Planning for Changes: A Study of Satellite Distance Learning Administrative Policy Development in Higher Education

A DISSERTATION

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It was Nietzsche who said "A refined nature is vexed by knowing that some one owes it thanks. . .". When it comes to expressing gratitude to the many who have given me encouragement and help in my pursuit of education, I become vexed. The pages of this document are not numerous enough to list them all. My early mentors who started me on this path; my parents who fostered a desire to learn; my academic colleagues who proof read, tolerated my tardiness, and assumed extra burdens; my friends who helped me in numerous ways from high tech explanations to typing, duplicating to sympathizing; my committee that helped me make sense of the whole process; my wife and sons who gave so much and received so little in return; and those who endured the late night calls and frantic juggling of time and commitments, yet continued to believe in what I was doing.

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Nietzschke went on to say "a coarse nature (is vexed) by knowing that it owes thanks to some one." It is my purpose to relieve my torment.

Table of Contents

LIST OF TABLES

PLANNING FOR CHANGES: A STUDY OF SATELLITE DISTANCE LEARNING ADMINISTRATIVE POLICY DEVELOPMENT IN HIGHER EDUCATION

CHAPTER I

Introduction

> ....education in technology and the implications of technological advances is essential if higher education is to deal effectively with reality." (Ashby, 1981, p. 32)

Distance learning is being accepted as a means of providing broader learning opportunities to students who find themselves inconveniently located far from campuses. Distance learning is a form of instruction reception that occurs via electronic media at a point distant from the location of the teacher. The medium has an interactive video and/or audio methodology. Televised teaching is sent out live from campus to students away from the campus. While the teacher may not be able to see the students at their distant sites, students and faculty are able to speak to each other. Normal classroom activites are extended to those students who for a variety of reasons can not attend the on-campus sessions.

Distance learning is the latest evolution of the traditional correspondence school. It is bringing instruction to those who would have to put off their education or would have to miss the opportunity for learning altogether. Continuing education programs and other programs in non-traditional education are using electronic delivery of instruction as a means of increasing

offerings to those students who are not coming to campus.

Distance learning is finding favor with many educators because of its immediacy. Unlike the older forms of correspondence education (e.g., mailings, audio tape, video tape), distance learning allows the student to have direct access to the instructor during the time that the instruction is taking place. Spontaneity in classroom discussion, feedback of student concerns, and student responsiveness to the teacher's instruction create an atmosphere aligned with the normal parameters to which most teachers are accustomed.

Higher education administrators are keeping a watchful eye toward this innovation in teaching. They are finding implications that need to be addressed. The technological advancements are creating many emotions. Excitement, anxiety, and apprehension are displayed by those in the higher education community when the subject of distance learning is mentioned. Lack of substantive procedures and policy creates an aura of concern that many administrators must overcome (Steele, 1991).

Society has a profound dependence on telecommunications. Information flow and the hardware associated with its delivery have become major expenditures in almost every organization. Schools, government, industry, business, medicine, and transportation have effectively demonstrated the impact that fast reliable communications can have on the increased efficiency of the organization (Tate & Kressel, 1983).

Higher education is experiencing an emergence in the use of

telecommunications. Administrators have known the value of data transfer, computerized filing systems, and teleconferencing. Recently academicians have turned to these electronic highways as means of delivering actual coursework to students and allowing the instructor to receive instant feedback from his/her students. Instructional signals travel by long-line telephone audio feeds, computer networks, cable, microwave, fiber-optics, and satellites. Courses are being offered by different technologies across campus to a few blocks downtown or to hundreds of miles across the state; these technologies are permitting the formation of communication networks of small pockets of students with common interests. The combination of these intimate groups of students provides a huge population overall. TI-IN, Incorporated, a satellite delivery company from San Antonio, Texas, is currently offering advanced secondary level courses to students in more than one thousand school systems (Heller, 1990). School boards that find it important to offer low enrollment courses, such as calculus, honors English, and computer science, are using TI-IN as a very economical means to provide these classes to deserving students (Jamerson, 1987).

There are several methods of distance learning taking place in the United States. A combination of audio and computer graphics is being utilized by Louisiana State University. Professors from the Baton Rouge Campus teach courses to a limited number of off-campus sites throughout the state. Students listen to the instructor and ask questions via regular speaker phone

assemblies and can view graphs and other computer generated imagery via personal computer connections (Partridge, 1987).

The University of Southern Maine operates a combination interactive video system to distance sites through the use of cable, microwave, and fiber-optics. On-campus teachers in Portland interact with students located at selected community college locations 35-50 miles distant (Cleary, 1986). Even the severest Maine winters do not hamper off-campus instruction.

West Virginia is currently delivering courses to multiple locations by means of microwave and satellite systems. During the 1990-91 academic year, higher education in West Virginia scheduled twenty-six courses by means of distance learning. A coalition of institutions belonging to the state's Board of Trustees and Board of Directors developed the schedule by taking proposals from interested faculty members teaching within the state supported and private schools. (Academic User's Group, 1990).

West Virginia has a ready made topography for satellite technology. The mountainous terrain makes it difficult to develop many traditional electronic delivery systems. Microwave must have multiple towers to hop from mountaintop to mountaintop. Telephone lines are too expensive to stretch through the noninhabitable areas to reach distant towns and cities. Satellite technology reverses the trend of most technological developments. Practically every other innovative advancement in society, e.g., telephone cable, water/sewage, paved streets, and

electricity, came first to the urban community rather than the rural areas. The use of satellite communication is made to order for the less populated sectors. The proliferation of satellite dishes (downlinks) in rural sectors of West Virginia is ample evidence. There are over 50,000 registered downlinks in the State. There is an estimated additional 30,000 unregistered dishes (O'Keefe, 1987). Each of the downlinks provides a potential site for viewing college coursework delivered by this space age technology.

Satellite and microwave delivery of West Virginia higher education courses was first envisioned in 1983 during discussions among professors and administrators from various West Virginia schools of higher education. After several state committee meetings, it was determined that the site for a satellite uplink would be on the campus of West Virginia State College at Institute. A bonding program in the amount of $650,000 was provided by the West Virginia Board of Regents (B.O.R) to construct the uplink. Stephen O'Keefe, psychology professor, of the College of Graduate Studies (COGS) Institute, West Virginia, was appointed to direct the program (Gilmore, 1986).

The development program of the satellite uplink facility was organized into several phases. PHASE I Construction of the uplink site included the transmitting dish and related electronics, an electronic classroom (the first in the state), studio equipment, and other assorted electronic necessities. These are all lodged in the new Community College building on the

West Virginia State campus (Academic User's Group, 1987).

The satellite uplink is accessed by the various campuses via a microwave system owned by the West Virginia State Educational Broadcast Authority. Public television stations in Huntington, Morgantown, and Beckley control the ports. Higher education institutions must connect with one of these public television stations to gain access to the microwave system. This is a major weakness of the communication technology. Direct access to the uplink comes only from COGS and West Virginia State College with all other institutions of higher education dependent on the microwave system (Van Camp, 1987).

Additional sums of money were earmarked in Phase II of this system. This funding is provided for: (1) microwave links bringing Medical School campuses in Morgantown and Huntington on-line with the system, (2) earth stations (receiving dishes) at each of the twenty-two B.O.R. facilities, (3) completion of the microwave link to the Institute location (Academic User Group, 1987).

Once completed the system will provide two-way video and audio to selected sites in West Virginia. One-way video with two-way audio anywhere within reach of the satellite signal, a distance which covers all most all of the continental United States. Using such systems many educators can see numerous implications for distance learning by satellite. The medium has the potential to serve a variety of populations all with select interests and capacities (Hendricks, 1986).

Technology is changing the way a university fulfills its mission. Traditional means of delivering an education are being evaluated. An understanding of these new methods by all constituents is important for proper policy development to take place. In making plans for the future, administrators must realize that the university of tomorrow will not be constrained by the political and geographic boundaries which are found in higher education today.

Statement of the Problem

Administrators of newly installed distance learning systems find that they often are faced with old problems fashioned in a new way. This study seeks to answer the overriding question: What are the administrative structures and processes in which satellite distance learning policies are developed in institutions of higher education in the United States? Other questions with associated hypotheses are as follows:

HYPOTHESES

What affect does the reporting levels of distance learning administrators have on policy formation?

I. There is no relationship between the reporting level of the satellite telecourse administrator and the number of

satellite delivered courses.

II. There is no relationship between the reporting level of the satellite telecourse administrator and the method of policy formation.

III. There is no relationship between the reporting level of the satellite telecourse administrator and the amount of perceived political pressure involved in policy development.

What methodologies are followed in formulating policies?

IV. There is no relationship between the method of satellite telecourse formation and the area from which satellite telecourse policy originates.

V. There is no relationship between the method of satellite telecourse policy formation and the administrative positions involved in the policy formation.

VI. There is no relationship between the method of satellite telecourse policy formation and the length of tenure of the satellite telecourse administrator.

Who is involved in policy formation?

VII. There is no relationship between the originating areas of satellite telecourse policy formation and the administrative positions involved in policy formation.

VIII. There is no relationship between the originating areas of satellite telecourse policy formation and disciplines demonstrating interest in use of the medium.

IX. There is no relationship between the originating areas of satellite telecourse policy formation and the reasons for undeliverability of courses by the medium.

X. There is no relationship between originating areas of satellite telecourse policy formation and institutional size.

XI. There is no relationship between the originating areas of satellite telecourse policy formation and faculty fear of job security.

XII. There is no relationship between the originating areas of satellite telecourse policy formation and opposition to telecourse development due to faculty skill in televised teaching.

XIII. There is no relationship between the originating areas of satellite telecourse policy formation and the opposition to satellite telecourse development due to concern over student attitude.

XIV. There is no relationship between the originating area of satellite telecourse policy formation and the point in time that satellite telecourse policies are formulated.

XV. There is no relationship between the originating area of satellite telecourse policy formation and the level of sophistication of the satellite telecourse physical plant.

XVI. There is no relationship between the originating area of satellite telecourse policy formation and the perceived level of success of distance learning classes.

Definition of Terms

Critical terms are operationally defined for this study as:

1. Distance learning: the means of delivering classroom activities to sites removed from campus by electronic methods which allow interactive participation between the teacher at one site and students at another. It also is referred to as an "Extended Classroom" (Hund 1987). Two-way audio, two-way video and audio, one-way video and two-way audio, and two-way audio

with computer data transfer are typical methods of distance learning. For purposes of this study, distance learning is defined as it is applied to satellite delivery of information.

2. Policy: the method or procedure implemented by an organization by which its actions are governed. Gary Brewer and Peter deLeon state that policy helps to give guidance for actions of persons in authority (Brewer & deLeon, 1983). Furthermore, "policy decisions bind an organization to important courses of action" (Riley & Baldridge, 1977, p. 71).

Policy formation involves decision making and activities in an organization which tend to (a) have wide ramifications, (b) have a long-term perspective, and (c) devote critical resources toward perceived opportunities in a changing environment. Policy formation is a dynamic social process within which an intellectual process is embedded.

3. Higher education: college and university education leading toward associate, baccalaureate, master and doctoral degrees.

4. Postsecondary education: all types of education beyond the high school curricula. It may include colleges, university, trade schools, vocational schools, and proprietary educational institutions.

5. Planning: designing programs to accomplish goals. Planning

may be regarded as the determining "the how" of doing something.

6. Telecommunications: using technology to communicate over distances. Radio, telephone, computer, television, and related hardware are the typical means of telecommunications equipment used in distance learning.

7. Administrator: This is the person who has the organizational, budgetary, and policy implementation responsibilities in providing academic support for faculty.

8. Political pressure: Laswell (1936) defined politics as "who gets what, when and how". For the purpose of this study, this phenomenon encompasses activities which occur within an institution designed to control resources that will secure desired outcomes in an environment of incongruity. It is the attempt of individuals or groups to sway decision making toward policies which favor their own positions or objectives.

9. Reporting level: the administrative level of the distance learning administrator within the institution of higher education. Two distinct levels are used in this study: (a) reporting to a dean or below and (b) reporting above a dean.

10. Originating areas: the areas within the institution from which policies are formed. For the use of this study, two main

areas are being considered, administration and faculty.

11. Point in time: the time that distance learning policy was developed within the institution. Options for the survey are: (a) before courses were being transmitted, (b) during experimental course transmissions, or (c) after regular course schedules have begun.

12. Physical plant sophistication: This refers to the level of the state-of-the-art that the distance learning production technologies exist at an institution. For purposes of this study, electronic classrooms depict state- of-the-art characteristics.

13. Method: This refers to the manner by which policy decisions are reached. For the purpose of this study, administrative directives and consensus, which is referred to as group decision making (GDM), are the alternatives.

Significance of Problem

Distance learning is a rapidly growing field of academic support in American higher education. In the past three years, colleges and universities have doubled the number of off-campus courses being delivered by electronic media. More than five hundred telecourses are being offered by sixty different

institutions of post secondary education (Underwood, 1987).

With only 2 percent of the nation's colleges now using satellite distance learning (Johnstone, 1987), administrators are attempting to provide policy statements for this new methodology. They are attempting to do this without the luxury of past studies or historical procedural precedent documentation. There has been no definitive study as to the general policies developed by distance learning institutions and the methods by which these policies were formulated. Institutions are entering into this electronic realm without knowing the hurdles other institutions have had to traverse in establishing guidelines for distance learning.

West Virginia's institutions of higher education are among the 2 percent nationwide which have access to distance learning via satellite (Academic User Group, 1987). Similar to other schools in other states which have entered this electronic frontier, West Virginia's colleges and universities operate under policies which have been surpassed by the technology. The hardware is in place. Courses are being offered. Students are receiving credit. However, this activity is taking place without any standard means for examining their effectiveness or needs. In some cases courses are offered on a first come, first serve basis.

A statewide committee with representatives from all West Virginia Board of Trustees and Board of Directors institutions interested in distance learning via satellite has been formed.

One of the challenges for the Academic Users Group (AUG/SAT-NET) is to develop policies for the use of the medium (O'Keefe, 1987). The 1991 West Virginia State Legislature passed a bill that gives legislative status to the delivery system and is asking for a general policy oversight committee (McManus, 1991). Information is sparsely available from colleges and institutions involved in similar electronic teaching programs. "It is notable how few academic or higher education organizations have entered the field to research the issues of policy formation in distance education" (Moore & Thompson, 1990, p. 41). If information were available, policy comparisons could be made and could be used to anticipate future problems (Spears, 1986). Procedural data from sister institutions would greatly aid AUG/SAT-NET in defining objectives in its own policy development. Many constituencies will be affected by any policy developed by distance learner systems. Having information from throughout the United States would assist those in West Virginia and like agencies elsewhere in their approach to the planning of the proper use of the medium (Johnstone, 1987). It is anticipated that information provided by this study would be sought by existing distance learning systems as well as those institutions considering this new medium in course distribution.

