

TEACHING APPROACHES EMPLOYED BY POSTSECONDARY EDUCATION  
INSTRUCTORS TEACHING IN BOTH THE TRADITIONAL CLASSROOM  
SETTING AND THE DISTANCE EDUCATION SETTING

by


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(ABSTRACT)

Because of decreased funding, increased enrollment, and other issues, postsecondary institutions face the challenge of providing the same or additional services to more students with less resources. One option is the increased use of innovative technology by postsecondary institutions, such as distance education. Distance education provides remote areas of a region the opportunity to participate in postsecondary coursework without having to travel or relocate to the actual campus. Little has been written regarding the identification of the different teaching approaches used in traditional or distance classrooms, nor on the preparation of distance educators who also teach in the traditional classroom. Therefore, the purpose of this study was to determine instructors' perceived effectiveness in both their distance and traditional classes and to identify the approaches used by distance instructors in both of these settings. Instructors' perceptions as to the supportive role of distance site supervisors also was identified.

Qualitative research methods involving interviews and observations were employed. Ten instructors from Old Dominion University (ODU), who also teach through the ODU Teletechnet distance education program, were interviewed

regarding their teaching approaches and rationale for selecting those approaches, as well as their view on the site supervisor's role. Each instructor was then observed twice in each of the classroom settings.

Results of the study found that instructors perceived themselves as equally effective in both their formats and behaviors while teaching in either the traditional or distance classrooms. Although suggested in the literature, instructors did not vary their teaching format between the two settings; however, teaching behaviors were observed as occurring with greater frequency in the traditional classroom than in the distance classroom. Also, while most instructors were unclear as to the specific responsibilities of the distance site supervisors beyond transferring materials between sites, many supported an increase in communication with the supervisors to improve the learning environment for these distance students.

Recommendations for practice include more opportunities for collaboration between distance faculty and the site supervisors. Also, the development of an intervention by distance learning administrators to assist instructors in varying their distance teaching format would provide exposure to other effective teaching techniques for use in the distance classroom. The information gathered from this study lends itself to further research into the possible implications of additional instructor training to prompt changes in teaching formats. Additional attention to the relationship of the distance site supervisors to the entire distance learning process also would be worthwhile.

## DEDICATION

This research is dedicated to the loving memory of my father, Robert Nolte, who never had the pleasure of knowing I made it to graduate school, but whose love of learning and thirst for knowledge provided the inspiration for my graduate school endeavors. Daddy, you are loved and missed.

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## Table of Contents

	Page
ABSTRACT .....	ii
DEDICATION .....	iv
ACKNOWLEDGEMENTS .....	v
Chapter	
1. INTRODUCTION .....	1
Statement of the Problem .....	6
Purpose of the Study .....	7
Research Questions .....	9
Definition of Terms .....	9
Organization of Study .....	12
2. REVIEW OF THE LITERATURE .....	13
Evolution of Distance Education .....	13
History .....	13
Current Formats for Distance Education .....	15
Perceptions of Distance Education .....	19
Teaching Issues in Traditional Postsecondary Classrooms ...	21
Teacher Training .....	21
Teaching Approaches .....	22
Teaching Issues in Postsecondary Distance Classrooms ....	26

	Teacher Training . . . . .	26
	Teaching Approaches . . . . .	27
	Responses to Distance Education Teaching . . . . .	31
	Qualitative Research and Distance Education . . . . .	33
	Summary . . . . .	35
3.	METHOD . . . . .	36
	Environment for Study . . . . .	36
	Sample Identification and Selection . . . . .	37
	Description of Research Methods . . . . .	39
	Pre-observation Interviews . . . . .	39
	Observations . . . . .	41
	Post-observation Interviews . . . . .	42
	Procedure . . . . .	43
	Pilot Observations . . . . .	43
	Data Collection Methods . . . . .	44
	Reliability and Validity . . . . .	47
	Results . . . . .	48
	Assumptions and Limitations . . . . .	49
4.	RESULTS . . . . .	52
	Description of the Sample . . . . .	52
	Data Collection Process . . . . .	53



	Pre-observation Interviews . . . . .	53
	Observations . . . . .	54
	Post-observation Interviews . . . . .	55
	Findings . . . . .	56
	Pre-observation Interviews . . . . .	56
	Observations . . . . .	78
	Post-observation Interviews . . . . .	84
	Distance Site Supervisor Evaluations . . . . .	105
	Summary of Post-observation Interviews . . . . .	108
5.	SUMMARY, RECOMMENDATIONS, AND CONCLUSION . .	111
	Summary . . . . .	111
	Summary of Results . . . . .	112
	Commonalities Between Results and Literature . . . .	116
	Conditional Issues of the Study . . . . .	120
	Recommendations . . . . .	121
	Recommendations for Practice . . . . .	122
	Recommendations for Research . . . . .	125
	Conclusion . . . . .	128
	REFERENCES . . . . .	130
	APPENDICES . . . . .	137
A.	Sample Letter of Permission - Teletechnet Director . . . . .	137

B.	Sample Letter of Permission - Instructors . . . . .	138
C.	Pre-Study Interview Protocol . . . . .	139
D.	Instructor Observation Sheet . . . . .	144
E.	Post-observation Interview Protocol . . . . .	145
F.	Observation Schedule . . . . .	147
G.	Table of Observed Instructors, Classes, and Times . . . . .	148
H.	Sample Instructor Observation Summary Table . . . . .	149
I.	Definitions of Behaviors . . . . .	150
VITA	. . . . .	151

## CHAPTER ONE

### Teaching Approaches Employed by Postsecondary Education Instructors Teaching in Both the Traditional Classroom Setting and the Distance Education Setting

Because of decreased funding, increased enrollment, and other issues, postsecondary institutions faced the challenge of providing the same or additional services to more students with less resources. " . . . The overriding fact is that governments now expect more from their universities but want to pay less for it" (Rosenzweig, 1990, p. A44). One institutional response to these concerns has been the introduction of distance education programs by several colleges and universities across the country in an attempt to accommodate these changes.

While federal monies represent a major source of funding for higher education, such funds have not been a consistent source of revenue (Waggaman, 1992). Between 1980 and 1994, federal funds for postsecondary education decreased 30% from \$20.2 billion to \$14.1 billion (National Center for Education Statistics, 1994b). With the reduction of federal support, research and development was affected, as were the educational opportunities for many students. It is unclear whether education has been considered part of the economy's problem, through consumption of national resources, or part of its solution as an investment in its future (Anderson, 1990). Whatever their role, colleges and universities have been obliged to consider restructuring their

institutions to accommodate a more competitive market within the "industry" of education (Kettinger & Wertz, 1993).

During the early part of the decade of 1990, public higher education institutions across the country experienced cuts to their budgets at the hands of state legislatures (Waggaman, 1992). State appropriations for public higher education institutions began declining nationally in 1990 (National Center for Education Statistics, 1994a). In 1984, state appropriations constituted 28% of the total fund revenues of higher education institutions. By 1992, that contribution had dropped to 23%. Meanwhile, rising costs for products and services, institutional loan supplements paid to students to compensate for the decrease in federal student aid, and fluctuating enrollments continued to reduce higher education institutional coffers (Waggaman, 1992).

National shifts in population over several years have had a significant effect on enrollments and, subsequently, funding for post-secondary institutions. Enrollment projections in public and private elementary and secondary institutions suggested an increase of 2.9 million students from 1993 to 1996, for a total of 51.3 million (National Center for Education Statistics, 1995). The number of school-aged children already in the "educational pipeline" across the country has increased significantly. As these children continued through high school, secondary school graduation rates were expected to climb through the year 2003, surpassing 1991-1992 levels by 30% (Spar,

Sprung, & Martin, 1994). Postsecondary enrollments were projected to increase by 9% between 1993 and 2005, rising from 14.8 million to 16.1 million.

On a statewide level, southeastern states experienced an average population growth of 5% between 1991 and 1993 ("Estimates of the Population of Virginia," 1993, cited in SCHEV, 1993). Between 1970 and 1993, the population of Virginia alone increased by 33%. Considering these increases in the population of potential college-bound students, new approaches for accommodating this influx will be necessary by the start of the next century (SCHEV, 1993).

Another issue facing higher education involved equity of access in terms of geographical barriers. Providing remote instruction to the educationally disenfranchised has been cited by institutions as a way to hold down costs by alleviating the need for funding new facilities (Whittington, 1990). These educationally disenfranchised were defined as those who cannot readily attend a higher education institution for various logistical reasons, such as inaccessibility and time constraints. For these individuals, located in rural or remote areas of the country, having equal access to the same resources available to their urban counterparts was of significant importance and vital to being competitive in an unstable economy.

One of the goals for higher education in Virginia articulated in the *1974 Virginia Plan for Higher Education* was to ensure broad access to higher education for all capable citizens who desired it (SCHEV, 1993). This goal has continued to be of importance to both the state's political and educational leaders. For example, the

importance of surveying students and examining institutional services in terms of efficiency and convenience has been recognized. Additionally, one of the objectives for the new century was to keep the rate of tuition and fee increases low, while increasing availability of state financial aid, so as to provide equitable educational opportunities for all citizens.

A matter related to both the issue of accessibility and revenue involves the removal of duplicate programs among higher education institutions as part of their restructuring efforts. For example, among the 17 public institutions in Virginia, 38 academic programs, considered duplications of programs elsewhere in the state, were eliminated from eight four-year institutions (D. Finley, personal communication, April 6, 1995). Institutions also included in their restructuring activities an overall review of their programs and subsequent removal of courses with low levels of productivity. While combining or eliminating academic programs made state and institutional resources more available (Blue Ribbon Strike Force, 1994), such efforts also may have kept a college degree from the reach of a potential student by removing programs of interest from a proximal institution.

In light of concerns over support, enrollment, access, and degree programs, postsecondary institutions will need to make clear changes in the way they present and manage their services and curricula to survive (Foa, 1993). According to the agenda set for higher education in the state of Virginia for the 1990s, "[C]olleges and universities have to change what they do and how they do it in order to serve a technologically

advanced society that is part of a global economy" (SCHEV, 1993). Such changes would have the potential to affect not only administrators, but faculty, and student affairs professionals as well.

One such change was the increased use of innovative technology by postsecondary institutions. Distance education is a primary example of these innovative technologies. For the purposes of this research, distance education or distance learning refers to the means through which academic courses, originating at the main campus of a college or university, are transmitted simultaneously to several other remote sites, through the use of an interactive television medium ("Video Via Telephone," 1993). The instructor and the distance learner are physically separated from each other (Bruder, 1989; Dillon, Gunawardena, & Parker, 1989; Riddle, 1990; Wolcott, 1995).

The primary purpose of distance education is to provide more rural or remote areas of a state or region the opportunity to participate in postsecondary courses without having to travel or relocate to the actual campus (Egan & Page, 1989; Gebhardt, 1994). Distance education programs providing the last two years of required courses for a baccalaureate degree could save institutions up to 50% of the costs needed to educate a student on-campus for four years (SCHEV, 1993). Also, with the elimination of duplicate programs and courses across institutions, distance education allows individuals to tap into many programs of interest across the state or country, without local institutions bearing the added expense of maintaining an under-utilized program. However, while higher education as a whole would stand to benefit

financially from the changes, maintaining the integrity of the learning experience and continuing to meet the needs of students outside the classroom posed a concern to both faculty and student affairs professionals alike.

### Statement of the Problem

A significant amount of the literature on distance education has concentrated on students and their expectations about, and reactions to, their distance learning experiences (Academic Senate for California Community Colleges (ASCCC), 1993; Bland, Morrison, & Ross, 1992; Gee, 1990; Riddle, 1990). For example, distance students were cited as older than their traditional (18-22 year-old) counterparts on-campus (Dirr, 1990). Many sought additional education to fulfill a personal need or obtain a professional skill (Granger, 1990), but did not have the time, access, or inclination to travel to a college campus (Dirr, 1990). Also, aside from certain technical issues, most students in general were satisfied with their distance learning experience. Seventy-three percent of the participants in a Virginia Community College System pilot program stated that they would participate in a similar course again, while 79% would suggest distance learning to a friend (Sachs, Wilkinson, & Murphy, 1993).

