f. FOOD MARKETING g. ADULT EFNEP** h. YOUTH EFNEP**	a. ADULT AGRICULTURE b. 4-H AGRICULTURE c. ADULT HOME ECONOMICS d. 4-H HOME ECONOMICS e. CRD* f. FOOD MARKETING g. ADULT EFNEP** h. YOUTH EFNEP**

*Community Resource Development

**Expanded Food & Nutrition Education Program

60. Please indicate the District in which your office is located (if your office is located on the UT Campus, please circle District 6).
- a. DISTRICT I
 - b. DISTRICT II
 - c. DISTRICT III
 - d. DISTRICT IV
 - e. DISTRICT V
 - f. DISTRICT VI
61. Please describe the town or city in which your office is located.
- a. URBAN CITY OVER 50,000
 - b. SUBURB OF CITY OVER 50,000
 - c. TOWN OR CITY 10,000-50,000
 - d. RURAL TOWN OR CITY UNDER 10,000
62. How many years have you been employed with the Extension Service?
- a. LESS THAN 3 YEARS
 - b. 3-7 YEARS
 - c. 8-15 YEARS
 - d. 16-25 YEARS
 - e. MORE THAN 25 YEARS
63. What is your gender?
- a. MALE
 - b. FEMALE
64. What is your age?
- a. UNDER 30
 - b. 30-44
 - c. 45-55
 - d. OVER 55

This completes the survey.
Please fold and place in the enclosed return envelope.

Thank You!

A State Partner in the Cooperative Extension System
THE UNIVERSITY OF TENNESSEE, U.S. DEPARTMENT OF AGRICULTURE, AND COUNTY GOVERNMENTS COOPERATING
The Agricultural Extension Service offers its programs to all eligible persons regardless of race, color
national origin, sex, age or disability and is an Equal Opportunity Employer.

Appendix B
Cover Letters

Initial Cover Letter
(On University of Tennessee Ag Extension Service Letterhead)

511 W. Second North Street
Morristown, TN 37814
Date

Dear :

Are Extension faculty ready to use instructional television to expand their educational programs?

Televised instruction is already occurring in countless different ways throughout Tennessee's Extension programming. However, we know very little about the Extension educator: their attitude toward televised instruction, their knowledge or use of the equipment, and the preferences they may have toward televised delivery methods. By completing the enclosed survey you can help us examine these concerns. Your answers could also aid in determining whether Tennessee Extension professionals are ready to consider a system-wide televised instructional effort.

It is very important that all faculty members have input into this study so that administrators, specialists, agents, and camp managers will all be represented. Since we cannot have input from every faculty member, you have been selected from a random sample of the entire Extension faculty at the University of Tennessee. In order that the results will truly represent our faculty, it is important that each questionnaire be completed and returned. Please use the addressed, postage paid envelope to return your survey.

You may be assured of complete confidentiality. The survey instrument has an identification number for mailing purposes only. This is so that we may check your name off the mailing list when your survey is returned. Your name will never be placed on the questionnaire.

The results of this research will be used to recommend modifications in the Tennessee Extension delivery system and will provide a research base for those who are assigned the challenge of bringing televised instruction technologies into use.

Thank you for your assistance. If you have questions, we would be happy to answer them. Please contact Vicki Price; the telephone number is 615-586-6111 (day) or 615-587-0958 (evening).

Sincerely,

George C. Mays
Professor
Electronic Media

Eva V. Price
Associate Extension Agent
Hamblen County

Follow-up Cover Letter
(On University of Tennessee Ag Extension Service Letterhead)

511 W. Second North Street
Morristown, TN 37814
Date

Dear :

About three weeks ago, we mailed you a questionnaire about instructional television. We wanted to know your opinions about the use of televised instruction in Tennessee. However, as of today, we have not received your completed questionnaire.

It is our belief that Extension faculty use televised instruction in many different ways; but we do not know whether a system-side televised instructional effort would benefit our staff and our clientele. Therefore, we designed this study to explore the use of instructional television for future expansion of Extension education programs at the University of Tennessee. By participating in the study, you can provide needed information about attitudes toward televised instruction, knowledge of equipment, use of equipment, and preferred delivery methods.

We are writing to you again because of the significance each questionnaire has to the usefulness of this study. You were selected from a random sampling process so that administrators, specialists, agents, and camp managers would each have a chance at being represented. So that the results will truly represent our faculty, it is essential that each person in the sample return their questionnaire.

For your convenience, a replacement survey is enclosed. Please take a few minutes to answer the questions. Then use the addressed, postage paid envelope to mail it to us. If you have questions about the study, please call Vicki Price; the telephone number is 615-586-6111 (day) or 615-587-0958 (evening).

If you receive this letter and you have already completed and returned the survey, thank you for your response. The results of this research will be used to examine the current Tennessee Extension delivery system and will help us prepare for bringing new technologies into use.

Sincerely,

George C. Mays
Professor
Electronic Media

Eva V. Price
Associate Extension Agent
Hamblen County

VITA

The author, Eva Victoria (Vicki) Price, describes herself as being from the "South." She was born in Monroe, Louisiana in October, 1959. However, she has lived in predominately Southern metropolitan areas including: Monroe, Louisiana; Jacksonville, St. Petersburg, and Tampa, Florida; and Nashville and Knoxville, Tennessee. She currently resides in the city of Morristown, Tennessee which is nestled in the foothills of the Smoky Mountains.

She graduated with honors in 1977 from Brandon High School in Brandon, Florida. She pursued undergraduate studies at Northeast Louisiana University in Monroe, Louisiana, in the field of home economics. While at Northeast, she was active in intramural sports and was a member of Kappa Delta social sorority. She also participated as an officer and member in several campus honor organizations including: Alpha Lambda Delta, Kappa Omicron Nu, Phi Kappa Phi, Omicron Delta Kappa, and Mortar Board. She graduated Magna Cum Laude in 1981 with a double major in Home Economics Education and Dietetics.

After graduating from Northeast, she was employed as an Extension agent with the Institute of Food and Agricultural Sciences, Florida Cooperative Extension Service. She served the clientele in Hillsborough and surrounding counties. While in Tampa, she began her experiences with distance education as a television teacher on the "Can-Do-Clinic"

television program. This thirty-minute how-to program was aired every Saturday on the Public Broadcasting Station. She had lunch, each week, with thousands of viewers. She also began her graduate studies while working with the Florida Extension Service. She enrolled in off-campus graduate programs offered by The University of Florida, Gainesville, and The Florida State University, Tallahassee. Both programs provided graduate courses and degree programs at distant sites such as Tampa.

After moving to Tennessee in 1985, she was employed by The University of Tennessee Agricultural Extension Service in Hamblen County. She serves Hamblen County as the Associate Extension Agent in home economics for both youth and adult audiences. Through Extension Winter School, a progressive education program for Extension educators, she pursued a graduate degree in Agriculture and Extension Education at the University of Tennessee, Knoxville.

Throughout her career, Vicki has been active in many professional organizations. She is a member of the National Association for Family and Consumer Sciences, the National Association for Extension Home Economics Agents, the National Association for 4-H Workers, and the National Family and Community Education Association.

Her other interests include working on her farm in Whitesburg, hiking in the mountains, participating in winter sports, and traveling to visit her family and friends.

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