Limitations of the Study

The population of this study is limited to administrators of higher education satellite distance learning systems in the United States. Administrators of other distance learning systems were excluded from the analysis. This study did not attempt to determine effectiveness of the distance learning technologies, but rather to discover out administrative policy making structures and processes used by institutions involved in this instruction delivery method. Limited information on this new field and the natural limits imposed by studying higher education policy development were factors acknowledged in this study. Hines and Hartmark report that higher education's diversity of focus and theoretical pluralism is confusing. However, this difference also means strength for new ideas and concepts (Hines & Hartmark, 1980). New ideas in higher education affect many constituencies. The perceptions of an innovation are determined by the experiences or concerns that individual may have. Objectivity was desired, but it was recognized that some survey instrument questions in the study requested subjective answers from the respondents.

CHAPTER II

Review of Related Literature

Distance Learning

To understand the need of applying proper administrative procedures to policy development in distance learning systems, it is imperative that the administrator comprehends the historical and conceptual framework from which her/his medium has developed. The discussion that follows provides a cognitive approach toward this comprehension.

> The advent of television and, indeed, the whole complex of newer communications media (from video to satellites) has given American citizens unparalleled opportunities to advance in their ability to record and communicate ideas. These new communication resources must now be harnessed to serve the ends of education. . .
> (Educational Media Study Panel, 1962, p.15)

The quote above easily summarizes the concerns of many educational media professionals. The new methods of delivering instruction to students in higher education vary. Satellite, open circuit, microwave, computer, telephone, and related media are all being utilized by colleges and universities to reach students who cannot come to regular classrooms on campus. The statement from the Educational Media Study Panel is significant in that it was quoted in a Stanford University sponsored symposium of 1962. For more than a quarter century educators have been planning the use of electronic media for immediate delivery of telecourses to off-campus populations.

Educational use of electronic communication began before general knowledge of television was widespread. In 1932, seven years before a dramatic preview of television at the World's Fair in New York City, the first educational television broadcast was aired in Ames, Iowa. The station, W9XK, was an experimental one, developed by the electrical engineering department of the State University of Iowa. The station used a scanning disc instead of a picture tube. It transmitted more than four-hundred programs including lecture courses in art, shorthand, engineering, botany, and drama in the years leading up to 1939 (Gordan, 1965).

By 1946 only six regularly authorized, non-experimental television stations existed in the United States. Only 6,500 receivers were scattered throughout the population. This slow growth can be attributed to the effort of the government to stop all non-war related research during the early 1940's. Several universities were denied opportunities to begin television broadcasting during this time by the Federal Communications Commission. Following the war, there was little doubt in the minds of radio manufacturers, broadcasters and advertisers that this new medium held great potential. By 1948, forty commercial stations were on the air. Six hundred thousand (600,000) receivers were in use. Television was definitely on the move (Hull, 1962). Training of soldiers in World War II had proved to educators that the use of audio-visuals could greatly increase the speed of instruction. "Every state department of education should have a specialist in A-V education to supply leadership

and over-all guidance. . .they should undertake to set standards, promote teacher training and in-service training. . ." (Dent, 1949,p. 183).

The 1940s saw a great interest but very little action in television by educators. This was underscored by a recommendation from the Federal Communications Commission that higher education should concentrate on the development of FM radio frequencies.

> With respect to television development. . .it does not appear that current educational interests in television... or those in the near future, warrant reserving any channels for I T V (FCC 83, 1945 np).

In 1948 five United States educational institutions were seriously involved with television.Iowa State, Iowa, Michigan, and American University were among those first schools utilizing open circuit television (Adams, 1958). Iowa State President Charles E. Friley brought to fruition the first educational station. Following a plan instituted in 1945, he threw the switch bringing the station on the air. The station provided instructional and commercial programming (Siepmann, 1952). It is still in operation as a commercial station today (Broadcasting Yearbook, 1990).

Educators were eager to try the medium of television for teaching. Study after study proved that student achievement from instruction via the new electronic innovation was as successful as from traditional face-to-face instruction. An initial study by T.S Parsons (1957) reported borderline significant differences

in achievement. Lapore and Wilson (1958) noted in their research that achievement of learning by television compared favorably with conventional instruction.

Sporadic growth slowed television use in education. The medium remained a low priority open circuit system of loosely related stations or hours set aside on commercial stations. By 1961 the National Educational Television Network (NET) had an affiliation of fifty-three stations. However, this was a web-less network. There were no interconnecting lines. Stations merely shared films and coordinated scheduling (Hull, 1962). The first real network came when the Southern Regional Education Board, Atlanta, Georgia, initiated the construction of a sixteen state interconnect in the late 1950's. Unfortunately, the final attachments did not take place until a decade later (Cassirer, 1967).

During the 1960's one of the most remarkable demonstrations of televised teaching took place. The Midwest Program on Airborne Television Instruction (MPATI) delivered instructional programs to both school systems and the general public. Utilizing renovated Air Force bombers, television transmitters were sent aloft over east central Indiana to broadcast to an area of the Midwest that included the parent state along with parts of Ohio, Kentucky, Michigan, Wisconsin, and Illinois (Smith , 1961).

Noncommercial educational television stations increased in number following the adoption of the Public Broadcasting Act of

1967. In 1966, 126 educational television stations were on the air. By 1972, 233 educational stations existed (Carnegie Commission, 1979).

While many universities tried to persuade their boards to invest in open-circuit television systems, others concentrated on a more narrow medium, closed circuit via microwave and cable (Murphey, 1966). Ohio University, University of Texas, and the University of Maryland created the networks for both on-campus and off-campus telecasting to specific student populations (Brientenfield, 1968). This application lead many institutions to rethink their desire to deliver educational messages to entire populations. Finding key groups of students in concentrated areas gave rise to the development of distance learning to selected clientele. In the 1970's satellite and microwave technologies had developed to a point that educators began to take notice. Lower cost and more accessible equipment made the medium economically feasible (Stone, 1991). The Carnegie Commission on Higher Education predicted that by the year 2000 over 80 % of off-campus instruction and 10-20% on-campus instruction would occur by telecommunications. (Carnegie Commission 1972, p.1).

The initial work with video during the 1970's was with videotape. Efforts were established at many universities to tape the regular proceedings of an on-campus classroom and mail these tapes to distant sites. Students would view the tapes with an on-site facilitator and interact with the campus bound instructor

via the mail. "The Tutored Videotape Instruction (TVI) method was originally developed to provide course work for science and engineering students..." (Gibbons 1977, p. 1140). It was deemed that the TVI method was most effective when groups of students assembled together. Students were not encouraged to attempt the courses on an individual basis. During this same time period some of the major universities began to experiment with microwave delivery. "In 1969, The Stanford Instructional Television Network began broadcasting engineering classes over a four-channel microwave link to its member companies." (Stanford, 1990, p.1) By 1979, faculty used 'candid classrooms' to support more than 44,000 off-campus graduate students who accessed nearly 1,800 courses offered by 30 universities (Baldwin and Down, 1981). "In 1974, NASA, NIE, NSF, and the Office of Education participated in experiments in video-satellite education using the ATS-6 satellite" (Withrow, 1990, p. 62).

During the 1970's educators began to turn their attention to non-broadcast sources of electronic course delivery. Following the example of universities like Stanford, other schools began to develop microwave networks. (Stone). Instructional Television Fixed Service (ITFS) systems were authorized by the Federal Communications Commission. These systems allowed institutions of higher education to deliver courses by one-way video with audio return by phone lines. However, this system limited the school to four off-campus sites. (Haley, 1987)

Although limited, the ITFS methodology worked well for

urban universities having a large graduate clientele within private sector institutions. For example, engineering courses in Dallas, Texas, found a ready market in the mushrooming high tech market. Southern Methodist University developed an efficient network to on-site industrial locations in its region. (Irwin, 1985) By 1979, faculty used television classrooms to support more than 44,000 off-campus graduate students who accessed nearly 1,800 courses offered by thirty universities. (Baldwin & Down, 1981)

"The ITFS system provided the open circuit television technology but restricted it to a closed circuit concept, eliminating the concern of over-reaching the target". (Hendricks, May 26, 1990) Professors did not have to concern themselves with casual home viewers tuning in an ostensively private lecture. Interaction with the teacher could take place with only those of a common interest being privy to the discussion. Dean (1982) reported that for the first time distant students were considered merely a part of the extended classroom and television existed solely to provide access to those unable to come to campus. Television became a process for education, not education for television. (Stone, 1990, p. 2)

As satellite technology became available for domestic purposes, educators began to see how they could take advantage of the positive points of ITFS, yet by-pass its limited capacity. During the early 1980's, universities in Virginia, Nebraska, and California developed uplinking facilities. (Stone, 1990) It was

realized that much like open circuit television, the satellite signal could be delivered to a multitude of viewing sites. Comparable to ITFS, the signal was given limited exposure to the general viewing public. (Hendricks, 1990) A proliferation of backyard downlinks existed; however, these were used mainly for general entertainment programs. Unless a private owner was given specific coordinates and times of the telecourse transmissions, there was little chance of public intrusion. (Portway, 1991)

National organizations, such as the National Technological University (NTU), National University Television Network (NUTN), and the Adult Learning Service (ALS), realized tremendous growth of their educational service during the 1980s. These agencies learned that a great untapped source of clientele existed beyond the confines of the traditional campus. "More than 90% of distance education enrollment in the United States occurs through postsecondary institutions other than colleges or universities" (Verduin & Clark, 1991, p. 18).

By 1990, the University of West Virginia College of Graduate Studies claimed a doubling of its distance learning courses over a two year period (Rhodes, 1990). "A recent study by the Congressional Office of Technology Assessment found that distance learning projects were operating or being planned in every state, up from just 10 states in 1987" (Kaminsky, 1990, p. 17).

Since the mid 1980's satellite delivery of telecourses has become commonplace for several universities in the United States. West Virginia has taken prominence in this method with

its ED-NET delivery systems based in Institute, West Virginia. The 1986 funding of the satellite uplink has created a demand for courses being telecast by the space technology. Nursing, Special Education, Social Studies, and Humanities have developed curricula for graduate degrees obtainable by distance education. More are expected to be completed by 1992 (SAT-NET, 1990). Parnell (1987) reported that video teleconferencing appeared to have great potential to become the world's largest classroom.

The history of television investment in higher education highlights the potential for distance learning via this medium. However, colleges and universities are not doing enough to provide awareness to legislators and government administrators about this potential. Some feel that if higher education does not react quickly it will be relegated to one of the paying customers competing for time in a national system (Welling, 1983). "University faculty and administrators tend to lack knowledge and vision to lead in this area " (Hund, 1987, p. 41). Verduin and Clark (1991) agree that not all educators perceive distance learning opportunities as equal to traditional teaching modes. ". . . a large audience of faculty and administrators in adult and higher education are not so easily convinced of the equivalence of mediated education" (p 89). However, Brown states that "the live video teleconference may be the next best thing to being there since it serves as an alternative to face-to-face learning" (Brown, 1987, p. 10). It is the responsibility of the distance learning administrator to blend the new technologies

with the teaching traditions of the institution. In doing so, he/she will have the opportunity to review existing policies and develop new policies.

Policy Theory

The development of the technology in distance learning is only part of the picture. Policy development for the proper utilization for the media also has had a roller- coaster history. Following the establishment of the Corporation for Public Broadcasting (CPB) in 1967, the national group attempted to elicit recommendations for the use of television as an educational and state input. This was the first organized effort in developing policy . In a television interview on K T C A-TV, St. Paul, Minnesota, John Macy Jr., President of the Corporation of Public Broadcasting during the formative years of the CPB, talked of the formation of a special group of people to develop policy for I T V . Five policy conferences on ITV in higher education were held in Washington, D.C. Thirty persons representing colleges, universities, community colleges, consortia, media, and the community attended general sessions and worked in small groups to address four concerns: inter-agency relationships, content, design and production, and distribution and utilization. Nearly two hundred recommendations were generated and forwarded to CPB which collated the information (Schwarzwalder, 1970).

Throughout the document produced by the CPB, terms were used to describe the cooperative atmosphere that was essential for the planning to take place. Faculty input, sharing, teamwork, supportive group experience, and teacher accessibility, are common terminology used in the report (Powledge, 1972). The basis for this approach is found in the Political Systems Theory as stated by Campbell and Mazzoni.."The political systems approach, speaking generally, stresses the utility of viewing policy making as an interactive process..." (Campbell, 1976, p. 5).

The last decade has demonstrated some dramatic moves in education. Lifelong learning, reconditioning of skills, and the advent of nontraditional students are causing institutions of higher education to rethink their approach to teaching (McCutcheon, 1987). Among the means of meeting the educational needs of nontraditional learners is electronic distance learning.

While many innovative thinkers are considered to be sentinels of the cutting edge, the activity of these emerging administrations is closely related to those who have preceded them in other educational technologies. Administrators have a common purpose in taking their organizations from point A to point B. Administrators' performances are evaluated on how this movement occurs. The working vector by which he/she advances his/her institution is the gauge by which his/her ability is to be judged. This is especially important in education. An administrator's relationships with other people is crucial to

success in reaching the enterprise's goals (Newell, 1978). Education is people intensive. The product is people enhancement. The main resource components used for developing this product are people.

The administrator must decipher impending problems and secure the proper resources of personnel and material to address these issues. To accomplish goals, it is imperative that a group perceive its administrator as an effective leader. "A leader is one who delineates clearly the relationship between himself and the members of the group and establishes well defined channels of organization and communication" (Halpin, 1966, p. 118). In higher education, often the people who evaluate an administrator are the same ones who are most affected by his actions. The evaluation does not have to be a formal one but may be merely individual reactions. However, these perceptions may actually be more important than any graphically displayed testing material by objective viewers. The intra-group perceptions cement the group toward common goals. The human relationships are focal to the achievement of the organization.