Another heavily studied area of research involves the technology, equipment, and cost necessary to establish and maintain a distance education program (Jones & Simonson, 1993; Srivastava, 1994). Debates over establishing a network versus using existing satellite, cable, or telephone systems to transmit a distance program have been conducted. The merits of videotaped, two-way audio, one-way video/two-way audio,



or two-way video delivery systems, among others, have been weighed. All of these issues, however, hinged almost entirely on how committed an educational institution was to advancing its technological innovations and ultimately, how much it had to spend to launch such a program (Morgan, 1994).

While students and technology have been studied to a great extent, little has been written regarding the identification of the different instructional variables or teaching approaches encountered by traditional classroom students and distance learners (Gee, 1990). Research also has been limited in terms of the preparation of distance education instructors and the possible differences they encountered between a traditional classroom and televised classroom setting (ASCCC, 1993; McNabb, 1994).

#### Purpose of the Study

Due to the gaps in the existing body of literature on distance education, one purpose of this study was to determine instructors' own self appraisal of the effectiveness of their individual teaching approaches through the use of interviews. Instructors' rationale behind their selection of instructional approaches used in their traditional and distance classrooms was pursued. By way of observation, this study also attempted to compare those teaching approaches commonly employed by distance educators with those used by the same educators in traditional classroom settings. Post-observational interviews examined the type of instructional training involved. Secondary consideration was given to the level of teaching experience in both the

distance and traditional classroom, and the effect of different disciplines or course content on teaching approaches.

The study was designed to contribute to research in the area of teaching approaches and to the existing literature on distance education. In addition, this research could inform faculty who are considering teaching in a distance learning system of the instructional approaches used in this medium. Institutions already using distance learning could replicate this study with their faculty who teach both traditional and distance courses to create a similar comparison of teaching approaches.

A final purpose for this study was to inform student affairs professionals, who may be enlisted to facilitate the operations of a distance learning site, about one of many variations from traditional learning that distance education offers. As a site coordinator or supervisor, student affairs professionals would represent the four-year institution in the various issues arising among students at the distance locations. For example, a single individual may be involved in various administrative duties, including admissions and financial aid, as well as academic advising. Working as a liaison between the community college and the four-year institution on issues involving transfer credit issues was suggested as another prominent role (S. Dillon, personal communication, August 10, 1995). Discussions with faculty regarding distance students' progress were not uncommon. Hence, because of the expanded role of student affairs professionals into distance education, an understanding of instructors' use of distance

education would serve to enhance the cooperative efforts of faculty and student affairs professionals involved in distance learning.

### Research Questions

The following questions will serve to guide this research:

1. How effective do instructors, teaching courses in both a traditional classroom and a televised classroom setting, believe their teaching approaches to be?

2. What are the differences in rationale, teaching approach, and instructional training among instructors who teach:

- a. the same course in a traditional classroom setting and in a televised setting; or
- b. a different course in the same discipline in a traditional classroom setting and in a televised setting?

3. According to distance learning faculty, what type of functions do distance site supervisors, acting as student services professionals, serve and what are their expectations of the role that distance site supervisors should play in enhancing their collaborative effort with faculty?

### Definition of Terms

The following definitions are provided for phrases used throughout this study. These definitions serve to operationalize the concepts and provide clearer meanings within the context of this research.

### Delivery system

The format by which instruction can be communicated. It does not relate to the content of instruction, only to the way in which the content is presented to students (Weston & Cranton, 1986). For this research, the delivery systems under study have been identified as "traditional classroom," or "on campus" teaching, and "distance" teaching.

### Distance education/Distance learning

The means through which academic courses, originating at the main campus of a college or university, are transmitted simultaneously to several other remote sites, through the use of an interactive television medium ("Video Via Telephone," 1993). The instructor and the distance learner are physically separated from each other (Bruder, 1989; Dillon, Gunawardena, & Parker, 1989; Riddle, 1990; Wolcott, 1995). Though distance education can be delivered by a number of means, for the purposes of this study, these terms will refer to the concept in general, not a particular system of delivery.

### Receiving site

That location, typically a classroom on a community college campus, which receives a televised course from a postsecondary institution's distance learning system. The receiving site can be located within proximity to the sending site or several thousand miles away. Receiving sites are also referred to as "remote sites," "distance sites" or "off-sites."

### Sending site

The site of the institution which is the originator of a distance learning course. The course typically is televised from a studio classroom on campus. Sending sites are also referred to as "on-site."

### Site supervisor

The individual responsible for overseeing the operation of the distance site. Responsibilities may include, but are not limited to, facilitating admissions, financial aid, academic advising, and technical support.

### Teaching approach

The behaviors and formats employed by instructors within the classroom setting. A teaching approach may involve the structure, or method by which lessons or information are conveyed, such as teacher-centered, or interactive, among others (Sikorski, Niemiec, & Walberg, 1994; Weston & Cranton, 1986). It may also include behaviors, skills, or techniques exhibited by instructors such as being animated and dynamic when presenting material, using humor, moving around the classroom, or speaking clearly, among others (Martin & Mayerson, 1992).

### Traditional classroom setting

Courses held in a classroom on the campus of a post-secondary institution, conducted solely for the audience of students within that classroom.

### Organization of Study

The remainder of the study is divided into four chapters. Chapter Two provides a review of the literature relevant to the issues currently being studied. Chapter Three outlines the methodology used in designing the study to effectively answer the research questions and present the data. Chapter Four presents the results of this research. Finally, Chapter Five provides a summary of the study, and its implications, conclusions, and recommendations for further research.

## CHAPTER TWO

### Review of the Literature

To inform the proposed research questions, a review of the literature on the concept of distance education and the role of the instructor in both the traditional classroom setting and the distance learning setting was conducted. Four particular areas were reviewed. First, because distance education has been an evolving technology, the evolution, current formats for delivery, and student and faculty perceptions of distance learning were explored. Second, teacher training in the traditional classroom at the postsecondary level was studied. Teaching approaches employed by instructors also were examined. Third, teacher training for the distance education classroom at the postsecondary level was explored. Teaching approaches used by instructors in the distance setting were identified. Responses to teaching and being taught in a distance learning setting, from faculty and students' viewpoints respectively, were presented. Finally, literature related to the methodology of the proposed research was explored.

#### Evolution of Distance Education

##### History

Distance learning has its roots in the mail order and correspondence schools of the late nineteenth and early twentieth centuries. The opportunity to obtain an education without physically attending an academic institution was extremely appealing

to many individuals, contributing to decades of success for this educational format. Yet, as technology became more sophisticated, so did distance learning.

Although television was used as an educational tool during the 1930s, televised courses were first introduced in 1956 by the Chicago TV College, offering classes to adults who could not attend traditional campus classes (Wiesner, 1983). Such course offerings proved very successful for the next thirty years (Gilcher & Johnstone, 1988). With the introduction of televised educational broadcasting in the 1970s, each course could be aired and viewed several times a week. This allowed students the freedom to watch their classes at times which were convenient to them (Weber, 1984).

During periods of high enrollment in the mid-1970s (Weber, 1984), closed-circuit television courses were used to compensate for classroom and instructor shortages. Closed-circuit television was a form of televised broadcasting which allowed programs to be transmitted from one location to another within a limited reception area.

As predictions for decreases in enrollment surfaced during the 1980s, a new purpose for distance education emerged. Higher education institutions looked to open-circuit televised courses as a means of reaching an otherwise untapped segment of the population who were bound either by place or time (Wiesner, 1983). Open-circuit television involved broadcasting a program from one location to other locations outside of campus but within a particular geographic range. Such a system allowed anyone with a television to receive the program or class. While closed and open-circuit systems



primarily involved only televised delivery systems, there were several other distance learning formats.

### Current Formats for Distance Education Delivery

Distance education delivery systems were intended to provide interactive communication and learning between students and instructors (Keegan, 1986). The interactive element of distance education has been defined as, "The sharing of instruction among two or more sites using telecommunications technology while providing interaction among the participants" (Hale, Markarian, Morton, Brooks, & Lynch, 1988, p. 1). Two-way communication has been considered an essential element of distance learning. Examples of the current two-way formats used in distance learning include videotape, educational broadcasting, the use of audio transmission, and the combination of audio and video transmissions.

Videotape. The use of videotapes allowed students the flexibility to view courses at home or work as well as the ability to replay or forward through particular sections of a lesson (Weber, 1984). The tapes could be records of televised courses or custom-designed courses for independent study use (Oliver, 1994). Courses, which were at one time televised live by an institution, typically were videotaped and held in a media center or video library (Pekich, 1979). This allowed students who missed a class during a semester to view the video at their convenience. Students maintained contact with their instructor by way of telephone, facsimile, electronic mail, student visits to campus, or site visits by the instructor.

Educational Broadcasting. Educational broadcasting was a form of "individualized learning" intended to be received by students individually, usually in their homes (Ellington, Percival, & Race, 1993; Oliver, 1994). It was a popular educational medium during the 1970s (Keegan, 1986). The instructor did not have a class or audience on camera; however, through the use of satellite broadcasting, such classes had the potential to reach an audience of millions (Pekich, 1979). Students were provided a study guide, textbooks, other reading materials, and class activities or exercises to complete during a specified time period. Communication with the instructor was either by telephone or mail.

Difficulties were encountered in terms of devising broadcast schedules convenient to both the instructor and students, and a sense of isolationism was reported by students due to their lack of interaction with instructors or other classmates (Oliver, 1994). Educational broadcasting also lacked flexible pacing, like that provided by videotapes, or the ability to immediately question an issue in the lesson, such as was available with live instruction or interactive systems.

Two-way Audio Systems. Two-way audio systems provided the ability to hear the proceedings of the sending site as well as be heard by that site, via telephone lines. An example of a two-way audio system was "audiographic conferencing." Audiographic conferencing allowed for two-way audio communication with a computer link for data communication. Students at distant sites were not able to see their instructor; however, they could communicate orally with both the instructor and their on-campus

classmates. Further interaction was provided through the use of "graphics tablets," on which distance students could draw and write notations which were then transmitted simultaneously to all class sites. Hence, students at every site could hear all students as well as contribute to a written lesson, via the graphics tablets. The system was relatively low in cost and easy to use for both instructor and student. According to instructors who used this system, little adaptation of their traditional classroom delivery was necessary (Gilcher & Johnstone, 1988).

Two-way Video Systems. A two-way television system provided both two-way audio and two-way video delivery (Egan & Page, 1989). This allowed students at the off-site to both see and hear the on-site instructor and class, and permitted the on-site class to see and hear the off-site class (Gee, 1990). Two-way television delivery allowed for a great deal of flexibility for the instructor. With some systems, control room operators and engineers could train several remote cameras on the instructor, the students, or teaching aids from anywhere in the classroom (Ward, 1990). Courses once thought to require too much hands-on or laboratory experience to be taught by television could be modified for two-way video through the use of multiple cameras. Although this was the delivery system of choice for some institutions, the costs of installation, particularly the use of satellite communications, were prohibitive for many schools (Ward, 1990).

One-way Video/Two-Way Audio Systems. One-way video/two-way audioconferencing communication was a widely-used configuration for distance

education (S. Zvacek, personal communication, June 20, 1995). With this format, students were able to see, hear, and address the instructor, who could in turn, hear and respond (Haughey, 1983). Typically, telephone lines were used to make the audio connection, allowing several callers to connect with the instructor at one time (Oliver, 1994). Computer integration was a possible addition to some videoconferencing systems. Although initial costs to purchase and install the system seemed high, institutions implementing this system often found it more cost effective in the long run (Lacina & Book, 1991). It was this delivery system which represented the focus of the current research.

Distance learning delivery systems served a variety of audiences. For example, a single institution's distance program could deliver classes to one off-site location or to several locations within the system. Taken further, those several distance sites also could receive several different distance courses from several different institutions simultaneously. Therefore, at any one time, hundreds of students could be participating in a course, but viewing either independently from a home connection or in groups at sites across the country. Consequently, while an instructor could be teaching literally to hundreds, he or she simultaneously could be teaching, literally, to one (Haughey, 1983). How these audiences of one or hundreds of students, and the faculty who teach them, perceived their distance learning experience was the next focus of research.

## Perceptions of Distance Education

Student Perceptions. When asked the reason for participating in a distance program, a common response among students was flexibility (Gebhardt, 1994). Taped courses allowed individuals working full-time to gain an education without disrupting their personal schedules. In addition, those students who registered for distance courses felt that their time restraints did not allow for on-site attendance. Students who were uncertain about returning to, or beginning, school used this form of education to "test the waters" without having to commit to attending regular class meetings (Gebhardt, 1994). Those who had never taken a college course may have felt intimidated by the thought of sitting in a classroom with students several years their junior. The option of distance education allowed them to learn from home without the additional pressure of direct peer competition.

Although adjustments by students were necessary to become acclimated to this unfamiliar setting, for the most part, those who have participated in distance learning programs have indicated a general satisfaction with their experiences (Dillon, Gunawardena, & Parker, 1989; Sachs, Wilkinson, & Murphy, 1993), and considered them equal to traditional on-campus courses (Douglas, 1989; Riddle, 1990). Students indicated that their courses were as effective as traditionally taught courses, and often more challenging (Turner, 1989). Over half of the students surveyed by Dillon, Gunawardena, and Parker (1989) did not feel disadvantaged by the distance between them and their counterparts on-campus. Other students found the atmosphere flexible

and informal, and indicated their comfort level through increased class participation (Turner, 1989). Once completing a distance course, participants of one study reported a positive shift in their opinions of distance education (Riddle, 1990).

Students also reported areas of dissatisfaction. For example, when using formats with phone-in response systems, students expressed difficulty in reaching instructors in a timely manner (Lacina & Book, 1991). Students have also indicated the need to meet their distance instructor at least once prior to the completion of the course to establish some level of personal connection (Riddle, 1990).

Faculty Perceptions. For instructors, the transition from the traditional classroom to a technologically-driven educational system was not as smooth. Instructors using the audiographic conferencing system felt a greater need to be prepared for class, yet a diminished need to modify their usual classroom style. Other problems included becoming distracted by technical issues and a tendency to present only material that translated well into the medium being used. Therefore, less information was being conveyed than in traditional classrooms (Gilcher & Johnstone, 1988).

How well instructors acclimated to this new environment might have depended on the general teacher training they received at the start of, and throughout, their academic careers. Therefore, another body of literature relevant to this study outlined teaching issues arising in the traditional postsecondary classroom settings.

## Teaching Issues in Traditional Postsecondary Classrooms

### Teacher Training

When students graduated from a degree program in K-12 education, their course work and student teaching opportunities typically offered them general training and preparation in effective teaching methods (Goodlad, 1990). Such training contributed to the development of teaching skills which facilitated both student learning and capable classroom management (Gliessman, Pugh, Brown, Archer, & Snyder, 1989). Considering the significance placed on course work and student teaching at the K-12 level, one might have expected a similar emphasis on training for potential instructors in traditional classroom settings at the postsecondary level.

The literature suggested otherwise. When seeking teaching positions at the postsecondary level, individuals were expected to possess a doctoral degree or the equivalent, but rarely if ever were they required to demonstrate an ability to teach (Cahn, 1978). The emphasis in graduate and doctoral training programs typically has been on research, with a lack of emphasis on teaching approach or method (Martin & Martin, 1989). An extensive understanding of one's area of study was necessary to teach; however, such knowledge did not guarantee the ability to effectively communicate that understanding (Gironi & Galbraith, 1993). According to Haughey (1983), not only should instructors be able to communicate their subject matter, but they also should be able to identify their own teaching approach. Yet, university professors typically did not "learn" how to teach (Cahn, 1978).

Although some effort was made through education association seminars, books, and other offerings to provide suggestions to improve teaching, what little professional training that has occurred at the graduate level has been inconsistent (Levine, 1993). Concepts such as teaching in large and small groups, teaching practical and laboratory classes, curriculum planning, and helping students learn not only made for reasonable chapters in a book (Newble & Cannon, 1989), but also provided a possible lesson plan for a course on college teaching that could be taught at the doctoral level. However, because of this apparent lack of structured training, it became the teacher's responsibility to take the initiative in discovering resources for developing teaching approaches which effectively communicated their newly-found knowledge (Laurillard, 1993).

### Teaching Approaches

Teaching approaches encompass both the behaviors which are identified with, and carried out by, an instructor (Girondi & Galbraith, 1993), and the structure, method, or format by which lessons or information are organized and disseminated to students in an educational setting (Weston & Cranton, 1986). While many postsecondary instructors stress course content, little attention has been paid to presentation style or the act of teaching in general (Martin & Mayerson, 1992). Therefore, awareness of one's teaching approach was considered the starting point in instructional development, as approaches typically remain constant while the subject matter changes. Subsequent development of various teaching approaches was



recognized as important in stimulating and maintaining students' attention and motivation to learn (Newble & Cannon, 1989). Use of a logical structure in presenting the lesson helped to sustain student motivation, while class attention was held through an expressive or enthusiastic delivery (Murray, 1983).

Specific teaching approaches identified in the research as useful in large group instruction include, among others, presenting material in a clear and logical fashion, encouraging student comprehension of basic principles, speaking loudly and clearly, presenting adequate depth in the topic, providing constructive criticism, offering practical applications, and maintaining a flexible pace (Murray, 1983; Newble & Cannon; 1989).

Several models for analyzing teaching approaches have been developed. Sikorski, Niemiec, and Walberg (1994), identified a four-stage model for organizing lessons: (a) "introducing the lesson" by setting the stage for a learning situation; (b) "presenting the lesson" in a clear, logical, and enthusiastic manner, with moderate pacing to allow for questioning; (c) "student participation" to promote cohesion among students through group activities; and (d) "evaluative feedback" from the instructor to the students by way of reviewing or reteaching when appropriate. Another model for analyzing teaching approaches considered the types of behaviors exhibited during a course lesson. Such categories included "generates interest," "organization," "clarity," "seeks feedback," "pacing," "presence" or "rapport," "instructional support," and "closure" (Shrock, Stonewater, & Coscarelli, 1981).

In terms of specific structures or formats for teaching postsecondary students, four categories were identified. "Instructor-centered," such as lecturing and questioning; "interactive," including class discussions and group projects; "experiential," allowing students to participate in demonstrations or lab exercises; and "individualized learning," in which instructors considered each student's pace of learning and provided regular feedback on performance (Weston & Cranton, 1986). Although each format has its strengths, different formats used in different subject areas by different instructors will have a varying impact on students, according to their individual learning styles (Weston & Cranton, 1986).

Instructor-centered formats were described primarily as one-way forms of communication, from instructor to student. Instructors who used questioning or demonstrations while giving a lecture maintained this one-way communication by controlling direction of the flow of information. While other formats were employed at various times, the primary mode of postsecondary instruction has been instructor-centered (Dillon & Walsh, 1992).

Interactive formats provided the opportunity for students to actively participate in their learning through self-managed discussion groups or group projects. Instructors acted as consultants while students freely expressed their own points of view (Weston & Cranton, 1986). Facilitating these group activities required flexibility and quick thinking to be prepared for any turn of the discussion. Yet, instructors also had to insure that

the discussion did not move too far from the topic so as to maintain the integrity of the learning experience (Bostert, 1978).

Experiential formats provided students with the opportunity to engage in a hands-on learning activity, such as taking part in real or simulated exercises (Weston & Cranton, 1986). Field studies, controlled laboratory experiments, role playing, and simulation or games offered situations for students to actually perform or act out particular skills or learning exercises. To obtain a true understanding, experiential formats emphasized the need not to simply hear how something is done but to literally learn by becoming an active participant in the situation or phenomenon (Arons, 1978).

Individualized learning formats were used with students working at varying paces, using prepared materials and instructor feedback offered at regular intervals. Students worked toward specific objectives or completed reading comprehension exercises outlined in a series of booklets or through computer-assisted instruction. Such forms of independent study were useful when the level of knowledge in a subject area varied among students in one class.

Although a study of effective teaching approaches indicated that student teachers who participated in a course on effective instruction did, in fact, improve their teaching skills (Veenman, Leenders, Meyer & Sanders, 1993), research suggested that a limited amount of professional teacher training has occurred for postsecondary level instructors. Additionally, Martin and Martin (1983) noted that the concept of instructor feedback by supervisors on effective use of teaching approaches also has been ignored

in the literature. Because distance learning represented a relatively new, technologically-driven academic setting for postsecondary education, it was reasonable to assume that issues similar to those in a tradition classroom setting would arise in this format as well. Therefore, a review of the literature on teaching issues in distance education was performed.

### Teaching Issues in Postsecondary Distance Education Classrooms

#### Teacher Training

Faculty in a distance learning setting received little to no instruction or preparation about the most effective way to teach using this medium (Dillon, Hengst, & Zoller, 1989). If training was provided, it was often a reactive rather than proactive exercise, as faculty rarely were consulted during the initial planning of most distance education programs (Western Cooperative for Educational Telecommunications (WCET), 1991). While some programs provided extensive handbooks and guidelines outlining the mechanics of operating within a particular distance delivery system, rarely were instructors assisted in making the transition from teaching in a face-to-face environment to teaching to a camera lens (Bland, Morrison, & Ross, 1992; Wiesner, 1983). More emphasis was placed on the technological elements of distance learning than on the interpersonal element (Wiesner, 1983). However, "Teaching is more than simply possessing a body of knowledge and a repertoire of technical skills" (Christison, 1993, p. 23). With effective training, distance instructors had the opportunity to affect change in their students' attitudes and increase their performance (Riddle, 1990).

In lieu of a structured training program, instructors were advised to consider the following when developing a focus and objectives for their distance courses: (a) contacting current distance instructors and researching existing literature; (b) observing distance learning classes from a student's perspective; (c) becoming well-acquainted with the technology involved; (d) contacting site facilitators to understand program procedures; and (e) speaking directly with students to gain their insights into their experiences (Wolcott, 1995). Of primary importance was the awareness of one's preferred teaching approaches (WCET, 1991).

### Teaching Approaches

In terms of specific approaches found to be important to distance students, the use of feedback, vocal expression, the use of students' names, availability to students, praise, and positive facial expressions such as smiling were identified (Hackman & Walker, 1990, cited in ASCCC, 1993). The use of eye contact was also considered important in the distance learning setting (Pekich, 1979). A conversational tone, strong, clear body movements and gestures, and an articulate lesson plan were all elements of an effective distance instructor (Pekich, 1979). Comprehension of the material and the ability to communicate it clearly were highlighted (Dillon & Walsh, 1992; Metcalf & Cruickshank, 1991). Understanding the technical aspects, expressing interest in the student, personalizing the experience, and allowing for a flexible pace were noted as elements contributing to an effective distance learning experience (Dillon & Walsh, 1992).

A greater effort to generate student feedback was mentioned as important in the overall approach toward postsecondary teaching (Dillon & Walsh, 1992; Haughey, 1983). For distance teaching, the use of more open-ended questions to stimulate discussion also was suggested, particularly with students who were using a one-way audio system and therefore, could not be seen by the instructor (Ward, 1990). Whatever the instructional approach, encouraging participation presented more of a challenge in a distance setting than in the traditional classroom (Ward, 1990). A study by Haughey (1983) found that improving the elements of class participation has not been a priority in either traditional or televised classrooms, as demonstrated by the extensive use of instructor-centered formats. In contrast, another study comparing traditional and distance teaching formats found that "interactive" formats, defined as those which typically stimulate participation, were most often used by instructors in traditional settings (Dillon, Hengst, & Zoller, 1989). However, as a general rule, using teaching approaches which complement the instructors' teaching preferences have been recommended (Weston & Cranton, 1986).