Distance learning via satellite technology is an innovation gaining popularity in higher education. Many universities are inquiring into the use of this new medium to develop off-campus educational opportunities. This type of innovation is expensive and very visible to the community, so few institutions consider such a step lightly. Whether it is technology or curriculum, any new strategy in education should not be taken without careful

consideration. Four major criteria are often cited for review: institutional commitment, instructional context, student performance, and learning activities (Hanson, 1979). Burnham and Seamons (1987) attest that administrators determine the educational processes used over electronic distribution systems. It is the job of the administrator to direct these diverse but related activities into a path that will allow the innovation ample opportunity to demonstrate its success or failure in its intended objectives.

While excitement may be immediately associated with an innovation, the intended change will also create resistance in both the organizational and individual levels. "Systems usually perpetuate rather than change an individual's level of functioning" (Newell, 1978, p. 184). People often fear change and the impact that change may have on their positions. A department may reflect some of these same qualities when faced with a change in which it has had no input. Traditional functions are secure. When expectations are known, the behavior of the department is one of confidence. It is the unknown from compulsory directives which create the disconcerting atmosphere and ensuing resistance.

The downward flow of resistance is just as real. If one person or department changes in function, the entire system will attempt to bring the offending unit back in line. Furthermore, should a new unit or new function of that unit be forced on the system, a backlash will occur. "If a single faculty member

experiments independently with a new plan, the rest of the faculty may resist..." (Newell, 1978, p. 41).

Within the realm of innovation the administrator of the new distance learning technologies often finds himself/herself. He/she is faced with the task of moving his/her organization from its initial point of emergence to the envisioned operational status. He/she must be able to peer into the educator's crystal ball to determine instructional needs, resources, and concerns related to changes that come with the innovation.

> Each institution involved in distance learning must inevitably respond to a variety of local influences and come up with a pragmatic operational system, matched optimally to its own context (UNESCO, 1983, p. 3).

The Council on Post-Secondary Accreditation's (COPA) 1984 revealed the rapid expansion os distance learning in higher education. This report's specific recommendations were made to implement policies in distance learning. An important suggestion was the need for close communications among the diverse participating groups for each had special needs for the electronic medium (COPA, 1984).

"All states are unique in distance learning policy development. However, policy must be part of an initial development" (Hezel, Feb. 4, 1991). When it comes to distance learning, most states are guarded in setting firm long-range directions for uses in technologies. State policies often reflect a concern that technologies will be in disharmony with

organizational structures (Holznagel & Olson, 1988). "A major concern for effective distance education is who manages, controls, or administers the program" (Verduin & Clark, 1991, p. 173). The administrator becomes the catalyst for the innovation to occur. Though a director may gather the components, without the administrator's bonding effort no direction can result from this compound. In making reference to the basic Action Theory stated by Talcott Parsons, it must be recognized that the administrator of the innovative system has great influence in the integration paradigm. Here, the leader must pull together the other corresponding subsystems of goal attainment, latency, and adaptation. He/she must correctly evaluate these subsystems and begin to bring them into a rational working order leading to success. "...there is a special level of integration within and not merely of systems of action" (Parsons, 1953, p. 98). The system is subdivided, and within each subdivision other functions are taking place. The administrator must know this and approach his/her work from the vantage point of recognizing all of the possibilities that may exist. The director will become successful when knowledge and managerial expertise are combined with the ability of realizing the needs of a given situation. Leadership is shown when analysis of system elements are accurately keyed with sound judgement and competence in the field in which the administrator is working. These dynamics may be in the form of dealing with people ranging from superiors to subordinates, or they may demand scrutiny in job requirements and

technology. This situation obviously requires knowledge and careful consideration of the higher education institutions and their objectives.

Parson's integrative subsystem becomes a microcosm where the scope of the new medium's administrator can be studied. While the subject of the innovation, satellite delivery of coursework, may be new, the administration of the technology is not new. Assimilating distance learning administration into Parson's model, the character of the people and the organizational system of higher education remain constant. Theoretically, the knowledge of the satellite medium is second to the understanding of administering a component in higher education. While there are basic assumptions associated with the management of a delivery system for distance learning, the concepts are so radically new that an administrator of an existing instructional television unit will require extensive research into the new technology. Leadership's success or failure does not depend solely on the assimilation of a working knowledge of microwaves, broadband coaxial cable, or satellite transponder frequencies but rather is contingent on the ability of the administrator to follow the more basic criteria of good management. He must know his product, people, organization, goals, and potential for their integration as the first order of success.

J. Victor Baldridge pointed out that decision making on the university campus is concentrated in the political character. "New managerial techniques will inevitably step on toes, invade

traditional domains, upset powerful people, and conflict with vested interests" (Baldridge, 1979, p. 173).

"Policies which create opportunity for some are seen as threats by others" (Holznagel & Olson, 1990, p. 21). Academic decision-making finds support in activating numerous points of input via committee which often find little continuity in membership. Issues once perceived as settled often resurface and in turn create new dilemmas that increase the parameters of discussion. Conflict will always be within easy reach (Baldridge, 1979).

Barbara Hund provided a direction to policy making with telecommunication components. Her work in the state of Virginia was based on F. F. Plude's theoretical model of telecommunications cooperatives . Public service telecommunications is characterized by low volumes and few users (Hund, 1987) . Plude's model was developed to relate the financial obligations of a transmitting spectrum. Plude allows these domains of decision influence to interact to develop cooperation which leads to greater latitude in the use of telecommunications (Plude, 1981).

The analysis of policy may be regarded in the following four elements: (1) The goals being addressed, (2) means of achieving these goals, (3) methods of determining goal achievement, and (4) relating means to goals by the nature of application. Many organizations have reversed the process of making policy. Instead of stating a policy and then determining the effect, the

new trend is to create goals as givens and then develop policies to enhance the effort in attaining these goals (Nagel, 1984).

Another danger cited is the administrator who plans rigidly. Narrow goals minimize choices. Broad goals allow those practitioners closest to the problems to choose from several alternatives in order to solve these problems (Goodin, 1982).

Cooperative policy decision making is supported by the work of David Paris and James Reynolds. The authors reinforce the need of policy development by those who work within the organization, not an outside analyst who has no vested interest in the structure (Paris & Reynolds, 1983).

College Annual Planning Process (CAAP), developed in the mid-1970's, provided parallel indicators for policy planning. The main component of this process was developed to improve communication in the planning process. This was accomplished by keeping paperwork at a minimum, establishing decision by committee and tailoring a system to meet the needs of the college (Hopkins & Shroeder, 1977). Coupling the correct process of policy development with proper technology provided a potential for education. The use of technology can increase the alternatives and permit teacher to lead students to find their own directions. "...visionary educators who use these technologies suffer a common fault, that of having a solution in search of a problem" (Hughes & Miller, 1975, p. 296).

Summary

Distance learning is the latest evolutionary trend in distance education, the field of delivering collegiate courses to off-campus locations. From the first experimental stations to the present, university administrators have sought to use television in its many forms as a means of carrying instruction to points away from the campuses. Individual broadcast stations, networks, videotape distribution, point-to-point microwave and cable, and most recently satellites have played a significant role in distance education. Time and again, educators have proven that there is no significant difference in the amount of learning that takes place between the traditional classroom and the televised classroom (Parsons, 1957; Lapore & Wilson 1958). Two per cent of the nation's universities have invested in satellite uplinks and are seeking the most effective ways to utilize these resources (Portway, 1991). Murgatroyd and Woudstra (1989) suggest that managers of distance learning systems need to be concerned about the transition into the traditional campus, resources, staff development, cost control, and new technological development. Ultimately, these developments will affect the way distance education functions.

Corresponding to the development of Instructional Television (ITV) has been the development of its policies. ITV organizations on national, state, multi-state, and local levels

have struggled to develop policies and procedures that effectively focus the systems into efficient operating patterns (UNESCO, 1983; COPA, 1984; Holznagel & Olson, 1988). Observing historical references of ITV policy development leads the researcher to realize that most policy development takes place in the realm of the Political Systems Theory where a demand is made for interaction with all constituencies (Campbell, 1976). Coinciding with this thinking was the writing of Parsons in his Action System Theory which demonstrated that the integration subsystem allowed an organization to initiate new ideas as long as provisions were made for goal attainment, adaptation, and pattern maintenance (Parsons, 1953). It would take a responsible leader to safeguard the process of enabling these important functions to occur and to recognize the resistance capabilities of an organization and the problems caused by such contention (Newell, 1978).

Bringing together the new technological developments with proper concepts in policy structuring has been a concern of educational administrators for decades (Paris & Reynolds, 1983). Acknowledging that the advancement of the former depends upon the integration of the latter is critical to the success of the administrator.

CHAPTER III

Methodology

Higher education in America is using more distance learning as each semester begins. West Virginia's recent reorganization of its system of higher education has brought attention to the technology of satellite delivery of instruction. An increase in funds has been budgeted for the use of delivering courses by satellite (SAT-NET, 1990). The governing body of the technical medium struggles with the establishment of procedures and policy (Van Camp, 1990). The survey instrument associated with this dissertation was an attempt to ascertain what procedures other satellite distribution administrators have used to establish policy. The overriding question to be answered was: What are the administrative structures and processes in which satellite distance learning policies are developed in institutions of higher education in the United States?

The population of this survey was a nationwide group of administrators who oversee the use of satellite uplinks for transmission of higher education courses. Because of the limited number of uplinks associated with higher education distance learning, the complete population of 48 uplink administrators was used. It is understood that the limited population could lead to an inability to depend on the validity of Chi-Square tests. The population was determined by information supplied by the United State Distance Learning Association and the National University

Continuing Education Association, the two primary professional organizations involved in higher education distance learning. As a member of both of these professional organizations, the writer had direct access to telephone numbers and addresses for the administrators. Interaction at professional meetings gave the writer even more contact with these distance learning administrators.

The Research Instrument

The survey instrument is an original document designed specifically for this research. It is a product of the author in collaboration with a nationwide committee of administrators of distance learning organizations. Educators from Marshall University, West Virginia University, College of Graduate Studies, University of Virginia, University of Southern Maine, University of Missouri, University of Texas, University of South Carolina, California State University at Fullerton, and Stanford University confirmed the instrument's readability and content legitimacy. (See Appendix A).

The survey instrument was mailed to all respondents. For the purposes of gaining a high return rate, all targeted administrators were contacted prior to the mailing of the survey. Most were communicated with by telephone. Several were contacted via personal visitations. Notes were taken during conversations for portions of the narrative, but the results of the survey were

taken from the returned instruments. Care was taken to ensure that anonymity was provided for the actual survey instrument. Several administrators did not request anonymity and signed their instrument. Others faxed the instrument back to the writer.

The instrument is sectioned in the following manner: institutional demographics; depth of involvement in satellite delivery; internal institutional interest in distance learning; extent of policy development; methods of policy development; amount and source of political pressure; administrative reporting lines; respondent demographics. Finally, the respondents were asked to forward any available literature on their organization. A survey instrument is included within this document. (See Appendix B).

Advance telephone calls and follow up letters were postulated to guarantee an adequate return. The follow up letters were unnecessary. A return of forty-five of the forty-eight surveys was deemed adequate for this project.

Data Processing Procedure

Raw survey answers were transmitted to scanning sheets by clerical assistants. These scored sheets were then utilized by a SAS computer program (SAS, 1985). Cross tabulation with development of tables allowed for statistic analysis of each hypothesis.

The test of the hypotheses was accomplished using cross

tabulations of categorical variables. In order to conduct the tests using cross tabulations a contingency table was used to determine the strength of the relation (or association) between the categorical variables. The strength of the two categories variables is expressed by a contingency coefficient. The significance of the strength of the relationship was determined by using Chi Square (Siegel, 1956).

The tests of the hypotheses were construed with an alpha level of .05. Null hypotheses were rejected if alpha $\leq$.05. Null hypotheses were accepted if alpha >.05.

CHAPTER IV

FINDINGS

This study was designed to seek out the structure and processes used by administrators of higher education distance learning via satellite facilities. At the point which the study was initiated it was determined that forty-eight institutions in the United States were using up-link capabilities (Willis, 1989). These sites and their administrators make up the population of this survey.

Respondent Profile

The participants in the survey represent a group that had an average age of 43. Seventy-seven per cent were male. The mean number of years as an administrator was 3.8. Only seven of the 45 respondents indicated they had administered a distance learning facility more than four years. Only nine institutions had the administrative position available beyond four years. Most (73.3%) report to higher administrative levels (Dean or above) and 71% had small staffs of six or less.

Eighty-four per cent of those surveyed came from public institutions. While all respondents were associated with four year institutions, 61% were associated with institutions having graduate and professional schools (Engineering, Law, Medicine), 25% were institutions with a graduate program. The remaining 14% were four year schools without a graduate program. No

administrator reported being associated with two year institutions. Over half of the institutions (55.6%) were under 15,000 in enrollment and a majority (57.8%) were located within metropolitan areas of 350,000 or more in population. See Appendix C.

Item Analysis

Forty of the 45 respondents indicated that their uplinks were under the direct administration of the institution. Three of the five not having an uplink on campus reported that the technology was being planned. Twenty-one schools (46.7%) have more than one electronic classroom from which they can produce courses.

The number of courses being transmitted each year varied; however, 31.1% said that over 10 courses per year were being delivered via satellite. Thirty-three percent (33%) indicated an increase of more than six additional courses scheduled for the 1990-91 academic year.

The interest in course delivery centered around the professional schools of education. Engineering and education programs each indicated the greatest interest in satellite distance learning. Thirty-eight and one-half per cent of the respondents reported high interest within these two programs. Other programs reporting interest were: medical programs (24.3%), business (19.4%), liberal arts (18.4%), and law (16.2%). Low

interest was exhibited by science (2.6%). There was no interest by fine arts programs reported by the respondents.

Some courses went undelivered. Two-thirds reported that it was the lack of funds as opposed to lack of television teachers which prompted the non-delivery of courses.

When it came to the of distance learning policies, faculty and resources were also criteria in development. The leading factor in developing policy as reported by 90% of the institutions was the lack of faculty's training in the field of distance learning. Fear of faculty job security (51%) was the second most common factor. Student concern (31%) and funding (25%) were less cited factors having pertinence in decision making. When it came to existing policies, 67.6% reported that their institutions had policies governing the use of satellite technology. Of the remaining number over half (56.3%) indicated that plans were being developed for policy implementation. Those who had no policies conveyed that administration and faculty apathy was a factor in at least 33% of the cases. Many (41.7%) thought existing university policies could be used to govern the delivery system.

Regarding policy formation, 91.1% of the respondents reported that administrators originated policy. Only 8.9% indicated that faculty started the process. During the process 86.7% of the schools used a group decision making (GDM) method of policy development.