That aspect of teaching approaches, involving formats, which has been utilized by several distance educators, ultimately mirrored those used in traditional classroom settings. They included instructor-centered, interactive, experiential, and individualized learning formats (Weston & Cranton, 1986). In a study by Dillon, Hengst, and Zoller (1989), most distance educators responded to using instructor-centered formats, specifically the lecture method.

Because of the preference for lecturing, it was suggested that, to enhance the lecture materials, music and visuals be used as a supplement (Bland, Morrison, & Ross, 1992; Lacina & Book, 1991). Using small group activities and plenty of visual aids also seemed to reinforce the learning environment (Lacina & Book, 1991). The use of examples has been identified as a primary means for communicating lecture content (WCET, 1991), and creating opportunities to stimulate critical thinking among students in a distance learning setting was considered significant (Parisot & Waring, 1994). Also, while important in all educational settings, critical thinking tended to get lost in the transmission of a distance setting due to the extensive use of the lecture as the preferred approach (Dillon, Hengst, & Zoller, 1989).

Because students' attention spans using televised learning was reported to last only 35 minutes, several breaks between blocks of lecturing helped to maintain concentration. Although the traditional courses on which the televised classes were based usually ran three hours, televised lectures usually could be compacted to one and one-half hours when presented on television. This was due to the reduced amount of questioning and interruptions (Weber, 1984).

In attempting to create effective teaching approaches in a distance learning setting, research suggested that instructors consider several issues. Some of these issues resembled those used in a traditional setting; others were fairly different. For example, both settings required the instructor to clearly conceptualize the course by identifying the course objectives, choosing course content, identifying the means for evaluation,

and gathering the materials needed (Haughey, 1983). In addition, distance instructors needed to be more aware of their personal definitions of teaching and learning (Wolcott, 1995). Determining whether their objectives were realistic and if there was sufficient time for course planning was useful. Instructors were advised that this planning takes place almost entirely before the start of the course, and without the benefit of knowing many, or perhaps any, of the students in the class. Also, because interactions were different and somewhat diminished, an understanding of the difference between "teaching" and "telling" was necessary. Flexibility and versatility were integral and helped the instructor to make the transition from classroom to television teaching (Haughey, 1983).

The key for an effective transition to a distance learning setting was an awareness by instructors of what approaches they preferred and why. An ability to articulate their preferences in terms of students' learning needs also was important. An understanding of their distance students, and consideration of the course content from the student perspective was necessary (WCET, 1991). The distance education focus became the establishment of a congruence between the medium of instruction and the learning styles of the students so that the course objectives were met (Riddle, 1990; Saettler, 1979; Wolcott, 1995).

In general, while most distance instructors defaulted to using approaches already found to be successful in face-to-face instruction, such approaches rarely, if ever, translated effectively to the televised setting (Haughey, 1983). For example,



distance instructors, specifically those using one-way video/two-way audio systems, could no longer walk freely about the room, initiate spontaneously discussions which included the off-site students, and could not rely on non-verbal feedback from those students, indicating their level of interest or comprehension (Haughey, 1983). Other faculty and student responses to the instructional aspect of distance education also were important to consider.

### Responses to Distance Education Teaching

Faculty Viewpoint. Some distance learning instructors who received high student evaluation ratings from their traditional classes, were disappointed at the lower marks awarded by distance students (Moore & McLaughlin, 1992). Other instructors indicated that they had become better teachers as a result of the distance teaching experience (Gilcher & Johnstone, 1988). Much of that improvement seemed due to their own ingenuity and creativity in developing an effective classroom experience. Rarely was their participation in a training program mentioned as their motivation to make adjustments in their approach. In fact, many teachers did not adjust their teaching methods when in a distance setting (Dillon, Hengst, & Zoller, 1989; Gilcher & Johnstone, 1988), choosing instead to use traditional teaching approaches without modification.

Faculty have reported feeling disconcerted at the inability to rely on nonverbal cues from students (Haughey, 1983). Such cues indicated interest, boredom, anxiety, comprehension, and confusion. Some instructors also cited difficulty with losing control

of the learning sessions to the students. In traditional classroom settings, when students do not respond, an instructor could simply call on another student and continue. In a televised situation, instructors sometimes lost that ability, particularly with their distance students, where the transmission equipment created a barrier.

In Dillon, Hengst, and Zoller's study (1989), most of the faculty interviewed would have preferred using group activities and discussion, but cited technical difficulties and a reticence on the part of distance students to participate. Additionally, none of the respondents received any type of training in terms of selecting appropriate teaching approaches which would initiate such participation.

Faculty did report certain benefits to teaching in a distance learning setting, including: reaching new populations of students; working with students who were typically better prepared and more diligent; scheduling flexibility; becoming more efficient and organized; and, having the opportunity to utilize many different media resources (Dillon & Walsh, 1992).

Student Viewpoint. Although some distance instructors believed their teaching improved, student evaluations of instructor performance in distance learning courses sometimes indicated a dissatisfaction with the instructor's approach (Dillon, Gunawardena, & Parker, 1989). Other responses indicated that students were able to mentally (and sometimes literally) turn off the instructor (Lacina & Book, 1991; Haughey, 1983). The literature suggested that applying the traditional methods of instruction to a distance learning class was not an effective means of teaching (Wolcott,

1995). This learning environment required changes beyond minor adjustments to a professor's in-class presentation style. Such changes were due to the many and varied factors which affect this type of learning experience (cited in ASCCC, 1993).

Bland, Morrison, and Ross (1992) found that students preferred their instructors to ask questions during their lectures and felt the use of small group discussions worthwhile. According to some students, feedback from instructors through comments on written assignments was as important as recognition by their instructor during class (Haughey, 1983). Respondents also reported almost unanimously (99%) that the instructor needed to be aware of the camera when asking questions of either the sending or receiving site, and to gain training in the most effective distance teaching approaches (96%).

In studying these issues surrounding distance education, several researchers found the use of qualitative research methods to be useful (Dillon, Hengst, & Zoller, 1989; Bland, Morrison, & Ross, 1992). Such methods, used either in conjunction with quantitative results or not, provided a useful means of obtaining information regarding instructional concerns in a distance learning system.

### Qualitative Research and Distance Education

Qualitative research methods apply a naturalistic approach to research, allowing phenomena to be studied as they normally occur in a particular setting. An important characteristic of qualitative research was the ability to study the entire setting in which a phenomenon occurred so as to appreciate its total reality (Borg &

Gall, 1989). In the current research, this approach permitted a study of the behaviors of distance education instructors in both their televised settings and their traditional classroom setting.

A particular qualitative research method of importance to the current research was the case study. A case study involves an in-depth investigation of a specifically defined group or phenomenon in a particular context (Borg & Gall, 1989). The purpose of a case study is to identify this group or phenomenon as being a typical example of other similar groups or phenomena; however, while similar, research results typically cannot be generalized across these other groups. A second purpose described in the research is to describe and interpret a particular culture (Manning, 1992). Because participants in a case study are under constant observation and analysis to determine why a behavior or phenomenon occurs, it is not possible to formulate a hypothesis in advance. Rather, as data are collected, the focus of the study becomes more refined.

Data can be collected by means of observations or interviews. In the current study, interviews were conducted to provide insight into the rationale used by instructors when choosing their teaching approach, and to determine their perceived levels of teaching effectiveness. Instructor approaches and behaviors then were observed. Post-observation interviews followed to gain additional information to supplement the observations. Data analysis in a case study involves identifying patterns or themes in the data and is often conducted on a continual basis while additional data

is being collected. Once these patterns or themes emerge, such analyses are provided to the participants for confirmation. The use of post-observation interviews in the current research served as confirmation of the findings. This input by the participants, which ensures faithful reproduction of the data, renders case studies which are typically considered to be of high quality, and ethical and methodologically sound (Manning, 1992).

The use of case studies, and qualitative research in general, were relatively new research techniques in the study of educational issues. However, both concepts continued to gain acceptance and popularity through their contributions to educational research (Borg & Gall, 1989).

### Summary

Distance education has advanced significantly since the days of the original correspondence schools. While courses still can be taken via mail, the combination of audio and video communication has provided opportunities for greater interaction between students and instructors and in general, was proven to be highly successful to date. The literature has seemed virtually saturated with research on the effects of distance education on students, as well as in terms of the changing technology. However, issues involving teaching at a distance, while growing, has been minimal, particularly in terms of comparisons between teaching in a traditional classroom and teaching in a distance classroom.

## CHAPTER THREE

### Method

The current research on teaching approaches of instructors of both traditional and distance education courses was conducted to answer the following questions:

1. How effective do instructors, teaching courses in both a traditional classroom and a televised classroom setting, believe their teaching approaches to be?
2. What are the differences in rationale, teaching approach, and instructional training among instructors who teach:
  - a. the same course in a traditional classroom setting and in a televised setting; or
  - b. a different course in the same discipline in a traditional classroom setting and in a televised setting?
3. According to distance learning faculty, what type of functions do distance site supervisors, acting as student services professionals, serve and what are their expectations of the role that distance site supervisors should play in enhancing their collaborative effort with faculty?

### Environment for Study

A case study of a distance learning system, Teletechnet, affiliated with a four-year public institution, Old Dominion University (ODU), located in the mid-Atlantic states was selected for this research. ODU has developed a partnership with the community college system in its state to provide classes toward baccalaureate degrees

using televised and computer-assisted technology (Old Dominion University, 1994). Instructors taught the course on the ODU campus while off-site students simultaneously received the televised classes at community college sites across the state. Currently, the system uses a one-way video/two-way audio system; however, future plans include sophisticated multi-media computer workstations incorporating video, audio, and data communication. Such transmission would allow on-line access to global information resources. The purpose of this study was to determine instructors' perceived effectiveness in both their distance classes and their traditional classes and to identify the approaches used by Teletechnet instructors in both of these settings. Instructors' perceptions as to the supportive role of distance site supervisors also was identified. Data were collected by means of observations and interviews.

#### Sample Identification and Selection

Two samples, one comprised of instructors and another comprised of courses, were needed for this research. The first sample was made up of instructors who taught both traditional classes and Teletechnet classes. The second sample was comprised of courses which divided into two groups: (a) identical courses in which one section was taught in a traditional class on campus while another section was taught through Teletechnet; and, (b) courses taught by the same instructor within the same discipline but on different topics, also taught in both a traditional and distance setting.

In a hypothetical example of these samples, "Professor X" teaches courses in both the traditional class setting and the distance setting, thus satisfying the criterion

for inclusion in the instructor sample. Specifically, Professor X teaches English 101 both in a traditional and distance setting. English 101 then can be included as part of the course sample. "Professor Y" also teaches in both a traditional and distance setting, but teaches Sociology 101 on-campus and Sociology 242 through Teletechnet. Because Professor Y teaches different classes in the same discipline and does so in both settings, that professor also can be included in the instructor sample and the courses can be included in the course sample. The primary criterion was that the same instructor be observed in both the traditional and distance settings.

Schedules for fall courses were requested from the Registrar's office at ODU for on-campus and Teletechnet classes. Courses in nine disciplines, offered in both the conventional on-campus format as well as through the Teletechnet system, were highlighted for inclusion in the study. Contact with the director of the Center for Learning Technologies at ODU and the director of Teletechnet was established to discuss the use of their system for this research. Permission to conduct the research was requested in writing to the Teletechnet director (see Appendix A). Further approval for the use of human subjects was obtained by the Institutional Review Board of the researcher's home institution, and written consent was obtained from the instructors.

A criterion for selecting this sample was the identification of instructors who taught distance learning classes through Teletechnet as well as traditional classes on campus. This sample was chosen to provide a comparison of the teaching approaches employed by individual instructors in two different classroom environments. Because of



the preponderance of lecture courses at the postsecondary level in general (Martin & Martin, 1989), classes presented in the lecture format were chosen for this study. The first ten instructors who met this profile and whose class meetings could be incorporated into a non-conflicting observation schedule were selected for observation. Each instructor was contacted individually initially by phone, due to the distance between the researcher and the instructors. The study's concept was introduced and the purpose of the research was described to the participants as a review of the issues related to instruction in a distance learning setting versus a traditional classroom setting. Specific details of the research were not conveyed to the instructors so as not to unduly influence them or their teaching behaviors. Finally, the methods of research to be employed were discussed. Those who agreed to participate were contacted formally in writing (see Appendix B).

### Description of Research Methods

#### Pre-observation Interviews

Qualitative research methods of observation and interviews were utilized to compare instructors' teaching approaches. Each instructor was contacted individually for a pre-observation telephone interview to discuss their teaching approaches, rationale for selecting these approaches, and level of experience. Further, instructors were asked to indicate their perceived level of effectiveness using their current teaching approaches. Finally, questions regarding the role of the distance site supervisor in the this learning environment were presented.

Instructors then were observed on two occasions in each of the two settings. A follow-up to these observations again took the form of telephone interviews, in which instructors were questioned in greater depth about the comparison between their perceived teaching approaches and those which were observed objectively. The role of the site supervisor in collaborating with the faculty to facilitate the distance students' learning again was examined. The interviews further served to determine if the research methods employed provided sufficient information for such a comparison to be made.

Interviews have been identified as a valuable part of the observation process (Westbrook, 1994) in that they supplement what has been observed previously (Whyte, 1979). The interview format used to discuss both classroom settings was flexibly structured so that if relevant information outside of the interview protocol was uncovered, that information could be addressed freely (Borg & Gall, 1989; Whyte, 1979). The pre-study interview protocol consisted of questions divided into three major parts: (a) teaching issues for traditional classes; (b) teaching issues used with the Teletechnet classes; and (c) the role of the distance site supervisor (see Appendix C). Within those three sections questions related to format, teaching behaviors, teacher preparation, and the functions of the site supervisor were presented. A final part on demographic information and teaching experience was included to determine if variables outside the actual classroom settings affected the instructors' teaching methods. Although brief written notations were made during the interviews, an audio

recorder was used, of which the interviewees were made aware, for collecting most of the instructor responses. The purpose for the interviews was to investigate why certain teaching approaches were employed and to determine, prior to observing actual behaviors, what the instructors' perceived level of effectiveness was in using particular teaching approaches.

### Observations

Observations of teaching approaches in both the Teletechnet and the on-campus classes were conducted by a single observer using a naturalistic approach. This approach allowed the instructors' actions and behaviors to be studied in their usual environment. The researcher assumed the role of "complete observer," disengaged entirely from the activities of the actual lesson (Babbie, 1989, cited in Westbrook, 1994). The purpose was to remain as unobtrusive as possible. The use of "simple" observation techniques allowed for passive collection of information regarding the instructors' overall body language, mannerisms, and vocal expression (Webb, Campbell, Schwartz, Sechrest & Grove, 1981, cited in Russell, 1992).

Each of 10 instructors was observed twice within the two different classroom settings, for a total of four observations for each instructor. Data then were collected by means of systematic observation methods, using structured observation sheets to identify the phenomena studied (Borg & Gall, 1989). The observation sheet used for this research was a modified version of the "Teachers Behaviors Inventory" designed by Murray (1983). Verbal permission to modify the original form was obtained from

the author. Due to the comfort level of the researcher with her ability to collect data using simple observation techniques, the use of an audio recorder during the observations was determined unnecessary.

Eighteen items were divided into six categories for observation: (a) Nonverbal behavior (body language, mannerisms, and facial expressions), (b) Explanation (using examples and visual aids, and repeating key points), (c) Organization (clarity of thought and outline of lesson), (d) Interest (providing practical applications and the use of humor), (e) Rapport (identification with students and their needs, calling on students by name), and (f) Participation (questioning and feedback). Each item within the categories represented an observable teaching behavior.

Data were recorded by means of frequency-counts (Borg & Gall, 1989; Evertson & Holley, 1981). Using a frequency-count, each occurrence of a designated action or behavior was tallied on separate observation sheets for each class observed in both the traditional classes and the Teletechnet classes (see Appendix D for an example of the form used in both settings). Additionally, after the observations, the researcher noted which of four teaching formats identified by Weston and Cranton (1986) was used most consistently throughout the class.

#### Post-observation Interviews

Post-observation telephone interviews allowed instructors to compare their previously-identified teaching effectiveness with the objective observations made. The post-observation interviews also were employed to gain additional insight into the

rationale behind selecting teaching approaches (Dillon, Hengst, & Zoller, 1989). The type of questions raised during this interview involved specific behaviors noted during the observations to determine again the level of consistency between perceived teaching effectiveness identified before and after the observations (see Appendix E). Additionally, faculty perceptions of the role of the site supervisor in assisting both the faculty and the distance students were identified to serve as a means of enhancing the collaborative effort between the distance instructors and the site supervisors. This combination of pre- and post-observation interviews, in conjunction with the observations, provided a counterbalance between what the instructor believed was the situation and the reality of the situation (LeCompte, 1993). Additionally, the level of consistency between the effectiveness of teaching approaches, as identified by the instructor, and the observations made by the observer would assist in determining the usefulness of these research methods in studying teaching approaches in the future.

### Procedure

#### Pilot Observations

A series of pilot observations, both in distance settings and traditional class settings, was conducted prior to the observation of actual classes for the study. The courses observed were in the same or approximate disciplines as those in the actual study to mirror the actual research as closely as possible. The purpose of the pilot was to enable the observer to gain experience with the method of observation as well as to make modifications to the proposed observation sheets, if necessary. Two pilot

observations of each setting were performed during the month prior to the actual observations. The pilot traditional courses were observed on the campus of a large, public four-year institution, and the distance courses were viewed at a local community college affiliated with the Teletechnet system.

A pilot interview also was conducted with an instructor at the same four-year institution to determine the clarity and the relevance of the questions so that modifications could be made prior to the actual interviews.

### Data Collection Methods

Ten instructors were identified for inclusion in the study. After initial contact was made by telephone to introduce the current research, and a follow-up letter was sent, telephone interviews were conducted to gain insight into the instructors' perceptions of their teaching effectiveness and their rationale for choosing their preferred teaching approach. Instructions were provided at the start of the interview, and included definitions of specific terms used in the research, such as "approach," "format," and "behavior."

The instructors were observed a total of four times each, twice conducting classes in a traditional setting and twice conducting a televised course. A total of 40 observations were made. The time period selected was the 1995 fall academic semester, between October 16, 1995 and November 17, 1995 (see Appendix F for an observation schedule). The purpose for choosing this time period was to ensure that instructors had ample time to settle into the semester and that any nuances or

technical difficulties arising early in the semester could be resolved. Observations of traditional classes on the ODU campus were made over a consecutive a period of one week. Televised courses were observed at a community college, New River Community College (NRCC). Due to the proximity of the off-site location to the researcher, extensive travel was not required. Therefore, observations of the distance courses were made on the actual days the courses were offered until each had been viewed the required two times. Instructors were not made aware of the exact class section which would be observed until the researcher entered the class. Only the general time period was identified, so as not to influence their teaching in any way.

For purposes of identification, each instructor was assigned a number noted on each observation sheet and interview protocol. Classes were identified by an "D" for distance courses and a "T" for traditional courses. A third designation identified the first and second observation for each instructor in each setting (i.e. the first observed distance course for Professor Smith (instructor #1) would be labeled "1D1" and his traditional course "1T1." The second observations would be listed as "1D2" and "1T2"). Classes were observed in the following disciplines: Civil Engineering Technology, Computer Science, Criminal Justice, Economics, Finance, Geological Sciences, Management, Nursing, and Psychology (see Appendix G for a table of instructors, course levels, and times). For the purposes of this research, neither the names of the instructors nor the titles of the courses warranted identification. Five of the instructors were observed teaching the exact same class in each of the two settings.

The remaining five instructors taught two different classes between the two settings, but within the same discipline.

In general, on-campus classes ranged in length from 50 minutes to one hour and 15 minutes. Distance classes ran from one hour and five minutes to two hours and 45 minutes. The courses selected for observation were three credit hour courses and were offered in a Monday/Wednesday/Friday sequence, a Monday/Wednesday sequence, Tuesday/Thursday sequence, or in a single three-hour class. Depending on the way in which the course was scheduled, observations of just two sessions in a three-session course sequence (i.e. observing Monday and Wednesday sessions and not the Friday session) would yield less hours of observation than would a course offered only two times a week for a total of three hours. Therefore, to maintain consistency with the amount of time spent in actual observation, each class session was observed, on record, for one hour, regardless of the actual length of the class, for a total of two observation hours for each course. However, for classes with shortened observation periods, the researcher did remain in the room for the completion of the class, so that each class was attended in its entirety. Test schedules and cancelled class dates were noted to avoid scheduling observation sessions during those periods. The traditional classes selected were scheduled between the hours of 8:00 a.m. and 4:15 p.m. The distance learning classes were offered between 8:00 a.m. and 10:00 p.m.

Each class setting was observed twice during the six-week period. Written notation on the observation sheet was used for visual observations. After the



observations were completed, post-observation interviews with each of the instructors were conducted.

### Reliability and Validity

When using a qualitative research method such as observations, the reliability of the observation tools are directly related to their validity (Evertson & Holley, 1981). The reliability for this study was established through the use of previous research presented in the literature which served to support the methodology of the current research. Further, direct and consistent observation of specifically defined teaching approaches, identified over the course of two class visits in each setting, increased the likelihood that reasonable conclusions would be drawn.

In terms of validity, the cause for concern was whether the tools or methods used in this research actually measured the teaching approaches they were originally designed to measure (Evertson & Holley, 1981). Content validity was established through the selection of 18 teaching behaviors within six overarching categories. Each of the behaviors was identified in the literature as commonly being used in both a traditional and a distance classroom. Other forms of validity (i.e. construct or predictive validity) are not relevant in qualitative research, and hence, were not explored for the current study. Therefore, post-observation interviews with the instructors under observation were considered a sufficient indicator of validity for the purpose of this study.

## Results

All observation and interview notes were organized and completed at the end of each full day of data collection (Westbrook, 1994). The use of the audio recording during the interviews allowed for further analysis of verbal cues after the actual interview periods. Interview sessions were examined and reexamined audibly, to identify any additional verbal behaviors overlooked initially. Preliminary patterns of behavior were detected and recorded in a general outline as they were recognized.

Once completely collected, data from each setting were analyzed according to the frequency of the behaviors observed. As an example, the total number of occurrences of a behavior was derived for each of the 18 items, in each of the two settings, on each instructors' observation sheet. In each setting then, the instructors' totals were averaged for each item (see Appendix H for a sample form used with both settings). Then, using those individual averages, an average was calculated for the category as a whole. Additionally, for each instructor, a frequency count total was calculated for all of the 18 behaviors observed. Finally, the average frequencies for both settings were summarized and presented to provide an overall comparison of the results. Copies of each instructor's individual observation sheets, used to record data in his or her own class, were provided to each instructor; no instructors were provided data sheets on other instructors.

The purpose of these frequency counts was to observe the similarities and differences in teaching approaches used by instructors teaching in both a traditional

and distance setting. For example, a comparison of the results between the two settings was utilized to examine the frequency with which instructors exhibited behaviors identified in the literature to be of particular importance to students in a distance setting. Responses to the interview questions, both before and after the observations, provided additional feedback as to the instructors' rationale for choosing specific approaches, and their perceived effectiveness in each of the settings. Although not a primary focus of the study, the researcher remained sensitive to the influence of both the amount of teaching experience possessed by the instructors, and the academic discipline on the type of approach used.