Ninety-three percent stated that they were directly

involved with the development of policies. Only 8.7% said that policies were developed prior to placing the first course in satellite transmissions.

Most administrators did not feel a great amount of political pressure. Of the political pressure that was perceived, the respondents perceived that it was greater within the institution (37.8%) than outside the institution (17.8%). Within the institution the greatest amount of political pressure was reported from among staff members (37.8%). Faculty was perceived of to have exerted political pressure in only 28.9% of the schools; governing boards 26.7% ; students 22.2% ; and other administration only 20%.

No particular group within the academic sector of the institution was reported as highly political by even a simple majority of the survey population. The highest rated academic unit, education, was perceived to be high in political activity by only one-third (33.3%) of the respondents. Engineering and liberal arts were tied for second highest rated with 24.4% indicating high political activity. Others were medicine and science at 20%, law at 15.6% and business at 6.7%.

Hypothesis Analysis

The following is a discussion of the information discerned regarding each hypothesis as outlined in Chapter One of this document.

Hypothesis I

There is no significant relationship between the reporting level of the satellite telecourse administrator and the number of delivered courses.

A majority (73.3%) of the administrators reported to positions higher than a dean. Fifty percent of those who report to positions of a dean or lower have developed more than 10 courses per year. Only 24.2% of those who report to positions higher than a dean have developed more than 10 courses per year. See table one.

The null hypothesis was accepted [X2 (1, n=45) = 2.724, p>.05]. X2=Chi Square

Table 1
Relationship Between the Satellite Administrative Reporting Level and the Number of Courses Delivered Via Satellite.

Frequency Percent Row Pct Col Pct	Number of Courses 1-10	More Than 10	Total
Administrative Reporting Level			
Above Dean			
Frequency	25	8	33
Total per cent	55.56	17.78	73.33
Row per cent	75.76	24.24	
Column per cent	80.65	57.14	
Dean or Below			
Frequency	6	6	12
Total per cent	113.33	13.33	26.67
Row per cent	50.00	50.00	
Column per cent	19.35	42.86	
Total			
Frequency	31	14	45
Column percent	68.89	31.11	100.00

Hypothesis II

There is no significant relationship between the reporting level of the satellite telecourse administrator and the method of policy formation.

Group Decision Making (GDM) is the method used by most (86.6%) institutions in developing policy. In both levels of reporting, above and below the dean, GDM was the favored means of arriving at policy; however, it was more favored by those reporting to higher levels of administration. Of those reporting above the dean's level 93.9% formed policy by GDM. Of those reporting to deans or below, only 66.6% formed policy by GDM. While GDM was the most obvious methodology of developing policy used by institutions, it is clear that more often a significantly greater number of those reporting to levels higher than a dean relied on GDM to bring about policies and procedures. See table two.

The null hypothesis was rejected [X2 (1, n=45) = 5.664, $p<.05$]. This result suggests a significant association between the reporting level of the satellite telecourse administrator and the method of policy formation. Implications of this finding are discussed in Chapter Five of this study.

X2=Chi Square

Table 2

Relationship Between the Satellite Administrator's reporting Level and the Method of Policy Formation

Frequency Percent Row Pct Col Pct	Method of Policy Formation		
	Group Decision Making	Not Group Decision Making	Total
Administrative Reporting Level			
Above Dean			
Frequency	31	2	33
Total per cent	68.89	4.44	73.33
Row per cent	93.94	6.06	
Column percent	79.49	33.33	
Dean or Below			
Frequency	8	4	12
Total per cent	17.78	8.89	26.67
Row per cent	66.67	33.33	
Column per cent	20.51	66.67	
Total			
Frequency	39	6	45
Column percent	86.67	13.33	100.00

Hypothesis III

There is no significant relationship between the reporting level of the satellite telecourse administrator and the amount of perceived political pressure involved in policy formation.

Regardless of the level to which administrators report, political pressure was not a major factor in deliberations in policy formation. Only 39.4% of those reporting to levels higher than a dean rated political pressure as high. Only 33.3% reporting at the dean's level or below rated political pressure as high. The comparison of levels showed that administrators reporting to higher levels had a greater awareness of political pressure than those reporting to lower levels. See table three.

The null hypothesis was accepted [$X2\ (1,N=45) = .675$, $p>.05$].

X2=Chi Square

Table 3

Relationship Between the Satellite Administrator's Reporting Level and Amount of Perceived Political Pressure on Policy Decisions

Frequency Percent Row Pct Col Pct	Political Pressure Low Pressure	 High Pressure	 Total
Administrative Reporting Level			
Above Dean			
Frequency	20	13	33
Total percent	44.44	28.89	73.33
Row percent	60.61	39.39	
Column percent	71.43	76.47	
Dean or Below			
Frequency	8	4	12
Total percent	17.78	8.89	26.67
Row percent	66.67	33.33	
Column percent	28.57	23.53	
Total			
Frequency	28	17	45
Column percent	62.22	37.78	100.00

Hypothesis IV

There is no significant relationship between the method of satellite telecourse policy formation and the area from which satellite telecourse policy originates.

While 86.7% of distance learning decisions are reached by GDM, faculty have a greater occurrence in using group decision making. Respondents reported that when policy originated with faculty, it was accomplished by GDM 100% of the time. When administration originated policy, only 85.4% of the administrators reported GDM as the means of policy formation. See table four.

The null hypothesis was accepted [X2 (1, n=45) = .675, p>.05]

X2=Chi Square

Table 4

Relationship Between the Institutional Originating Area of Satellite Telecourse Policy Formation and Methods Used in Policy Formation

Frequency Percent Row Pct Col Pct	Group Decision Making	Not Group Decision Making	Total
Institutional Area Originating Policy			
Administration			
Frequency	35	6	41
Total percent	77.78	13.33	91.11
Row percent	60.61	14.63	
Column percent	89.74	100.00	
Faculty			
Frequency	4	0	4
Total percent	17.78	0.00	8.89
Row percent	100.00	00.00	
Column percent	10.26	00.00	
Total			
Frequency	39	6	45
Column percent	86.67	13.33	100.00

Hypothesis V

There is no significant relationship between the method of satellite telecourse policy formation and the administrative positions involved in the policy formation.

The vast majority (86.7%) of respondents indicated that group decision making was the vehicle used in developing satellite telecourse policy. Consistent with this finding, 85.7% of the administrators said that GDM was the methodology used when the distance learning administrator was included in policy formation. When the distance learning administrator was not included in the policy formation, GDM was the method employed 100% of the time. See table five.

The null hypothesis was accepted [$X2$ (1, N=45) = .495, $p>.05$].

X2=Chi Square

Table 5

Relationship Between Involvement of Satellite Distance Learning Administrator and Methods of Policy Development

Frequency Percent Row Pct Col Pct	Group Decision Making	Not Group Decision Making	Total
Satellite Administrators			
Involved			
Frequency	36	6	42
Total percent	80.00	13.33	93.33
Row percent	85.71	14.29	
Column percent	92.31	100.00	
Not Involved			
Frequency	3	0	3
Total percent	6.67	0.00	6.67
Row percent	100.00	00.00	
Column percent	7.69	00.00	
Total			
Frequency	39	6	45
Column percent	86.67	13.33	100.00

Hypothesis VI

There is no significant relationship between the method of satellite telecourse policy formation and the length of tenure of the satellite telecourse administrator.

No matter the length of tenure of the distance learning administrator, GDM was the most common method of decision making for distance learning policy formation. Those with five years or more at the same position used GDM exclusively. When grouping all respondents with three or more years, 88.2% utilized GDM decision making. Of those with two years or less tenure, 54% used GDM. See table six.

The null hypothesis was accepted [X2 (3, N=32) = 6.291, $p>.05$]. X2=Chi Square

Table 6

Relationship Between the Satellite Administrator's Experience and the Methods of Policy Development

Frequency Percent Row Pct Col Pct Duration of Administrator in Office	Group Decision Making	Not Group Decision Making	Total
Less Than a Year	0 0.00 0.00 0.00	1 3.13 100.00 16.67	1 3.13
One to Two Years	9 28.13 75.00 34.62	3 9.38 25.00 50.00	12 37.50
Three to Four Years	10 31.25 83.33 38.46	2 6.25 16.67 33.33	12 37.50
Five or More Years	7 21.88 100.00 26.92	0 0.00 0.00 0.00	7 21.88
Total	26 81.25	6 18.75	32 100.00

Hypothesis VII

There is no significant relationship between the originating area of satellite telecourse policy formation and the administrative positions involved in policy formation.

While the distance learning administrator was involved most of the time that policy formation occurs, there was a greater chance that he/she will be involved when faculty originated policy. When policy originated from the ranks of the faculty, the administrator participated 100% of the time. However, when policy originated from higher levels of administration, the administrator participated 92.7% of the time. See table seven.

The null hypothesis was accepted [X2 (1, N=45) = .314, $p>.05$]. X2=Chi Square

Table 7

Relationship Between Institutional Originating Administrative Area and of Satellite Telecourse Policy Formation Involvement of Satellite Distance Learning Administrator in Policy Formation

Frequency
Percent
Row Pct
Col Pct

	Satellite Administrator Involved	Not Involved	Total
Institutional Area Originating Policy			
Administration			
Frequency	38	3	41
Total percent	84.44	6.67	91.11
Row percent	92.68	7.32	
Column percent	90.48	100.00	
Faculty			
Frequency	4	0	4
Total percent	17.78	0.00	8.89
Row percent	100.00	00.00	
Column percent	9.52	00.00	
Total			
Frequency	42	3	45
Column percent	93.33	6.67	100.00

Hypothesis VIII

There is no significant relationship between the originating areas of satellite telecourse policy formation and disciplines demonstrating interest in use of the medium.

The different disciplines common to most institutions were rated by the distance learning administrators regarding each disciplines' interest in the use of satellite technology for delivery of off-campus courses. The reactions by the administrators revealed that interest levels differed among disciplines.

Table eight represents the interest levels of the various disciplines. The disciplines are cross referenced with the originating areas of satellite telecourse policy formation.

The table indicates no significant relationship was obtained in any discipline. The null hypothesis was accepted for all disciplines. See table eight.

Table 8

Relationship Between Disciplines' High Interest in Using Satellite Distance Learning and Institutional Areas Originating Policy Formation

	% high interest by area			Chi-Square	
	Admin	Faculty	DF	Value	Prob
Disciplines					
Liberal Arts	29.4	25.0	4	2.397	.663
Science	22.9	50.0	4	2.467	.651
Education	47.1	75.0	4	2.195	.700
Fine Arts	00.0	00.0	1	.731	.393
Medicine	33.3	100.0	4	7.039	.134
Law	21.2	50.0	4	2.504	.644
Engineering	50.0	50.0	4	2.159	.707
Business	40.6	75.0	4	8.156	.086

Hypothesis IX

There is no significant relationship between the originating areas of satellite telecourse policy formation and the reasons for nondeliverability of courses by the medium.

Lack of funding and lack of an adequate supply of television teachers were the two reasons for courses not being delivered cited in this study. A substantial majority (68.3%) of administrators whose policy originated within the higher levels of administration cited lack of funding was the reason. However, 50% of the administrators whose policy originated from the faculty cited an insufficient supply of television teachers as the reason for undelivered courses. See table nine.

The null hypothesis was accepted [X2 (1, N=45) = .549, $p>.05$]. X2=Chi Square

Table 9

Relationship Between Institutional Originating Areas of Policy Formation and Reasons for Courses Not Being Delivered

Frequency Percent Row Pct Col Pct	Reasons for Nondelivery Funding	 Unqualified Teachers	 Total
Institutional Areas Originating Policy			
Administration			
Frequency	38	13	41
Total percent	62.22	28.89	91.11
Row percent	68.29	31.71	
Column percent	93.33	86.67	
Faculty			
Frequency	2	2	4
Total percent	4.44	4.44	8.89
Row percent	50.00	50.00	
Column percent	6.67	13.33	
Total			
Frequency	30	15	45
Column percent	66.67	33.33	100.00

Hypothesis X

There is no significant relationship between the originating areas of satellite telecourse policy formation and institutional size.

This study suggests that administration dominates policy origination. This tendency was somewhat less pronounced in small to medium sized schools (15,000 students or less), where 88% of the respondents indicated that satellite telecourse policy originated in upper levels of administration, than in larger schools (greater than 15,000) where the corresponding percentage was 95%. See table 10.

The null hypothesis was accepted [X2 (1, N=45) = .672, $p>.05$].

X2=Chi Square

Table 10

Relationship Between Institutional Originating Areas of Satellite Telecourse Policy Formation and Institution Size

Frequency Percent Row Pct Col Pct	Institution Size by Student Population 3000-15000	 More Than 15000	 Total
Institutional Area Originating Policy			
Administration			
Frequency	22	19	41
Total percent	48.89	42.22	91.11
Row percent	53.66	46.34	
Column percent	88.00	95.00	
Faculty			
Frequency	3	1	4
Total percent	6.67	4.44	8.89
Row percent	75.00	25.00	
Column percent	12.00	5.00	
Total			
Frequency	25	20	45
Column percent	55.56	44.44	100.00

Hypothesis XI

There is no significant relationship between the originating areas of satellite telecourse policy formation and faculty fear for job security.

Differences were observed regarding faculty fear for job security when policies originated from the administration as compared to programs in which policy was developed by the faculty itself. A lower proportion (48.8%) of the respondents from the former group reported a high fear among faculty regarding job security than the latter (75%). See table 11.

The null hypothesis was accepted [X2 (1, N=45) = 1.003, $p>.05$].

X2=Chi Square

Table 11

Relationship Between Institutional Originating Area of Satellite Telecourse Policy Formation and Faculty's Fear of Job Security Due to Satellite Courses

Frequency Percent Row Pct Col Pct	Faculty Fear of Job Security None to Often	 Very Often To Always	 Total
Institutional Area Originating Policy			
Administration			
Frequency	21	20	41
Total percent	46.67	44.44	91.11
Row percent	51.22	48.78	
Column percent	95.45	86.96	
Faculty			
Frequency	1	3	4
Total percent	2.22	6.67	8.89
Row percent	25.00	75.00	
Column percent	4.55	13.04	
Total			
Frequency	22	23	45
Column percent	48.89	51.11	100.00

Hypothesis XII

There is no significant relationship between the originating areas of satellite telecourse policy formation and the lack of telecourse policy development due to lack of faculty understanding of television teaching.