#### Assumptions and Limitations

Prior to this research, the assumption was made that instructors who teach in both a traditional and a distance classroom do not radically vary their teaching approaches between settings (Dillon, Hengst, & Zoller, 1989; Gilcher & Johnstone, 1988). Limitations for this study centered on the fact that ODU's Teletechnet system was the only distance learning program in the state offering a baccalaureate degree, in conjunction with the community college system, through televised courses. Therefore, because this research focused on a case study of this system, its results may not be generalizable to other distance learning systems.

Other limitations included possible contradictory results due to comparisons made between different disciplines. Differences may be attributed to the various teaching approaches associated with disciplines rather than with traditional versus

distance learning settings. For example, history may employ primarily instructor-centered formats, while philosophy may typically employ an interactive approach.

Attempts to compare differing delivery systems (i.e. two-way audio versus two-way video) also might have yielded different results. As stated in the literature, audiographic conferencing characteristically required instructors to become more interactive and inventive when devising course plans (Gilcher & Johnstone, 1988). In contrast, two-way video instructors relied on instructor-centered formats due to the greater similarities with a traditional classroom than other mediums (Dillon & Walsh, 1992). Therefore, observation results could have been extremely different and, hence, difficult to compare.

From a methodological standpoint, failure to conduct observations on the same days or at consistent times during the day might have elicited conflicting results. Instructors may have followed a different lesson plan for each of the days in a week the course was taught. Other results may have developed due to outside variables such as teacher fatigue, which could have altered the findings. Also, because observations were limited to a set number of classes over an established period of time, not all of the teaching approaches listed on the observation sheet may have been exhibited on the days during which observations were made.

An attempt was made to control for changes in course delivery or demeanor over time by conducting all interviews and observations within a set period of one month. An additional limitation related to time was the fact that, due to the variations

in class lengths, certain courses could be observed on record for only a portion of their entire period, for reasons of observational consistency. Hence, some behaviors which could have been included in the study may have been exhibited during the class, but after the designated observation period.

The mere presence of the observer in the classroom may have had varying effects on the instructor (LeCompte, 1984). Regardless of how purposeful the observer may have been in remaining unobtrusive, it may have been difficult to ignore an individual watching one's every move. Quantitative researchers warned against such effects as potential contaminants of data (Borg & Gall, 1989).

Limitations also may have developed due to the sampling method. For example, the number of instructors selected was based not only on the criterion of teaching both a distance class and a traditional class, but also on the criterion that the courses taught were scheduled without conflict over a period of one week. Had more time been available for observation or had less miles existed between observation points, a more rigorous method of identifying the sample could have been employed.

## CHAPTER FOUR

### Results

#### Description of the Sample

The sample of instructors chosen for this study was selected according to the criterion of teaching courses in both a traditional classroom setting and a distance classroom setting. Of the instructors who met this criterion, the first ten instructors offering a non-conflicting course schedule were selected for observation. Of the ten, five instructors taught the same course in the both traditional and distance classroom settings. The remaining five taught different courses in each of the two settings; however, both courses were in the same discipline. Each instructor was contacted about participation in the study and agreed to be included. They were randomly assigned a number from one to ten as a means of anonymous identification.

Nine disciplines were represented by the ten instructors. The disciplines included Criminal Justice, Civil Engineering Technology, Computer Science, Economics, Finance, Geology, Management, Nursing and Psychology. Those disciplines in which the same course was observed in both teaching settings were Computer Science, Economics, Finance, Management, and Psychology. The sample consisted of eight male and two female faculty members. The average teaching experience for this sample was 14.5 years in the traditional classroom setting and just over one and one-half years in the distance classroom. Four of the instructors were teaching on Teletechnet for the first time.

### Data Collection Process

Data for this research were collected over a period of five weeks, from October 16, 1995, to November 17, 1995, with the exception of one post-observation interview which was postponed until the week of November 26, 1995. The means by which data were collected included pre-observation telephone interviews, observations of instructors in both the traditional classroom on the ODU campus and in the distance classroom from the Teletechnet site at NRCC, and finally post-observation telephone interviews.

#### Pre-observation Interviews

Pre-observation interviews took place during the first week of the data collection period and lasted approximately one hour for each interview. Instructors were contacted individually by telephone and asked a series of questions about their teaching formats and teaching behaviors used in each of the classroom settings. Questions also included each instructor's perceptions of his or her effectiveness in teaching in each of the settings, as well as their perceptions about the function and role expectations of the site supervisors (see Appendix C for the interview protocol). Each instructor was interviewed prior to being observed in either of the classroom settings. The interviews were audiotaped as a means of supplementing written notations made on the interview protocols. Each interview was transcribed virtually verbatim, with the exception of verbal hesitations, word repetitions, or anecdotes or comments deemed by the researcher as unnecessary or which could violate the confidentiality of the study.

## Observations

Observations of the distance classes from NRCC began during the second week of the data collection period. Those observations were suspended during week three to conduct observations of traditional classes on the Norfolk campus. Each of the instructors was observed twice in each classroom setting. The remainder of the distance observations were completed during weeks four and five. Each class in each of the settings was observed for approximately one hour, during the first hour of instruction, regardless of the length of the class. The researcher made every effort possible to remain as unobtrusive as possible; however, for most of the distance classes, due to their small size, the researcher was often questioned as to the purpose of her presence and the nature of her research.

An observation sheet was designed for use in each of the two classroom settings on which frequency counts were noted for each of the 18 behaviors considered (see Appendix D). Space was provided on the sheets for additional comments which could be used to augment the frequency counts tabulated for each behavior observed. Once all of the observations were completed, an average frequency count was calculated for each instructor in each of the classroom settings. Additionally, a total frequency count was tabulated for each instructor to determine how often the instructor exhibited these 18 behaviors in one hour. The overall format of the observation period also was assessed as instructor-centered, interactive, experiential, or individualized in terms of its structure.



### Post-observation Interviews

Post-observation interviews were conducted by telephone with each instructor during weeks four and five, as the last of the distance classroom observations were being completed. Each of these interviews lasted approximately 30-45 minutes and was taped and transcribed to augment the researcher's notes. The protocol included questions about each instructor's opinion regarding several of the teaching behaviors observed, specifically those identified in the literature as important in the distance learning setting. Prior to the researcher leaving the Norfolk campus, each instructor was provided a sample observation sheet which included definitions of each behavior as determined by the researcher (see Appendix I). Instructors were requested to refrain from looking at the definition sheet until the date of their last observation to minimize opportunities for influencing their teaching.

After a discussion of the identified behaviors, each instructor was asked to refer to the definition sheet while the results of the frequency counts were disclosed. Instructors were then asked to reflect upon how the observations compared with their perceptions of how they conducted their classes and their effectiveness in each classroom setting. Finally, instructors were asked to express how well their expectations of the role of the site supervisors were being met and how site supervisors might support faculty in improving the learning experience.

After having the opportunity to identify these perceptions and see the results of an objective observation of their teaching approaches, this technique created a

comparison for each of the instructors of their perceived effectiveness in the two classroom settings. Secondly, a discussion of the role of the site supervisors on two different occasions provided an opportunity for the instructors to compare their perceptions of the site supervisors' roles with their expectations of these roles in contributing to the distance learning experience.

## Findings

### Pre-observation Interviews

Results of the pre-observation interviews for both the traditional and the distance classroom settings were presented under five broad categories: (a) format; (b) teaching behaviors; (c) teaching preparation; (d) differences and similarities between the two settings; and, (e) the role of the site supervisors. Format was considered in terms of which type was typically employed by each of the instructors, the rationale for choosing that format, and its perceived effectiveness. Teaching behaviors included identifying those which were employed regularly, determining their perceived effectiveness, and the level of student contact.

The category of teaching preparedness included expectations of teaching in both classroom settings, the type of college teaching training obtained for both settings, if any, the thought processes used to plan courses, and the comfort level of teaching in both settings. The next category outlined the similarities and differences between the two settings, as identified by the instructors. Finally, the site supervisors were addressed in terms of function and expectations.

Format. In the traditional classroom setting, eight of the ten instructors thought that they maintained a lecture-centered or instructor-centered format. The remaining two identified the use of either group processes or interactive techniques more often in conjunction with their lectures. Some of the instructors mentioned either large class size or an extensive amount of material as reasons for less discussion. One instructor noted that, regardless of the class size, "I present the material to the students and they feel they should be able to engage in a discussion of that material." Another identified his interaction as being "mainly between me and an individual student."

Within the distance setting, seven of the instructors indicated little to no change in their format from the traditional setting; however, one instructor who typically lectured in the traditional class noted that she became more interactive in the distance class due to the students being at a more advanced course level. Two instructors attempted to incorporate in-class activities (e.g., games) into their distance lectures to maintain interest. Virtually all faculty mentioned the need for greater preparation or the development of more extensive course packets. As one instructor said, "Distance learning uses extra energy." Two instructors mentioned that the unavailability of a chalkboard limited their ability to identify pertinent points. Comments were made by six of the instructors regarding the need to initiate greater involvement by the distance students; however, one mentioned that, "Students are less likely to participate and it is more difficult interactively." Still another instructor stated, "I try to get at least some of

them involved in every class." Put concisely, "Those people are out at sites, so to bring them in, you have to involve them."

When asked their rationale for choosing a more lecture-centered format in the traditional classroom, four of the eight instructors related it to the "tremendous amount of material that has to be imparted in a short period of time," as expressed by one. The nature of the material being primarily didactic was another reason given for minimal amounts of interaction and discussion. Large class size was still another reason why extended periods of discussion could not be allowed, as time would not permit instructors to cover the necessary amount of material. Those who saw themselves as more interactive reasoned that it was through opportunities for discussion that instructors can provide a structured learning process. Another determined that "somebody [i.e. an instructor] reading [notes] is horrible."

From the distance perspective, three instructors used the same rationale as in their traditional class. This approach included: (a) to deliberately structure discussion so that the learning process is one of discovery; (b) to try to balance lecture and discussion; and (c) to convey a large amount of theoretical information. In mentioning this attempt to maintain balance, one instructor added her distaste for forcing students to participate in a discussion at a distance: "I have an inhibition about forcing people I cannot see, who may be very intimidated, to talk. . . . so, not by design, but by reality, there is less discussion." At the same time, of the seven instructors who cited their distance format as lecture-oriented, six of them recognized an increased need to

involve their distance students. As one instructor offered, ". . . interaction is critical. It is an essential characteristic." Another instructor noted, "The rationale is to keep them involved so they will be more attentive." One instructor suggested a way to increase that involvement by assigning an in-class writing exercise on the lecture topic, to be read on the air to the entire "class." "That way," said this instructor, "they have created a script for what they might say and they are much more likely to participate." While not particularly scientific, another instructor offered this rationale, "Up to this point, it's been trial and error."

Considering the effectiveness of their chosen formats in the traditional classroom, seven instructors specifically mentioned positive student feedback or student evaluations:

". . . when I get feedback from my students, it seems to be pretty good."

"Well, I get good evaluations in the in-class."

"The feedback is excellent."

"[According to their feedback], students say they enjoy it, learn a lot, [and] are motivated."

One instructor attributed the effectiveness of his lecture to the fact that he presumed it was what was expected by his students. Another looked to her students' improved test scores, noting, "I think the format that I use helps them to see what is important, and helps them to get the information they need."

Of the seven instructors who mentioned student feedback as their means of determining their format's effectiveness in the traditional class, four also mentioned it for their distance class. Others mentioned the longer length of the distance class to be a hindrance ("I think the format is effective per se; the problem is that it is not effective for three hours"), as well as the confining characteristics of the technology ("Within the constraints of the media we use, I would say it is fairly effective."). Another was uncertain as to his effectiveness due to evaluations not being delivered to the sites in time for processing.

Teaching behaviors. When questioned as to the teaching behaviors or techniques used most often in their traditional class setting, nine of the ten instructors mentioned the use of humor:

"I always use humor . . ."

"My humor would sometimes be self-deprecating . . ."

"I found that humor is a good way to get them to respond."

"This type of class can get horribly boring . . . so humor is important."