When policy originated in upper administrative levels, 60% of the respondents reported that, very often or always,lack of television teaching skills among faculty factored in the resistance to develop policy. In those cases where faculty originated policy, this same perception was even greater (75%). See table 12.

The null hypothesis is accepted [X2 (4, N=39) = 2.789, p>.05]. X2=Chi Square

Table 12

Relationship Between Institutional Originating Areas of Satellite Telecourse Policy Development and Lack of Policy Formation Due to Limited Faculty Understanding of Television Teaching

Frequency Percent Row Pct Col Pct	Lack of Policy Development Due to Teacher Non-understanding of TV Teaching Never-Some	 Often-Always	
Institutional Areas Originating Policy			
Administration			
Frequency	14	21	35
Total percent	35.90	53.85	89.75
Row percent	40.00	60.00	
Column	93.33	87.50	
Faculty			
Frequency	1	3	4
Total percent	2.56	7.69	10.25
Row percent	25.00	75.00	
Column percent	6.67	12.50	
Total			
Frequency	15	24	39
Column percent	38.46	61.45	100.00

Hypothesis XIII

There is no significant relationship between the originating areas of satellite telecourse policy formation and lack of satellite telecourse development due to concern over student attitudes.

Among administrators of program in which policy originated from higher levels in the administration, 29.2% reported that student attitudes were considered as a factor in policy development. Fifty percent of the administrators of programs governed by faculty originated policy listed student attitude as consideration in policy formation. See table 12.

The null hypothesis was accepted [X2 (1, N=45) = .731, $p>.05$]. X2=Chi Square

Table 13

Relationship Between Institutional Originating Areas of Satellite Telecourse Policy Formation and Concern Over Student Attitudes Preventing Policy Development

Frequency Percent Row Pct Col Pct	Concern Over Student Attitude Preventing Policy Development None to Often	 Very Often To Always	 Total
Institutional Area Originating Policy			
Administration			
Frequency	29	12	41
Total percent	64.44	26.67	91.11
Row percent	70.73	29.27	
Column percent	93.55	85.71	
Faculty			
Frequency	2	3	4
Total percent	4.44	4.44	8.89
Row percent	50.00	50.00	
Column percent	6.45	14.29	
Total			
Frequency	31	14	45
Column percent	68.89	31.11	100.00

Hypothesis XIV

There is no significant relationship between the originating areas of satellite telecourse policy formation and the point in time that satellite telecourse policies are formulated.

Both administrative- and faculty-originated policy formation typically took place after regular transmission of courses begin. Administration originated programs reported pre-transmission policy development in only 10% of the cases. Faculty origination reported no pre-transmission policy formation. See table 13.

The null hypothesis was accepted [X2 (1, N=23) = .329, $p>.05$]. X2=Chi Square

Table 14

Relationship Between Institutional Originating Area of Satellite Policy Formation and When Policy was Developed

Frequency Percent Row Pct Col Pct	When Policy Was Developed Before or During System Dev.	After System Begins Operation	Total
Institutional Area Originating Policy			
Administration			
Frequency	2	18	20
Total percent	8.70	78.26	86.96
Row percent	10.00	90.00	
Column percent	100.00	85.71	
Faculty			
Frequency	0	3	3
Total percent	0.00	13.04	13.04
Row percent	0.00	100.00	
Column percent	0.00	14.29	
Total			
Frequency	2	21	23
Column percent	68.89	31.11	100.00

Hypothesis XV

There is no significant relationship between the originating areas of satellite telecourse policy formation and the level of sophistication of the satellite telecourse physical plant.

Where policies are generated by the administration, 46.3% claimed two or more electronic classrooms. Where faculty developed policy, a slightly higher percentage (50%) of the institutions reported having two or more electronic classroom. See table 15.

The null hypothesis was accepted [X2 (1, N=45) = .02, $p>.05$]. X2=Chi Square

Table 15

Relationship Between Institutional Originating Area of Satellite Telecourse Policy Formation and Number of Electronic Classrooms Available

Frequency Percent Row Pct Col Pct	Number of Electronic Classrooms One	 Two or More	 Total
Institutional Area Originating Policy			
Administration			
Frequency	22	19	41
Total percent	48.89	42.22	91.11
Row percent	53.66	46.34	
Column percent	91.67	90.48	
Faculty			
Frequency	2	3	4
Total percent	4.44	4.44	8.89
Row percent	50.00	50.00	
Column percent	8.33	9.52	
Total			
Frequency	24	21	45
Column percent	53.33	46.67	100.00

Hypothesis XVI

There is no significant relationship between the originating administrative area of satellite telecourse policy formation and the perceived success of distance learning classes.

When administrators were asked to rate the perceived success of distance learning classes, 100% of those who develop policy via faculty were completely satisfied with the results. Only 53.6% of those who developed policy via administration declared the classes complete successes. See table 15.

The null hypothesis was accepted [$X2$ (2, N=45) = 3.208 $p>.05$]. X2=Chi Square

Table 16

Relationship Between Perceived Success of Distance Learning Courses and the Institutional Originating Areas of Satellite Policy Formation

Frequency Percent Col Pct Row Pct	Institutional Areas Originating Policy Administrative Area	Faculty Area	Total
Perceived Success of Telecourses			
Mild			
Frequency	16	0	16
Total percent	35.56	0.00	35.56
Column percent	39.02	0.00	
Row percent	100.00	0.00	
Good			
Frequency	3	0	3
Total percent	6.67	0.00	6.67
Column percent	7.32	0.00	
Row percent	100.00	0.00	
Very Good			
Frequency	22	4	26
Total percent	48.89	8.89	57.78
Column percent	53.66	100.00	
Row percent	84.62	15.38	
Total			
Frequency	41	4	45
Column percent	91.11	8.89	100.00

Summary

It was discovered that while an individual institution may approach the development in satellite telecourse policy in what was perceived as a unique manner, statistically, policy was reported as formulated in much the same way nationwide. Reporting levels had no effect on the number of courses delivered or the amount of perceived political pressure within the institution.

Administrators who reported to the level of a dean or lower said that their institutions had less GDM than those administrators that reported to higher levels; however, GDM was reported to be the most common method by which policy was derived at all levels. Areas of policy origination, the administrative positions involved, or the length of time the distance learning administration has been at the institution had no bearing on the way by which the policy was formulated. Group decision making was the accepted procedure.

Some institutions' policies originated from the ranks of the faculty; however, most were developed from higher levels of administration. Beyond this, there was no significant relationship established in the spheres associated with administrative positions, academic interest in the medium, reasons for non-delivery or institutional size. Faculty job security fears, skill in televised teaching, or concern over

students were factors in policy formation, but there was no significant relationship with the administrative areas from which the policy originated. Finally, the originating areas of policy had no significant effect upon the point in time policies developed, the sophistication of the physical plant, or the perceived success of the courses being delivered by the medium.

The following table represents a summary of the data and action associated with the hypotheses of this study:

Table 17

Summary Table of Hypotheses Information

Hypothesis		DF	Value	Probability	Result
I		1	2.724	.099	ACCEPTED
II		1	5.664	.017	REJECTED
III		1	.675	.711	ACCEPTED
IV		1	.675	.411	ACCEPTED
V		1	.495	.482	ACCEPTED
VI		3	6.291	.098	ACCEPTED
VII		1	.314	.575	ACCEPTED
VIII	(Interest)				
	Lib Arts	4	2.397	.663	ACCEPTED
	Science	4	2.467	.651	ACCEPTED
	Education	4	2.195	.700	ACCEPTED
	Fine Arts	1	.731	.393	ACCEPTED
	Medicine	4	7.039	.134	ACCEPTED
	Law	4	2.504	.644	ACCEPTED
	Engineer	4	2.159	.707	ACCEPTED
	Business	4	8.156	.086	ACCEPTED
IX		1	.549	.459	ACCEPTED
X		1	.672	.412	ACCEPTED
XI		1	1.003	.317	ACCEPTED
XII		4	2.789	.592	ACCEPTED
XIII		1	.731	.393	ACCEPTED
XIV		1	.329	.567	ACCEPTED
XV		1	.020	.889	ACCEPTED
XVI		2	3.208	.201	ACCEPTED

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

> Our society is in the process of making a major shift. We're moving beyond the information age into an age of communications, and that calls for a concomitant shift in management style. (Holman anticipates, 1990)

Television has been a regular part of our society for over forty years. Since its earliest beginnings, the technology associated with television has been viewed as a boon for education. Universities were the first to recognize its potential and, thus, were the initial institutions to have to manage it. As television evolved so did the procedures for using it and the need to create corresponding policies. Each new turn in technology raised faculty anxiety and administrative apprehension, and the rapid expansion of its technical development meant that many administrators have had to make quick decisions. Those who followed old guidelines or wrestled a length of time with policies found themselves technically outdated by the time final decisions were reached. Today, administrators must be able to adapt at a faster pace than ever before.

West Virginia continues to seek the proper methods of

utilizing its advanced technology of satellite communication for off-campus delivery of higher education courses. New governance of the state's system of colleges and universities has prompted questions of more efficient means of delivering education. Distance learning has been cited as a valuable asset in bringing educational opportunities to those in the state that do not have the chance to attend an institution of higher education. Already distance learning via satellite has provided advanced degree opportunities in nursing and education. Other disciplines--social studies, math, humanities, and science--are in the process of developing curricula for students distant from the campuses. In a short time the airwaves will be crowded with course work. Where just three years ago distance learning was seeking volunteers to develop experimental teaching modules on the system, the next three years will witness many study programs vying for a slot on the system. It is essential that administrators facilitate policies and procedures for the use of this very expensive methodology.

This survey is an effort to address the structure and process of policy formation; that is, how administrators of higher education distance learning satellite distribution systems develop the procedures and administrative strategies governing the use of their delivery systems. Armed with the right approach, distance learning administrators in West Virginia or elsewhere can save many hours in the search for process in developing distance learning policies.

Administrators of higher education satellite delivery systems nationwide were surveyed to determine the process by which policies were formulated for their distance learning programs. An instrument designed by the researcher was distributed to administrators with advance and, where appropriate, follow up telephone contact to ensure maximum return. The survey sought to determine effects of reporting levels, methodologies, and the principal parties taking part in the decision making process. Specific questions addressed were: (a) What affect does the reporting levels of distance learning administrators have on policy formation? (b) what methodologies are followed in formulating policies? (c) who is involved in policy formation? The overriding question of this research paper was: What are the administrative structures and processes in which satellite distance learning policies are developed in institutions of higher education in the United States?

This concluding chapter summarizes the key areas of this study, cites specific conclusions, discusses the theoretical and practical implications, and makes recommendations for the practitioner as well as the researcher.

Key Areas of Study

The key areas of this study sought to determine if a significant relationship existed between policy development and factors relevant to program administration. The factors were

(a) reporting levels of administrators, (b) methods used in determining policy, and (c) institutional areas that originate the policy process.

First, the reporting level of the administrator has always been a concern of any policy development on a university campus. The age old conflict of faculty versus administrators hold true in distance learning. Discussions in West Virginia's satellite governing body, SAT-NET, often revolve around the necessity of having greater faculty input to ensure credibility of procedures. There are those who perceive that it would be best for a faculty member to oversee the use of the new technology. Discovery of the most common levels of administrative reporting and comparing this information to other factors facilitate the development of expectations for other elements of the process, such as course loads, policy formation methodologies, and the potential for political pressure.

Another key area of this study is the concern of higher education communities for the method by which policy formation takes place. Suspicions often voiced in faculty meetings about administrators. This area of the study addresses the use of group decision making (GDM) as opposed to administrative directives in the formation of policies. Again, many people often decry their lack of input into the decision making process. This study addresses this issue in satellite distance learning to discover the most often used method for policy formation and the relationship of that methodology to other factors. These are

originating administrative areas, administrative positions involved in the methodology, and the longevity of the administrator.

A final key area involved the determination of areas from which satellite distance learning policies were formulated. Many in the higher education community have anxieties about distance learning. Discovery of areas from which these policies emerge provides insight regarding how administrative positions can best be utilized for policy development. Our understanding of variables, such as interest by disciplines, reasons for success and failure of courses, amount of faculty job security fears, reasons for lack of policy, and the impact on the sophistication of the physical plant, can be enriched by careful comparisons of the originating areas of policy development.

Tying these issues together is the commonality of an organization's concern about innovation. The fear of change and the unfamiliarity of the new displaces the comfort of the traditional. However, by studying these areas of concern, it is possible to relieve these fears and promote a more communicative atmosphere in policy development (Newell, 1978).

Conclusions

This study contains a set of questions with associated hypotheses. The respondents to the survey were the experts in the field who were striving to deal with these same questions at

their own institutions. They have provided their opinions and expertise. This section addresses the questions and offers conclusions based upon their input.

Overriding Question:

What are the administrative structures and processes in which satellite distance learning policies are developed in institutions of higher education in the United States?

The survey suggests that administrators were an intricate part of the decision making process for distance learning by satellite. While most report to offices above the level of a dean, the impact of the reporting level was not significant in course development or the amount of perceived political pressure exerted on policy development. It did suggest that those administrators reporting in upper levels of the institution's organization had a greater occurrence of group decision making than those administrators who reported to lower levels in the organization.

Group decision making is the predominant process in which policy development for satellite distance learning takes place. The dynamics of GDM are found more prevalent in organizations in which the distance learning administrator reports to upper levels of administration, but overall, few institutions use administrative directives to establish policy.

The following is a discussion of the sub-questions associated with the overriding question:

Question I

What affect does the reporting levels of distance learning administrators have on policy formation?

This survey discovered that, except for methodology, the reporting level of the distance learning administrator had no statistically significant effect on the elements of policy formation. Null hypotheses were accepted when they proposed that no significant relationship existed between the reporting level of the administrator and the number of telecourses being delivered or the perceived political pressure being placed on the process.

(a) While different reporting levels existed, a majority reported to higher level administrative positions. However, statistically, this did not have any effect on the number of courses being transmitted each year. Whether the director of the distance learning program was listed within the ranks of the faculty/faculty level staff or listed within the levels of the institution's upper administration, the ability to produce a high number of courses each year was not affected by that level of reporting.

(b) No matter what the level of reporting, GDM was the most common manner by which policy was formulated. The majority of all policy decisions were being reached by bringing together personnel and developing a conclusion. However, those who report to higher levels of administration were more likely to find GDM as the means of establishing policy. It is important for institutions which have the distance learning administrator reporting to lower levels of administration to know that a perception exists that telecourse policies are often dictated without proper input. This is a distinct characterization that must be addressed when policies are being considered.

(c) The administrators did not feel a heavy impact of political pressure, either at the upper or at the lower reporting levels of distance learning administration. While the higher levels of administration did note a greater awareness of political pressure, it was not significantly different from those who administered from lower positions.

Question II

What methodologies are followed in formulating policies?

First, this survey confirmed that policy being developed for satellite distance learning was being accomplished under democratic methods of group decision making. While, noted above, there was a significant relationship established between the method and the reporting level of the administrator, no other

factors were demonstrated to affect the methodology. Further, the acceptance of the null hypotheses associated with this question determined that the decision making process was not effected by areas of policy origination, the level or seniority of administrators involved with the process.

(a) GDM was the most often reported method used in developing policies for distance learning. Group decision making was used in programs characterized by both faculty and upper administrative areas of origination. As one administrator commented, "We found it best to get all parties involved in the process". The vast majority of policies were formulated in this manner. While nearly a third of the institutions did not have policies completed to govern their satellite delivery systems, very few said that administrative directives were expected.

(b) By facilitating policy development via GDM, all levels of decision makers have input. The administration of satellite distance learning did not fall into any set pattern. Most directors of the electronic instruction program were considered academic support staff; however, many held faculty rank and some were lower staff positions outside the academic sector of the university. Most were associated in some way with continuing education, off-campus instruction, extension services, or some other not-on-campus/community outreach service. However, the positions associated with the decision making process did not have a significant impact on the process itself. Everyone reported freedom for expressing opinions during policy formation.

(c) The tenure of the administrator had no impact on the method being used to formulate policy. Because this delivery system is relatively new, respondents reflected a low mean length of time (3.8 years) associated with the medium. However, both those who reported the longest tenures and those who were new to their positions, agreed that GDM was the typical method used to develop their policies.

The general agreement among the administrators was that those planning to enter into this field of technology should do so with the understanding that policy needs to be developed with maximum participation.

Question III

Who is involved in policy formation?

Policies originate from various sources and levels of the university community. No one area dominated this facet of the process. Acceptance of the null hypotheses aligned with this question suggests that administrators need not be concerned about the area from which policy is developed. It will impact neither on the positions involved in the process nor on the disciplines exhibiting interest. No relationships were discovered regarding reasons for undelivered courses, concerns over teacher skill in televised teaching, job security for teachers, student attitudes, or the success of the courses being transmitted. Further, the

originating point of policies had no significant relationship to the timing of the policies, the funding of the physical plant, or the size of the institution. A discussion of the specific sub-questions follows in this narrative.

(a) When it comes to policy development, the administrator can expect to be included. Faculty originated policies had a tendency to ask for the advice from the satellite telecourse administrator slightly more often that administrative originated policies. Still, there was no significant difference in the amount of input required by either area. The new technology demanded that those with expertise be involved in the development of policy. Any institution investing in the position of an administrator for the program expected that person to be involved in creating the policies associated with the system.

(b) Administrators seeking client disciplines will find education and engineering the most readily acceptable. These two academic areas demonstrated the most interest. Others expressing a moderate interest included liberal arts, medicine, law, and business. Science and fine arts showed little interest in using satellite distance learning. However, significant relationships were discovered with respect to policy origination. This variable made no difference in the level of interest being voiced by any of the disciplines. Interest in creating distance learning instruction appeared to be generated within the discipline. Without the support of those who work intimately with a curriculum, the development of any program of instruction

would be fruitless.

(c) Courses go undelivered, but this study does not inform administrators as to reasons for the courses' demise. Some may think that transponder (satellite) underfunding came as a result of the area from which policy originated, no significant relationship was found. Universities may lack funds for transponder time or they may not have an adequate supply of teachers in the proper fields. However, these problems are not related to area of policy origination. Faculty may blame administration or administrators may assume faculty are at fault, but this study suggests that those who make the policy have no impact on the reasons for courses not being transmitted.

(d) While administrative areas were more likely to originate policy formation, the size of the school did not dictate the area from which policy will come. Large schools and small schools demonstrated that policy could originate either from the administration or from the faculty. There was no significant relationship between these phenomena. The small campus with close knit familiarity was no more likely to produce policy from the faculty than the large institution with thousands of staff and faculty disseminated over large tracts of property.

(e) Job security has always been an issue when technology is introduced in education. A bare majority of the respondents agreed that job security among faculty was of great consequence. Most administrators were sensitive to faculty concerns. A few respondents indicated that faculty had shared concerns over

copyrights of televised courses, royalty payments, restrictions on playback, and guarantees of employment. However, some may believe that such concerns would be less prevalent when policies originate from the ranks of the faculty. This is not the case. The origination of policy had no effect on the perceived threat of faculty job security.

(f) "Distance education uses technologies that are unfamiliar as the primary media of communication for teaching to most teachers and administrators" (Moore & Thompson, 1990, p 16). Teachers are especially concerned that the formerly closed classroom is now open for anyone to see how the teaching is occurring. The lack of a prepared faculty for televised teaching appeared to be a major factor in keeping the institution from developing a policy. The perception is that having a faculty without experience in the use of television in education prevents the formation of policy. Having an informed faculty enhanced their input in the favored policy formation method of GDM. Increased distance learning awareness within the faculty could lead to additional opportunity for policy development.

(g) Distance learning policy formation is accomplished in most institutions without major concern for student attitude. Administrators do not perceive that students are overly concerned about the medium. This was reflected in a series of studies which indicated that "general adult student attitudes toward telecommunications are positive" (Moore & Thompson, 1990, p. 14). This should be expected. Students and faculty make up a

population that has grown up in a video environment. It has become a common element in schools since the advent of public/educational television stations in the late 1960s. It means that administrators should not be overly concerned about student attitudes or their ability to adapt to television for delivering instruction.

(h) Practically all institutions placed satellite technology into operation before any policies were developed for its use. It does not matter as to where policies were developed within a university. An institution that perceives within its mission the need to deliver courses off campus will seek to accomplish this goal in the most efficient manner possible. This study suggests that if satellite delivery is determined to be in the best interests of the university, the institution will make the investment in money, time, and people before it makes policies governing how this medium will be best utilized.

(i) Nearly half of the institutions have more than one electronic classroom. Next to the uplink, this is the most expensive unit for any distance learning organization. The administrative areas which develop the policies have no relationship with how much investment was made in the physical plant. Again, this points to the rush to be associated with hardware. While 47% of the institutions had two or more electronic teaching classrooms, only 33% delivered more than 10 courses per year. Obviously, better scheduling might have eliminated the need for redundancy.

(j) A clear majority of distance learning administrators perceived that their courses were successful. Whether the policy originates from faculty or administration, the decisions reached did not affect the perceptions of success of the courses be transmitted. Students enroll in distance education for several reasons. Conflicting schedules and saving of travel time were the most common answers when distant students were asked by a CPB/Annenberg survey as to why students take distance learning courses (Brey & Grigsby 1984). Student desire coupled with motivated teachers can result in courses be delivered successfully, and it is related to who makes the policies governing the delivery system.

A summary listing of the conclusions of this survey are as follows:

1. The reporting level of a distance learning administrator will have no effect on the number of telecourses an institution will produce.

2. Administrators reporting to levels higher than a dean are more likely to use group decision making is policy formation.

3. Political pressure is not a significant factor in developing policy for distance learning.

4. No matter where an institution's satellite policy formation originates, group decision making is the most common method utilized.

5. No matter where an institution's satellite policy formation originates, the distance learning administrator will be part of the process.

6. No matter the length of time that a distance learning administrator has been in the position, group decision making will be the preferred process of policy formation.

7. No matter where an institution's satellite policy formation originates, interest of specific disciplines will not be affected.

8. No matter where an institution's satellite policy formation originates, the number of courses going undelivered because of funding will not be affected.

9. No matter where an institution's satellite policy formation originates, the number of course going undelivered because of inadequate television teachers will not be affected.

10. The size of the institution will not determine the area in which satellite policy originates.

11. No matter where an institution's satellite policy formation originates, the amount of perceived threat on faculty job security is not affected.

12. No matter where an institution's satellite policy formation originates, the level of faculty understanding of televised teaching is not affected.

13. No matter where an institution's satellite policy formation originates, concern about student attitude toward distance learning is not a major issue in policy development.

14. No matter where an institution's satellite policy formation originates, most policies are developed after the distance learning instruction is being delivered by the medium.

15. No matter where an institution's satellite policy formation originates, concerns about the development of a user friendly environment for teacher and students in distance learning technologies is consistently high.

16. No matter where an institution's satellite policy formation originates, most distance learning courses are perceived as succesful.

Implications

Satellite television systems are costly. Huge sums of money are expended to develop the medium for distribution of instruction. Concerns regarding the proper usage of the funds and equipment are natural. The concern for distance learning is found in all parts of a university. Administrators see a way to deliver more courses, possibly in a more efficient manner. Faculty view the system both as an exciting medium to test their teaching skills and as a potential threat of taking away the number of faculty members needed at the institution. Engineers, television producers, facility directors, student affairs counselors, institutional advancement officers, fund raisers, alumni, athletic officials, continuing education directors, and other people on the campus will view distance learning systems from their own perspective or from their own agendas. From whatever angle satellite distance learning and its affiliated equipment is observed, there will be those who can see advantages in its control.

Policy and procedures are desired by all campus constituencies. All the constituencies perceive that it is in their interest to make sure their programs are getting fair representation in the decision-making for distance learning. The literature stated that organizations may resist an innovation, but once it occurs, that same organization will move to protect the innovation. Individuals and departments will seek ways to

take advantage of the change. New satellite distance learning systems initiate these same characteristics in a university. In the fast paced era of advancing technologies, few are startled by the fact that behind the ivy covered towers are high tech satellite communication devices. It must be understood that the questions facing satellite distance learning are old inquiries fashioned around a new concept.

The people and methods for determining policies and procedures for the new delivery systems may look much like those that have been seen before. The configuration of today's decision making group would reflect a similar composition of groups who have dealt with innovation in the past. We would find the methods by which the earlier group determined policy again in vogue today. The primary outcome is that those who are most interested in satellite distance learning will constitute a group decision making body to devise policy for the system.

It would appear that one could merely make the above observation and then leave it to the institution to work out the difficulties. However, it is important that all implications be taken into account. The effects of a study's information can not be unilaterally disseminated. The connotations associated with this study of satellite distance learning policy development encompasses many facets of a university.

Implications to the Physical Plant

Satellite distance learning is an equipment-intensive delivery system that demands great attention to the physical plant. Any university entering into this field will need engineers, producers, and media specialists to support the instruction by the faculty. These personnel will have the greatest concerns about the construction and maintenance of the equipment. They can take comfort in the finding that the physical plant will not suffer because of policy conception by one group or another.

There is general agreement among those surveyed that additional funds are always welcome. However, as revenues come to distance learning, the distribution of those funds into the physical plant of operations does not appear to be affected by the composition of the decision making groups. Faculty and administrators alike recognize the importance of the delivery system. Without a reliable mechanism of transmitting the signal to distance sites, there is no need to prepare all the other aspects of the educational process. Without an electronic environment in which it is comfortable to teach, distance learning coordinators will discover that they may have curricula lacking instructors willing to impart their expertise.

Implications for Instruction

The prospects for satellite distance learning are good. The development of telecourses is on the rise. With predictions of

course schedules doubling, it would appear that a school already having the technology in place is in a good position for growth in the next decade. This study suggests that the development of instruction will not depend on policy construction groups or the perceived influence an administrator may have through his/her reporting level. The number of courses to be offered may be contingent on availability of resources, but the disposition of those resources will come from within the distance learning system.

The curricula represented on satellite distance learning systems are a product of the disciplines within the university. Having an administrator opposed to faculty-generated policy poses neither an advantage nor a detriment to those disciplines wishing to incorporate the system into their curriculum. It makes no difference who is working on the policies and procedures, the difference comes from the amount of interest demonstrated by the specific discipline. If the squeaky wheel gets oiled, then it is the vocal program of study that will receive attention. Administrators of technology need the input from their academic colleagues. While most satellite directors wear the badge of educator, they recognize the importance of having the academician involved in the planning and implementation of any instructional program of instruction.

Implications for Faculty

It appears that faculty need not be concerned about the area within the institution where policy might originate. More important than who is involved in the process is the quality of input provided by the faculty. Policy decisions are made by group decision making with input from all constituencies. New instructional systems need the advice of those who will be using them. The research indicates that institutions will not develop policy and procedures for satellite distance learning in a vacuum. Faculty will be involved. It is, therefore, critical that faculty grasp the full meaning of distance learning and their role in it. Their input will be substantial and should reflect their concerns.

Generally, a concern for the attitudes of the student is not taken into account when policy is developed. The reasons for this could be varied, but faculty should be cognizant that, if a desire for student input is important to their perspectives of distance learning, information must be actively sought from those students who would be affected by distance learning. Students are not typically represented on committees developing satellite distance learning policies. It could be surmised that the end product is what students want. The instruction is important. How it reaches them is secondary. Today's students are video-conscience. They do not find it abnormal for instruction to come to them in the same manner that they receive most of their other

information. Thus, it stands to reason that institutions could perceive that students do not have to make any major attitude adjustments to participate with distance learning activities. Professors who have concern for their students' opinions about distance learning systems should solicit their comments for sharing with others.

The investment that faculty are willing to make in satellite distance learning is not a product of the area which generates policy. Teacher comprehension of the system and its potential must be initiated by the teachers themselves. Because faculty are involved in the development of policies does not mean that a greater number of faculty understand the concepts associated with distance learning. The literature supports the notion that success of distance learning relies on the effectiveness of the teacher. That effectiveness depends on the teacher's enthusiasm to learn about and use the system. Again, it is those who have the vision for its usage that have the greatest understanding of its attributes. Faculty who desire increased participation by their colleagues need to promote the philosophy of distance learning. Policies and procedures will not accomplish this for them.

Implications for Institutions

The findings of this survey will give administrators information to consider when determining the place of distance

learning within their missions. Potential for growth, success rates, and discipline interests are themes of which universities are keenly aware. The results of this research are applicable to institutional interests.

First, growth potential is high for satellite distance learning. As more institutions seek to deliver courses to sites situated far from the campus, programs will look to satellite teaching as an economical means of transmission to multiple points. Results of this survey suggest that the number of courses will rapidly increase among those institutions currently committed to satellite telecourses. Funds have been allocated for huge capital expenditures. Equipment is in place. With faculty growing accustomed to the benefits of the system, distance learning administrators predict that growth will occur vertically in numbers and laterally across programs of study. Decisions will have to be reached by those considering the use of satellite distribution as to whether their institution engages singularly in the application of space bound technology for terrestrial based instruction, forms consortia with other institutions, or allows other institutions to fill this niche.