Seven instructors identified moving about the classroom or gesturing to keep students' attention or to show their enthusiasm:

"I have a lot of enthusiasm and energy in my lectures . . . I tend to use a lot of gestures. I try to move forward toward them."

"[Do] crazy, dumb things -- walk outside of the class and keep talking so they have to strain and listen to you. Now, you've got their attention."

"I could walk around the room, which I like to do."

Three instructors mentioned the use of personal anecdotes or other examples "that are pertinent, draw on personal background and then try and elicit students' personal backgrounds," according to one. Two mentioned looking into the eyes of their students, as one instructor described it, to "see if they understand what I am saying." Two others noted the use of different forms of media from videotapes to newspaper clippings. Singular references also were made to calling on students by name, not calling on students by name ("I believe the world is full of shy, anxious people who, if they thought I might call on them, they are going to be sitting there anxious the entire time"), summarizing periodically, and acknowledging students for good responses ("[I] get excited over a good point made by a student").

The teaching behavior reportedly used most often with the distance students involved techniques to increase participation. Also mentioned were some of the difficulties in initiating that participation:

"I still try to engage students by asking them questions directly."

"Getting that rapport going with the distance students takes a good deal more time than in the regular classroom."

"In the beginning, they probably feel sort of alienated out there and it's tough to get that rapport going at a distance."

Two instructors noted their perceived success with stimulating involvement, stating, "So far, people seem to be talking at the sites," and, "You can tell they've been trying to talk to each other [at the distance sites]." For one instructor, the technology slowed down his speech and his class, yet for another, it seemed to increase her rate of speech.

Restrictions, both physically and in terms of presenting content, were the largest negative behavioral changes reported by the instructors:

"It really makes it difficult, so you do have a feeling of being restricted."

"I feel that part of my enthusiasm is conveyed by my body and I can't move, I can't show it. I feel more restrained."

"Students on campus are preparing to do [an in-class assignment] which cannot be done on the television system. It's impossible."

"There is a lot to cover and only so much you can say and they can hear in a three-hour period. . . What I struggle to do is to try to make the main points for sure and hit the material that will show up on the test."

"I pretty much have to stick at my feet. I can't clip on a microphone and go walking around the class."

"I'm more confined in what I can do."

Asked how they acquired their teaching behaviors, for example, in terms of conscious choice or years of practice, nine instructors clearly believed it was a combination of those two elements, heavily sprinkled with trial and error. An instructor with close to 18 years of teaching experience called it "an evolution." Another instructor admitted, "I've tried a number of things that have flat bombed and you know not to do that anymore." That same instructor recognized the value of his collegial resources: "A lot of this is watching other good teachers or getting tips." Another referred to journals for new ideas. Still another looked to his audience, "I've been shaped by classroom response, where I continue to do things that they find helpful or interesting . . . things that involve." However, one instructor warned, "As



you get feedback, you modify *slightly* [italics added]. If you try to be too malleable to the audience, you become unrecognizable." The one instructor who did not reference trial and error as her modus operandi instead recognized her teaching style as a function of her outgoing personality: "I suspect that the only reason I became a teacher is because I wasn't sure I could make it on the legitimate stage."

Four instructors related their biggest influence on their distance teaching behaviors to the training they received:

"We had a seminar for a week. I also practiced with one of the professors [because] I needed to have more practice than in the seminar."

". . . I took what I had done already and merged it into the training they had given me and the things they encouraged me to do."

One of these four instructors, along with two others, also identified elements of their personality as contributing to their teaching behaviors:

"[Because] there really wasn't much there for me [in terms of training], I basically just did what seemed to feel comfortable, which is to try to pursue some of the same things I knew worked well in the traditional classroom."

"I attended a Teletechnet training seminar this summer which was very important for developing . . . the important objective of bringing the students in."

". . . I took what I had already done and merged it into the training they had given me and the things they encouraged me to do."

Although the one instructor relied on her personality in choosing her traditional class teaching behaviors, with the distance class, it was simply trial and error. Similarly, two

instructors again attributed their teaching styles to trial and error as they had in the traditional classroom:

". . . It's all been trial and error. I've had some good counseling from the production staff and certainly the technicians, but in large part, it's been by my gut feeling."

When asked to evaluate the effectiveness of their teaching behaviors in the traditional class, most of the instructors again looked to student feedback and evaluations as a gauge. Of the ten, six instructors identified positive student feedback and therefore perceived their teaching behaviors to be either "pretty effective" or "very effective." Three used student performance as their measure of effectiveness:

"Well, the students seem to do very well."

"It seems to work; people seem to respond."

"The good ones [behaviors], I think are very effective."

The last professor interviewed, while neither affirming nor degrading his effectiveness, submitted, "One of the things I guarantee my students is, you may not like what I do, or enjoy the workload I place on you, but you will learn and that's what you came for . . ."

Eight of the ten instructors were not as quick to respond positively about the effectiveness of their teaching behaviors at a distance. Three instructors who relied again on student feedback and felt their behaviors were effective, were tentative in most of the responses:

"I think pretty good so far, according to the responses I've gotten . . ."

"I actually think I'm more effective on television than I am live, although I really don't know."

"I get good responses from the students . . . I think it is coming across okay."

While one instructor noted his decreased comfort level and an inability to determine his effectiveness, four other instructors used student performance as their guide, but again seemed reluctant to speak with authority:

"Not as good. I don't feel that I'm being as effective. The grades are lower . . ."

"I think students learn. I think it works pretty well."

"So far so good, I think."

"The feedback I would like to get is some really good grades from the people in class."

Two instructors seemed to express no doubt about their effectiveness:

"I did get the award for best teacher . . ."

"As effective as they are in the [traditional class]."

Included in the examination of teaching behaviors and rapport building was consideration of the frequency with which instructors met with their students outside of class. In the traditional class setting, seven instructors specifically mentioned maintaining scheduled office hours; however, the frequency with which students scheduled and kept appointments varied. Four of the seven noted that, few if any, students came to their office, while the other three were either, "available whenever I'm in the office," "[had] a bunch of them standing around in the hall to talk to me,"

or "[has] somebody in here almost every day." Two other instructors mentioned that the frequency with which they met with their students depended on the level of the class being taught. The higher the level, the more frequent the meetings. Another instructor found that his students either simply called or stopped by his office, or opted to speak with him after class.

Considering the question of contact from the distance perspective necessitated redefining "contact" as the use of regular mail, electronic mail (E-mail), telephone, facsimiles, or personal visits by either students or faculty to the main campus or a site respectively. Nine instructors said that both they and their students use the telephone as a primary means for communicating at a distance. The university provided the students with an 800-number for use when contacting their instructors, and instructors were issued a calling card to use when reaching their students. Six identified the use of E-mail. The need to respond to student inquiries immediately also was highlighted as an effort to continually bolster student connectedness. While instructors identified the availability of these communication modes, seven instructors specifically responded that contact with their distance students was relatively infrequent. Three other professors also determined site visits or one-on-one meetings with their distance students to be impossible. One instructor however, has been able to get to know some of his distance students fairly well by E-mail, yet he concedes that in terms of the amount of communication, "I wouldn't use the word 'frequently.'"

Teaching preparation. The first aspects of teaching preparation identified were the expectations and objectives each of the instructors held prior to going into teaching in each of the classroom settings. In the traditional classroom, five instructors recognized one of their objectives as passing information to their students:

"I think the whole objective to teaching is that you are passing along a synthesis of knowledge that you have to students."

". . . to present the information as clearly as I could in a way they can understand it."

"To convey information and ideas in a manner that students will find interesting and memorable and useful."

Several of these same five instructors and others mentioned the need not only to convey the information, but to have the information be useful in their students' jobs or lives:

"My main thing was to provide an opportunity for people to develop skills I knew they would use later on . . . and actually [be able to] apply materials we're dealing with."

"I wanted them to get a good solid overview of [the course topic] and a good dose of [some specific areas]. Those are the vessels in which they will do business. . . ."

"I wanted them to have something in their pockets that they could use in getting a job or in actual practice on the job."

Two instructors mentioned their desire to make better citizens of their students through acquisition of their course material, while one instructor noted his objective was to maintain a structured learning experience while avoiding the perpetuation of any negative teaching strategies or behaviors he encountered as a student. While

objectives certainly are necessary, one instructor suggested the following reality: "How much you [the students] absorb and how much I'll be able to stuff down is always a toss up." Similarly another remarked, "They're big boys and girls. They can make the choices and I'm not responsible for those choices."

Four instructors noted little to no change in their teaching objectives between the traditional and the distance classrooms. Some identified the increased need to include the distance students in the learning process:

"I think the expectations were that the [distance] students were going to feel left out. Your problem is to make them feel more in than out."

"I want them to feel valued and a part of their education."

"Time taught me that most of them just want you to be reachable."

"My objectives in many ways were fairly the same, except I felt a little bit more of a need to reach them, to connect with them the kinds of issues that I didn't think quite as much about in the traditional classroom."

One instructor expressed her concern about reaching her distance students, many of whom she considered underprepared:

"I recognized that there probably would be a difficulty, due to the selectivity bias, that the more capable students would not be taking Teletechnet. I was concerned because, unlike the courses they think are wonderful, they actually have to know something coming in . . . So I knew I would have a problem with students that were less prepared. That's why I tried to develop this book."

Instructors in the traditional classroom in general received no formal training to teach at the college level. One instructor received some training as an undergraduate,

although for the most part, he considered it unhelpful. Another received practical training while working in industry prior to entering academia. A third instructor, recognizing his interest in an academic position, created his own training by seeking out opportunities to teach selected course sections as a graduate student because, "I really wanted the experience and it forced me to be prepared."

Those who did not receive formal training cited various ways in which they have compensated for this lack of formal training. One instructor "learned by doing." She also added, "I learned by emulating people I respected and adjusting my style to the audience." Another did not believe that formal training was necessary, but hard work was. "I consider myself one of the best and if you don't consider yourself that, then you shouldn't try to do what you do . . . But in order to maintain that inner feeling that I'm the best, I have to work hard at it." One who had received some exposure to instructional methodology as an undergraduate "had a pretty good idea of what I responded to as a student and what I saw adults respond to in an industrial setting."

All ten participants referenced the week-long seminar offered for Teletechnet instructors as being their primary source for training to teach at a distance. However, satisfaction with that training varied, as did the secondary sources utilized as a supplement to that training. Those who felt that the seminars were worthwhile mentioned several helpful tips they took away from the experience:

"Instructional design put on some really good workshops . . . They had people who had taught on television and who were pretty expert."

"They have had week-long sessions on how to teach, how to be organized, how to do this . . . that was extremely helpful."

"We had a training program . . . which was quite good."

Several sought out instructors who had taught previously on television:

"I got together with a couple of other teachers and shared notes."

"The most effective part for me was this professional in distance learning helped me with my overheads and critiqued a couple of my presentations."

"What was also useful was hearing people who have already done it talk about solutions."

Three instructors did not find the seminars worthwhile. One instructor, in contradiction to a comment made by another noted earlier, believed that the individuals teaching the seminars had never taught in distance learning before and therefore, ". . . if you haven't experienced it, don't try and teach it to someone else." Another mentioned that too much time was spent on "how to teach in general" instead of more on the technical aspects of this new environment.

Another element of teaching preparation involves course planning. Coherence in presenting the material was an important aspect:

"I try to have concepts that I am sure to cover throughout the course to show how things pull together and fit together, so there is coherence."

"I try to make sure that every lecture is coherent, . . . that they ought to have in their minds the lecture as a whole."



"You pick out those things and topics you like best and then you need to build a systematic framework around it all to make sure it flows logically."

Having an agenda or an outline of useful information which logically unfolds through the semester was another element of planning mentioned:

"I present them a simple agenda and we proceed to break that agenda down into pieces and work from there."

"The first thing I do is see what readings they were supposed to have done and outline it pretty closely. Then I brainstorm on what I can bring that adds to the text."

"[I found the text] to be excellent and decided the way that it had organized the material was quite suitable and that I would format my lectures pretty directly from the text, moving through it and picking out topics I liked and expounding on them."