Institutions intending to enter the domain of electronic delivery of off-campus courses may do so with the knowledge that the system works. Distance learning administrators agree with the literature in that instruction by this medium is as successful as more traditional modes and is as fruitful as other types of correspondence instruction. Institutions searching for

new ways of presenting instruction to sites away from the campus will find the final product in agreement with standards of achievement touted by higher education.

Growth and success of satellite distance learning will be conditioned by the interest that programs of study have in the medium. The survey suggests that those institutions with professional programs and graduate schools will find the greatest numbers seeking to utilize the service. Disciplines affiliated with professional degree programs have traditionally had the highest need for continuing education and off-campus instruction. The study confirms that these same programs of study are using satellite distance learning and will seek to use it in the future. Engineering schools were among the first to utilize satellite delivery and will remain high in its employment. Graduate schools in education are finding an immediate audience of students as more teacher-oriented programs of study are sought for satellite delivery. Instruction in medical, law, and business degree programs are maturing to the point that these programs will be enlisting the support of distance learning systems to reach their constituents. In professional-and vocational-oriented disciplines the student demand is apt to increase as the barriers of reception are erased with the number of downlinks (receive sites) escalating. As industrial sites, public schools, hospitals, and professional buildings install satellite dishes, there will be an expectation that instruction will be delivered to the distant site by any number of

universities. The reverse is true for the more traditional programs of study. While the use of distance learning by liberal arts, sciences, and fine arts will increase, the study indicates that the interest in the medium is much less and that their more conservative approach to off-campus instruction will result in a marginal use of satellite distribution.

Implications for Policy Development

Satellite distance learning systems within higher education need to have established policies and procedures which govern their operation. People need to understand goals, missions, and parameters of the organization. To confirm the areas of responsibility associated with the medium, an institution is required to initiate the process of policy development. Knowing how policies are formed, who is involved, and when policies are developed was the central focus of this study.

There is considerable evidence that regardless of the size of the institution or the area of the institution,group decision making is the preferred method for determining policy for satellite delivered distance learning. Very little governance is expected otherwise. Administrative directives are not recognized as the means of getting the necessary involvement of faculty, staff, and other administrators. To realize success in policy formation, policy formulators will have to follow guides to good group decision making which dictate maximum involvement from all

affected areas which and allow interaction among the group and feedback to the leader. The process must allow those who wish to comment adequate opportunity to do so. The final product of this process is an institutional choice as opposed to an individual preference. While some may perceive this approach to be laborious, the ultimate solutions and agreements for implementation will become faster when input is considered before the decisions are made.

One significant finding regarding the group decision making process in satellite telecourse policy development is that those who are higher up in the ranks of the administration use GDM more often than those in lower staff or faculty ranks. The evidence suggests that the age old suspicion of administrators by faculty may not be valid when it comes to satellite telecourse policy development. Upper level administrators seek out the opinions of others in making decisions for the medium. While the expectation remains high that GDM is the method that would be exercised for satellite telecourse policy formation, those institutions with distance learning administrators in the upper levels of administration will enjoy a greater likelihood of experiencing GDM in the unfolding of their policies and procedures.

The concept of group decision making forces the inclusion of many people. This survey confirms that, to some extent, all levels of administration, staff, and faculty can expect to be incorporated into the process. More than likely, any constituencies wanting to have input into the policy decision

will have the opportunity.

Technology often outraces society's perceived use of it. This holds true for satellite distance learning. Those addressed with the challenge to formulate policy will probably be faced with a game of catch-up. Very few institutions initiated policy formation prior to delivering instruction. Administrators often claim that policies must be established, but these policies are slow to be started. The study supports the notion that many institutions get excited about the concept of being first with the technology and resolve to determine its implications later. However, the medium is a relatively new phenomenon. Institutions wishing to stay on the cutting edge of off-campus instruction may choose to venture into new horizons without the benefit of extensive research. While there is limited literature on satellite distant learning, there is ample research on the effects of the many components of the system. It is prudent that an institution carefully evaluate the successes and failures of other types of distance education and apply these to this new medium. The time for the experimental phase of satellite delivery of telecourses is coming to an end. Sufficient information is forthcoming for decision makers of tomorrow.

Implications for Distance Learning Administrators

Administering an innovation in higher education is a complex and demanding job. Those at the helms of satellite distant

learning programs are faced with questions which need to be addressed. There are specific consequences to which the administrator should be attentive. Among the consequences that need to be understood by the administrator are certain expectations associated with the policy including (a) the amount of input, (b) the effect of his/her tenure, and (c) the comprehension of job security and political pressure issues.

The administrator is the campus expert. He/she is expected to have a great deal of input into the decision making process. Even if decisions are made by people removed from the departments normally associated with distance learning, the administrator will be assumed as part of the decision-making group. Further it is to be expected that the distance learning administrator will be called upon by various disciplines to explain the system to faculty and support staff within those programs of study. Deans, chairpersons, or faculty-in-rank who desire to have their teaching colleagues incorporate distance learning activities will solicit the administrator as a proponent for the system. Participation by the executive in charge of distance learning will be mandated anytime discussion of the instructional system is formalized.

The evidence from this study clearly illustrates that the length of time the administrator is at his/her position does not affect the manner in which policy is formulated. Group decision making will be used by all administrators regardless of the experience they have with the system. The accepted practice of

GDM is a format welcomed by those who have seniority with the medium and by those who are novices.

For those embarking on the decision making process, the arriving at solutions which may not have popular appeal is a concern. What will a certain constituency feel about this decision? What effects will it have on jobs and positions? What internal or external pressure will be brought to bear on the issue to formulate it is a specific way? These kinds of questions often plague decision makers even before they get into the process. However, the findings of this study suggest that most of these questions are moot. Administrators reported minor levels of political pressure. The GDM process can go forward without the worry about heavy lobbying for favoritism from entities within or outside the institution. Satellite distance learning does not experience the positioning of factional elements of the institution for the elements own benefit. This will be of great relief to any director who has had to deal with opposing camps desiring to have judgments rendered favorably to their points of view. Limited political pressure in satellite telecourse policy development will allow greater freedom for gathering information and making objective decisions.

Recommendations

Clearly satellite distance learning is a growing system of course delivery. These results of this survey suggest that

educators interested in using the system in higher education have a lot of company. As the current users of the technology respond to greater demands for course delivery and additional institutions enter the field, administrators of satellite systems will be faced with solving problems and creating policies and procedures which will facilitate the best service to all constituencies.

Based on the conclusions of this study , the following recommendations are made for institutions, disciplines, distance learning administrators, and researchers:

1. It is recommended that institutions with continuing education and/or extension instruction incorporate the growth of satellite distance learning into institutional planning.

2. It is recommended that institutions developing satellite telecourse policies have faculty and administrators learn group decision making processes.

3. It is recommended that institutions intending to incorporate satellite distance learning initiate the telecourse policy development process before expending funds for equipment or course development.

4. It is recommended that institutions educated administrators and faculty about the general concepts of satellite distance

learning and specifically about the potential that it holds for the institution.

5. It is recommended that disciplines related to professional and graduate degree programs incorporate satellite distance learning into their instructional program planning.

6. It is recommended that disciplines associated with traditional programs of study investigate the potential uses of satellite distance learning.

7. It is recommended that disciplines interested in pursuing satellite distance learning prepare evidence to support requests for time on increasingly crowded systems.

8. It is recommended that distance learning administrators become competent in facilitating the process of group decision making.

9. It is recommended that distance learning administrators develop and share with other administrators and faculty guidelines for the process of group decision making.

10. It is recommended that distance learning administrators have sample proposals for satellite telecourse policies and procedures prepared for those who wish to initiate policy formation.

11. It is recommended that distance learning administrators initiate the policy formation process for satellite distance learning if no other institutional areas are prepared to do so.

12. It is recommended that distance learning administrators develop contingency plans for the growth of satellite distance learning.

13. It is recommended that distance learning administrators seek input from students utilizing satellite distance learning.

14. It is recommended that distance learning administrators present workshops to facilitate a greater awareness of satellite distance learning among faculty and administrators.

15. It is recommended that distance learning administrators prepare for immediate demands for satellite distance learning by professional and graduate programs of study.

16. It is recommended that further research be initiated to repeat this same study at an appropriate interval which would determine the impact of the maturity of satellite distance learning will have on the telecourse policy development process.

17. It is recommended that further research be initiated to

compare the distance learning administrator's perceived intensity of a discipline's political activity and the number of course offerings the discipline delivers by satellite distance learning.

18. It is recommended that further research be initiated to compare the level of interest an institution exhibits toward satellite distance learning and the population of the institution's service area.

19. It is recommended that further research be initiated to determine what effect that an increase in the distance learning administrator's length of service at an institution will have on satellite distance learning facilities, growth in number of telecourses, and competency of faculty in televised teaching.

Distance learning via satellite is tied to the need of distance education. It has been suggested that the demand for education at a distance from the university campus will increase. Specialized institutions that fill the niche between the traditional campuses and correspondence schools will utilize the nontraditional delivery systems. Specialized programs within the universities will also favor innovative technologies for instruction to distant sites (Moore, 1987). It is imperative that administrators in higher education today realize that colleges and universities as they have known them will change. With the technology available today and with the new technologies

of the future, educational service areas will no longer stop at political borders or geographic formations. Administrators must be willing to adapt and formulate policies that will allow their institutions to take advantage of the rapidly changing world around them. The ivy covered ramparts must not only be viewed merely as the protectorates of knowledge, but also as its dispensers. Bringing these two apparently disparate missions together will be the task of the distance learning administrator. Understanding the unique characteristics of satellite distance learning policy formation and having the proper policy development skills will allow the distance learning administrator to facilitate, not impede the process.

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Appendix A

Sampling of Comments from Instrument Readers

Title? Opening instructions?

C. Gregory Van Camp
Director

Radio & Television Services
Route 10, Box 304-B
Morgantown, WV 26505
Phone 304 293-7171

SURVEY

1. Please check the category which best describes yc institution of higher education:
a._____ 2 year college
b._____ 4 year college/university
c._____ 4 year plus graduate school
d._____ 4 year plus professional schools (law, medi engineering, graduate , etc.)

Comments:_____

2. Is your institution of higher education:
a._____ public
b._____ private

Comments:_____

3. What category best depicts your fall 1988 enrollment?
a._____ 3000 or fewer
b._____ 3,001 to 6,000
c._____ 6,001 to 9,000
d._____ 9,001 to 12,000
e._____ 12,001 to 15,000
f._____ more than 15,000

Comments:_____

4. What is the approximate population within a 90 minute commute time of campus?
a._____ 50,000 or fewer
b._____ 50,001 to 150,000
c._____ 150,001 to 250,000
d._____ 250,001 to 350,000
e._____ 350,001 to 450,000
f._____ more than 450,000

Comments:_____

5. Does your institution have the capability of satellite delivery of higher education coursework?
_____ Yes. How many years?___ (Please go to question 6)
_____ No (Is this technology planned for your campus during the next five years? Please explain why or why not.)
_____ Yes _____ No_____

Comments:_____

NOFFLET'S COMMENTS

SURVEY

1. Please check the category which best describes your institution of higher education:

a._____ 2 year college
b._____ 4 year college/university
c._____ 4 year plus graduate school
d._____ 4 year plus professional schools (law, medicine, engineering, graduate , etc.)

Comments:_____

2. Is your institution of higher education:

a._____ public
b._____ private

Comments:_____

3. What category best depicts your fall 1988 enrollment?

a._____ 3000 or fewer
b._____ 3,001 to 6,000
c._____ 6,001 to 9,000
d._____ 9,001 to 12,000
e._____ 12,001 to 15,000
f._____ more than 15,000

WHAT ABOUT CAMPUSES WITH MULTIPLE LOCATIONS, OR UIC WHERE THE COMMUNITY COLLEGE SYSTEM IS A PART OF THE UNIVERSITY? HOW WOULD WE ANSWER THIS? MOST OF THE INSTITUTIONS DELIVERING COURSES VIA SATELLITE WILL BE 20,000+.

Comments:_____

4. What is the approximate population within a 90 minute commute time of campus?

a._____ 50,000 or fewer
b._____ 50,001 to 150,000
c._____ 150,001 to 250,000
d._____ 250,001 to 350,000
e._____ 350,001 to 450,000
f._____ more than 450,000

Comments:_____

5. Does your institution have the capability of satellite delivery of higher education coursework?

_____ Yes. How many years?___ (Please go to question 6)
_____ No (Is this technology planned for your campus during the next five years? Please explain why or why not.)
_____ Yes _____ No_____

Comments:_____

GEORGE A. KOONS
ON-CAMPUS ENGINEERING
AND OPERATIONS MANAGER

Stanford University
Stanford Instructional
Television Network
401 Durand
Stanford, CA 94305-4036
(415) 723-4826 725-3007

SURVEY

1. Please check the category which best describes your institution of higher education:
a. _____ 2 year college
b. _____ 4 year college/university
c. _____ 4 year plus graduate school
d. ✓ 4 year plus professional schools (law, medicine, engineering, graduate , etc.)

Comments: _____

2. Is your institution of higher education:
a. _____ public
b. ✓ private

Comments: _____

3. What category best depicts your fall 1988 enrollment?
a. ✓ 3000 or fewer
b. _____ 3,001 to 6,000
c. _____ 6,001 to 9,000
d. _____ 9,001 to 12,000
e. _____ 12,001 to 15,000
f. _____ more than 15,000

Comments: WE BROADCAST ONLY UPPER GRADUATE LEVEL CLASSES

4. What is the approximate population within a 90 minute commute time of campus?
a. _____ 50,000 or fewer
b. _____ 50,001 to 150,000
c. _____ 150,001 to 250,000
d. _____ 250,001 to 350,000
e. _____ 350,001 to 450,000
f. ✓ more than 450,000

Comments: SAN FRANCISCO BAY AREA

5. Does your institution have the capability of satellite delivery of higher education coursework?
_____ Yes. How many years?___ (Please go to question 6)
✓ No (Is this technology planned for your campus during the next five years? Please explain why or why not.)
_____ Yes _____ No _____

Comments: WE ARE CURRENTLY designing AN uplink FAC. SHOULD BE OPERATIONAL FIRST of NEXT YEAR.

WE ARE CURRENTLY ON FIBER OPTICS ON THE PAC BELL SYSTEM AND ARE TALKING WITH ATET TO GET ON THEIRS.

H. Keith Spears
Marshall University
ITVS
400 Hal Greer Blvd.
Huntington, W. Va. 25755-2140

June 19, 1989

Stephen O'Keefe
ED-NET
P.O. Box 707
Institute, W.Va. 25112

Dear Stephen,

Here is the survey we discussed in the past. Thank you for your help in "accrediting" this instrument. This is for my dissertation which I hope to defend in early fall, thus your quick response is appreciated. A return envelope is enclosed for your convenience.

Please review this survey for its readability and nomenclature. Any suggestions you have can be made in the margins or in the comment areas.

Again, thank you for assisting this bedraggled student.

Sincerely,

H. Keith Spears

Enclosures

you need a cover letter that explains your research and defines who you want for respondents — also a demographic of respondent e.g. position, years of exp. in distance ed academic affiliation for distance ed?

H. Keith Spears
Marshall University
ITVS
400 Hal Greer Blvd.
Huntington, W. Va. 25755-2140

June 19, 1989

B.R. Smith
Central Michigan University
Dept. of Broadcast & Cinematic Arts
340 Moore Hall
Mt. Pleasant, Mi. 48859

Dear B.R.,

Here is the survey we discussed in the past. Thank you for your help in "accrediting" this instrument. This is for my dissertation which I hope to defend in early fall, thus your quick response is appreciated. A return envelope is enclosed for your convenience.

Please review this survey for its readability and nomenclature. Any suggestions you have can be made in the margins or in the comment areas.

Again, thank you for assisting this bedraggled student.

Sincerely,

H. Keith Spears

Enclosures

Appendix B

Survey Instrument

SURVEY

ADMINISTRATIVE POLICY DEVELOPMENT
FOR
DISTANT-LEARNING VIA SATELLITE

Dear Administrator:

Distance-learning is a rapidly growing means of delivering off-campus courses. Use of electronic interactive media is providing unique methods of bringing live instruction to student populations heretofore inaccessible to higher education.

West Virginia colleges and universities have developed a consortium to utilize satellite technology in distance-learning. This new approach to education is not without its difficulties. Nationwide, colleagues have shared with me that both technical and administrative hurdles must be overcome. As we leave the electronics to engineers, it is the responsibility of administrators to clarify policies. The latter is the subject of this survey.

As a doctoral candidate at West Virginia University, I plan to use portions of this survey as part of my dissertation. No name or institutional identification is required. In consideration of your busy schedule, the survey is designed to be answered quickly. If your institution does not have satellite capability your answer to question #5 will complete your input to the survey. Upon finishing the survey, merely fold it down, tape or staple, and return with the self-addressed post-paid section displayed.

I thank you in advance for your assistance.

Sincerely,

H. Keith Spears, Director
Instructional Television and Distance-learning
Marshall University
400 Hal Greer Blvd.
Huntington, W V 25755-2142
(304) 696-3150

SURVEY

1. Please check the categories which best describe your institution of higher education:

a._____ 2 year college
b._____ 4 year college/university
c._____ 4 year plus graduate school
d._____ 4 year plus professional schools (law, medicine, engineering, etc.)

Comments:_____

2. Is Your institution of higher education:

a._____ public?
b._____ private?

Comments:_____

3. What category best depicts your fall 1988 full time equivalent enrollment?

a._____ 3,000 or fewer
b._____ 3,001 to 6,000
c._____ 6,001 to 9,000
d._____ 9,001 to 12,000
e._____ 12,001 to 15,000
f._____ more than 15,000

Comments:_____

4. What is the approximate population within a 90 minute one way commute time of campus?

a._____ 50,000 or fewer
b._____ 50,001 to 150,000
c._____ 150,001 to 250,000
d._____ 250,001 to 350,000
e._____ 350,001 to 450,000
f._____ more than 450,000

Comments:_____

5. Does your institution have the capability of satellite transmission of higher education coursework?

_____ Yes. How many years? _____ (Please go to question 6)
_____ No. (Is this technology planned for Your campus during the next five years? Please explain why or why not.)
_____ Yes _____ No_____
_____

If you answered no to question #5, this completes your survey, Thank you.

Comments:_____

6. How many courses are tranmitted to other locations per year by distance learning via satellite?

_____ 1-2
_____ 3-4
_____ 5-6
_____ 7-8
_____ 9 - 10
_____ 10 - 12
_____ 13 - 14
_____ 15 or more

Comments:_____

7. How many satellite telecourses do you expect to deliver during 1990-91?

_____ 1-2
_____ 3-4
_____ 5-6
_____ 7-8
_____ 9-10
_____ 11-12
_____ 13-14
_____ 15 or more

Comments:_____

8. What areas of your institution demonstrate the greatest interest in developing satellite telecourses? Please indicate the degree of interest from the following areas:

area	interest					
	none					much
_____ liberal arts	0	1	2	3	4	5
_____ sciences	0	1	2	3	4	5
_____ education	0	1	2	3	4	5
_____ fine arts	0	1	2	3	4	5
_____ medical	0	1	2	3	4	5
_____ legal	0	1	2	3	4	5
_____ engineering/math	0	1	2	3	4	5
_____ business	0	1	2	3	4	5
_____ other. Explain _____						

9. Please check reasons for any proposed courses that have gone undelivered:

_____ lack of funding for transponder time
_____ inadequately prepared television teachers
_____ lack of producers
_____ faculty apathy
_____ administrative apathy
_____ lack of student enrollment
_____ inadequate supply of state of the art equipment
_____ faculty adherence to traditional teaching methods
_____ other. Explain:_____
_____ d.n.a. _____

Comments:_____

To what extent have the following been factors in the development of satellite policy formation at your institution?

10. Faculty fear of the loss of job security?
____ none ____ not often ____ often ____ very often
____ always

11. Lack of learning resources at distant sites?
____ none ____ not often ____ often ____ very often
____ always

12. Lack of faculty skill in use of televised teaching?
____ none ____ not often ____ often ____ very often
____ always

13. Concern over student attitude at distant sites?
____ none ____ not often ____ often ____ very often
____ always

Comments: _____

An electronic classroom is defined as a specific academic room properly wired with remote controlled video and audio components which allow live transmission and interaction with students at distance sites.

14. How many electronic classrooms are available for telecourse origination?

_____ none
_____ 1
_____ 2
_____ 3
_____ 4
_____ 5
_____ 6 or more

Comments: _____

_____

In the following section; "policy" refers to guidelines specific to the development and implementation of distance learning telecourses.

15. Does your institution have policies governing the use of satellite technology for delivery of higher education courses?

_____ Yes (please go to question 19)
_____ No (continue with 16)

16. Are you planning to implement policies? ____ Yes
____No

17. Why have policies **not** been implemented?

_____ faculty apathy
_____ administrative apathy
_____ existing policies cover activity
_____ other. Explain _____

_____

Comments: _____

IF YOUR INSTITUTION HAS NOT FORMULATED POLICIES FOR DISTANCE LEARNING, THIS CONCLUDES THE SURVEY . . . . THANK YOU!

The following section deals with policy formation methodology and participation:

18. From what area did policy development originate?
_____ governing boards (i.e. Board of Regents)
_____ upper administration (Vice Presidents and above)
_____ middle administration (Deans; Dept. chairs; Directors)
_____ faculty
_____ staff
_____ Other. Explain _____

Comments: _____

19. Did policy formation come through:
_____ consensus (group)
_____ authority (administrative directive)
_____ other. Explain: _____

_____

_____

Comments: _____

_____

_____

Political pressure is defined as the attempt by others to sway decision making toward policies. The following questions deal with this phenomenon.

20. Please rate the severity of political pressure from the following categories:

area	severity					
	none					much
_____ within the university	0	1	2	3	4	5
_____ outside the university	0	1	2	3	4	5
_____ within your department	0	1	2	3	4	5
_____ other administrators	0	1	2	3	4	5
_____ faculty	0	1	2	3	4	5
_____ staff	0	1	2	3	4	5
_____ students	0	1	2	3	4	5
_____ governing boards	0	1	2	3	4	5
_____ other: Explain _____						

_____

21. If any political pressure comes from within the academic sector of the institution, please indicate the severity from the following areas:

area	severity					
	none					much
_____ liberal arts	0	1	2	3	4	5
_____ sciences	0	1	2	3	4	5
_____ education	0	1	2	3	4	5
_____ fine arts	0	1	2	3	4	5
_____ medical	0	1	2	3	4	5
_____ legal	0	1	2	3	4	5
_____ engineering/math	0	1	2	3	4	5
_____ business	0	1	2	3	4	5
_____ other. Explain _____						

_____

A successful distance learning course is defined as one which has been offered at least two times with good technical quality, learning out comes comparable to that of on-campus courses and having an adequate student population at distance sites to justify the teaching.

22. What percentage of the distance learning courses from Your institution do you consider successful?
_____%

23. Please estimate the percentage of currently enrolled distance learning students who would **not** be able to take courses offered if no distance learning was available.
_____ %

The following section deals with administrative reporting lines.

Administrator is defined as the individual who has direct responsibility for policy implementation and operations of the satellite distance learning telecourses.

24. The administrator for satellite telecourses reports directly to the:

_____ President
_____ Academic Vice President/Provost
_____ Other Vice President. Title _____
_____ Dean of college. Name of college _____
_____ Director of support service. Title _____
_____ Department chairman. Title _____
_____ Other. Explain. _____
_____

Comments: _____

25. Please indicate who is involved in policy formation.
_____ the distance learning administrator
_____ technical assistance and staff
_____ governing board
_____ others: Explain _____
_____

Comments: _____
_____

26. Policies were developed:

_____ prior to first course delivery
_____ during experimental period
_____ following experimental period

Comments: _____

27. How long has the current administrator for satellite telecourse been in her/his present position?

_____ less than 1 year
_____ 1-2 years
_____ 3-4 years
_____ 5 or more years

Comments: _____

28. How long has the position of administrator for satellite telecourse delivery existed at your institution?

_____ less than 1 year
_____ 1-2 years
_____ 3-4 years
_____ 5 or more years

Comments: _____

29. How many distant learning staff members report to the administrator? _____ none

_____ 1-3
_____ 4-6
_____ 7-9
_____ 10 or more

Comments: _____

General Information

30. Age of administrator? _____

31. Sex of administrator? _____

32. Highest degree attained by administrator? _____

33. Major emphasis in the latest degree held by administrator? _____

34. What employment position did the administrator hold prior to assuming his/her current position? _____
_____

DON'T FORGET! IF YOU HAVE A POLICY DOCUMENT OR BROCHURE WHICH YOU CAN SHARE WITH THE SURVEY, PLEASE INCLUDE IT IN THE MAILER.

THANK YOU FOR YOUR TIME!

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Appendix C

Respondent Demographic Information

Respondent Demographic Information

Average age	43.0
Sex	
Male	77.0%
Female	23.0%
Mean years experience	3.8
Institution association	
Two year schools	0.0%
Four year undergraduate	14.0%
Four year/graduate	25.0%
Four year/graduate/professional	61.0%
Size	
0-14,999	55.6%
15,000+	44.4%
Public	84.0%
Private	36.0%
Location	
Metro population of 350,000+	57.8%
Under 350,000 population	42.2%
Reporting lines	
Above Dean	73.3%
Dean or below	26.7%
Staff size	
Six or less professionals	71.0%
More than six professionals	29.0%
Uplink facilities	
Institutionally owned	88.8%
Leased from other sources	11.2%

Abstract

The problem investigated was the process by which policy is formulated for satellite distance learning systems in higher education. Effects of reporting levels, areas of origination, political pressure, discipline interest administrator characteristics, and types of positions were measured on the methods used by institutions create policies for satellite delivery of courses. The influences that other variables have on the decision makers were part of the study.

The population studied was made up of all administrators of higher education satellite distance learning systems in the United States. The population was the sample. The research instrument was a nominal survey developed by the researcher and mailed to the respondents.

The data was given empirical values and cross tabulated using SAS, Inc. processing. To determine the influence of variables, relationships were accepted or rejected using Chi Square (X2) with a significance at the .05 level.

The survey revealed that, overall, group decision making was the favored method of determining policy for satellite distance learning. The study suggests that while some variables showed greater levels of influence, most all had no statistical significance. The lone exception was that administrators had a much greater perception than faculty that group decision making was the preferred method of decision making.

Incidental findings indicated that satellite distance learning systems were unique to four-year schools and mostly

associated with institutions having professional and graduate schools. The positions involved nor the areas of the university which initiated policies had any effect on the final outcomes.

It is important that administrators of distance learning systems understand the impact that the decision making process has on the policies that are being considered. Institutions of higher education need to incorporate efficient group decision making processes into its satellite policy formation procedures and have

administrators competent in leading process. Such knowledge and leadership will facilitate the development of policy and minimize the concerns in its formation.

APPROVAL OF EXAMINING COMMITTEE

Bernard Queen, Ph.D.

Dorothy Johnson, Ph.D

Ronald Childress, Ed.D.

John Andes, Ed.D.

Date

Ermel Stepp, Ed.D., Chair

John Andes Comments

Results of Ho's [illegible] directional

Tables not clear (signature on table)

Consecutive narrative

Correlation of Fax / mail / verbal responses p37

Data Tables for Demographic (Appendix)

Confusion in explanation of Data 41, 46, 75

Chapter 5 – Problem ~~Statement~~ underline – answer

GDM not clear p45 – Higher educ agree lower degr

Summary of Review of literature

Research Question same p7/35/75

Needs Grammar Editing

pg. 7-16, pg 35
p 34
pg 35
p. 36
p. 37
p. 34 – geographic dist, inst. type.
pg 38
pg 41

pg 42
pg 34
App A. – remove comment –
list panel of experts –
– summarize instr. modifications –

What ~~was~~ was source of instrument?
How does it relate to literature?

Literature Review — 18-26 - History of ~~[illegible]~~ - distance learning

disjointed, not logically organized -
No flow / para # to #

p. 102 - Is that really true!

Item related to policy develop. pg. 105 - ?

10, 11, 12, 13, 17, 18, 19, 25 — level of concern for student attitude

Theoretical unclear for methods of policy formation!

II, IV, V, VI

demographic variable, correlation units

method of satellite policy formation -
- administrative terms
- ~~[illegible]~~ area of policy operation

p. 81 source of question?? (first time we see them)

pg 86
pg 87

pg 91-92-93 relationship to study - implication

pg. 96 - what the study!
p. 98 - p. 101 - why?