Some instructors ask themselves questions as to what needs to be covered throughout the course:

"The first thing I start with is, 'What are the important things for students to know when they come out of the class?'"

"How am I going to do it?"

"What do I need to cover tomorrow? I'd make sure I remember the key points I want to say and I've marked my notes so that I will say it."

"What is the information I want to get across? How will I illustrate it? How will I make it interesting?"

In the distance setting, six instructors noted that they plan their distance course in much the same way as their traditional course, with the exception of taking into consideration the technology and its demands. One instructor did not place the same

emphasis on coming to class and simply reading the book as she had in her traditional class for fear someone else on the network might pick up the broadcast and think ODU students less capable. She also concentrated on being more organized, speaking more slowly, and reiterating major points more often. Another looked to previous courses he had taught and made the necessary changes to ensure that the critical information came through. Providing "information they can actually use," and applying the technology of graphics and videos in a way that was entertaining and interesting while continuing their concern for "trying to get it to be a shared experience" were also factors which influenced the planning of their distance course.

Asked to rate their comfort level when teaching in a traditional class (one equaling "very uncomfortable" and five equaling "very comfortable"), the average response was 4.8. Several mentioned that their ratings fluctuated from day to day and class to class. In the distance class, the average response decreased .75 to 4.05. "I get up there and get rolling through it, but I'm always nervous . . .," admitted one instructor. Added another, "I'm probably not as comfortable over there [in the studio] as I am in the traditional classroom." Concerns over the dependability of the system and maintaining a connectedness with the remote students were expressed; however, one instructor attempted to put his experience in a positive light, "It's a challenge to me and I rise to the challenge."

Differences and similarities between the settings. Instructors spoke of several differences between teaching in a traditional classroom and teaching in a distance

classroom. These differences included access to fewer resources at the distance sites, a loss of spontaneity, a tendency to act stiffer and more professorial (mentioned twice), and a reduction in the quality of the information exchange. Three instructors remarked that the need for course planning and organization increased, while four lamented the loss of eye contact as a cue to comprehension and student reaction. Technical difficulties and interruptions were a frustration, as was the loss of personal connectedness between student and instructor, discussed by three instructors. Other obstacles included the greater amount of time needed to convey and exchange information both during class and between the main campus and the distance sites, the intimidating nature of being on television, the need for more and better varieties of presenting information, and a greater difficulty in generating discussion. One instructor mentioned feeling more comfortable relying more extensively on the textbook as an element of his instruction that both he and his students have in their possession.

In terms of similarities to the traditional classroom, four instructors felt that the students and the instruction were actually more similar than different:

"It is far more similar than different."

"They work more the same than I thought."

"It's 80% similar in terms of what you do to deliver the information and get feedback on the information."

"They're more alike than they are different."

Two instructors noted that their level of discussion and lecture emphasis is equal to the traditional class, and another noted that both sets of students maintain the same "inherent level of interest in certain topics over others [and have] very similar reactions to the materials." "The methods that you can use in one will work in another . . . with some modifications," stated one instructor. Only one instructor saw little to no similarities to the traditional classroom beyond the fact that a lecture was being given.

Role of the site supervisors. When discussing the role of the site supervisors, the first question was structured rather broadly, asking the instructors to identify their perceptions about the functions of site supervisors. Six instructors specifically mentioned their function in coordinating the distribution and mailing of test papers and assignments. Three mentioned their role in acting as a liaison between the students and the faculty, while five instructors identified student support and advocacy as a major responsibility. Five mentioned having either rarely or never spoken to a site supervisor, or feeling as though some of the supervisors cared about the students more so than others:

"I have not had a lot of contact with them."

"Some of them are very helpful in letting you know how it's going."

"Some of them you rarely ever hear from and that's not good, because the ones that you hear from, who show a really keen interest in every student, really make you feel good."

"There are some site directors whom I have never spoken with and there are others I have spoken with often and those are the ones that are very student-oriented . . ."

Two mentioned not being clear as to the role of the site supervisor, while one seemed to be able to identify most of their responsibilities including recruiting, advising, financial aid, counseling, and admissions, as well as the administrative and technical duties.

Lastly, instructors were asked to cite their expectations of the role of the site supervisors. Six instructors identified the need for the supervisors to continue in their administrative role of ensuring that papers are transported between the sites, that tests are proctored, and that the technology is maintained in working order. Included in that administrative capacity is the role of liaison between faculty and student should problems arise. Three instructors mentioned the need to act on behalf of the students, to be the "personal touch where we [the instructors] can't be," and to assist them in curriculum selection issues where necessary and when possible. Five recognized the extensive workload and level of responsibilities placed upon the site supervisors, and understand the necessity of their role. As one instructor summarized his comments, "I see these people as being some of the key actors in this whole process. Ultimately, to the success of the class, they are more important than I am."

Summary of pre-observation interviews. Instructors were primarily lecture-centered across both settings, although more participation by the distance students was desired. The rationale for this format was that both the amount and the nature of the material were more conducive to the lecture, although in the distance setting, the

desire to keep students attention was still great. The effectiveness of the format in both settings generally was determined according to student evaluations and feedback.

Those teaching behaviors identified most often in the traditional classroom were humor, moving about the classroom or gesturing, and the use of personal anecdotes. At a distance, instructors largely used any behaviors that might elicit greater participation, although many mentioned that their restricted movement was a hindrance in this regard. Most instructors hit upon their most-often used behaviors either through conscious choice or trial and error over the years. Many had looked to their colleagues for advice while also acknowledging that, for their distance classes, the training they received prior to beginning their instruction proved extremely valuable. Student evaluations again were the preferred evaluation tools in both settings, along with student performance. The means by which instructors established and maintained rapport with their students outside of class in the traditional setting predictably was through the use of regular office hours or discussions immediately following a lecture. Communication at a distance fell to E-mail, regular mail and the telephone; however, most instructors seemed dissatisfied at the decreased level of communication compared with their traditional classes (which also appeared low).

The primary objective for instructors in the traditional class was to convey information that would be useful to their students. While also mentioned for the distance classroom, the additional need to include the distance students in the dialogue was highlighted. Instructors received virtually no training to teach their traditional

classes, while all of them acknowledged participating in the week-long Teletechnet teaching seminar; most found it useful. Being able to develop a coherent and logical lesson plan was a necessary element for most instructors in both settings, paying particular importance to the demands of the technology while at a distance. Overall, on a scale from one to five, the average comfort level in either classroom setting was between four and five with instructors feeling slightly more comfortable in the traditional classroom.

Instructors related the most prominent differences between the distance and the traditional classroom settings to decreases in resources, spontaneity, exchanges of information, and eye contact, with an increase in their organizational strategies. Similarities included equally sophisticated levels of discussion and comparative measures of student interest in the topics.

In terms of the site supervisors, the most common role mentioned by instructors was that of a conduit for distributing and mailing test papers and assignments, followed by student advocate and faculty liaison. Only one instructor was able to identify virtually all of their many and varied responsibilities. As to instructors' expectations of these supervisors, to continue to ensure efficient transfer of information and proper technical support, as well as to act on behalf of the students were mentioned most often.

Having noted the instructors' views and opinions on teaching formats, behaviors, preparation, classroom setting differences and similarities, and the role of

the site supervisors, observations were made of these instructors in each of their class settings. Additional interviews followed, from which the instructors were to identify for themselves any discrepancies between their perceptions of rationale and effectiveness held prior to the observations, compared with their perceptions after the observations. Further commentary on the instructors' expectations of the site supervisors and suggestions for further collaboration also were solicited.

### Observations

Eight of the instructors were observed for approximately one hour in each of the classroom settings on two different occasions. The ninth instructor lectured for the first 35 minutes of the class and ended with a video. The other instructor canceled one of the traditional classes to be observed, due to illness. Two instructors gave exams during one-half of their distance classes, one instructor began both of his traditional classes with a quick quiz, and four instructors spent a substantial amount of time going over test results. Two instructors took time during the break and ended early at the end of their distance classes to answer questions. With the exception of the 35-minute lecture and the canceled class, none of these situations appeared to affect the observations.

Frequency counts were averaged between the two observations in each of the classroom settings. Averages across the 10 instructors for each of the 18 behaviors also were identified. Table 1 provides a summary of these averaged frequencies in the



Table 1

Frequency Count Summary - Traditional Classroom

Teaching Behavior	Instructor										AVG.
	1	2	3 <sup>1</sup>	4	5	6	7	8	9	10	
<b>NONVERBAL BEHAVIOR</b>											
* Uses eye contact with students	117.5	32.5	35.0	58.5	33.0	68.0	69.5	104.0	59.5	16.0	59.35
* Smile, laughs, nods/ Shows approval	7.5	8.5	16.0	25.0	3.5	11.0	13.0	16.5	20.5	7.0	12.85
* Steps away from podium/notes	4.5	14.5	11.0	25.5	4.0	7.0	13.5	8.0	14.0	19.0	12.10
<b>EXPLANATION</b>											
Uses examples	7.5	13.0	5.0	15.0	18.0	8.0	11.0	9.5	22.5	21.0	13.05
Repeats concepts/ideas as necessary	0.0	0.5	23.0	9.5	18.0	8.0	11.0	9.5	22.5	21.0	12.30
Stresses important points	3.0	2.5	2.0	2.0	1.0	7.0	6.5	1.5	3.0	0.5	2.90
<b>ORGANIZATION</b>											
* Explains how each topic fits in	0.5	7.5	4.0	4.0	4.0	4.5	2.0	1.0	2.0	3.0	3.25
Summarizes lecture topic periodically	0.5	0.5	2.0	1.0	0.0	1.5	2.0	2.5	2.0	0.5	1.25
<b>INTEREST</b>											
Uses humor	2.0	0.0	2.0	2.0	14.0	3.0	2.5	7.0	11.5	6.5	5.05
Uses variety of media	5.5	28.5	14.0	27.5	20.5	5.0	13.5	6.0	2.0	3.0	12.55
Contributes personal anecdotes	6.0	2.0	1.0	4.5	2.0	0.5	5.5	1.0	10.5	1.5	3.45
* Suggests practical applications	5.0	0.5	4.0	2.5	4.0	6.0	1.5	1.0	11.0	0.5	3.60
<b>RAPPORT</b>											
* Addresses students by name	17.0	0.0	0.0	4.5	0.0	5.5	37.0	3.5	0.0	0.0	6.75
Offers help with problems/questions	18.0	4.0	4.0	2.0	6.5	6.0	8.5	5.5	12.0	3.0	6.95
<b>PARTICIPATION</b>											
* Encourages feedback i.e. asks for question/comment	3.0	0.5	1.0	2.0	1.0	0.0	3.5	0.5	1.0	0.5	1.30
Asks questions of individual students	15.5	3.0	2.0	2.5	2.0	5.5	21.0	3.5	2.5	0.0	5.75
Asks questions of class as whole	20.0	11.5	22.0	6.5	7.0	15.0	6.5	20.5	8.5	1.0	11.85
* Acknowledges students for good ideas	<u>3.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.5</u>	<u>0.0</u>	<u>6.5</u>	<u>2.5</u>	<u>1.5</u>	<u>0.0</u>	<u>1.40</u>
TOTAL	236.0	129.5	148.0	194.5	139.0	156.0	220.0	198.5	192.5	86.0	

\* Behaviors of particular importance in a distance learning setting (Dillon & Walsh, 1992, 1993; Hackman & Walker, 1990; Haughey, 1983; Metcalf & Cruikshank, 1991; Pekich, 1979; Ward, 1990).

<sup>1</sup> Due to instructor illness, only one class period was observed.

traditional classroom; Table 2 displays the averaged frequencies in the distance classroom.

Beyond the frequency counts tallied for each of the behaviors, additional related observations were made. For example, when considering eye contact with students, it was observed that several instructors in both settings seemed to look quickly from student to student rather than holding their gaze. Specifically, six instructors seemed to look into the camera when in the distance class more than the others. With regard to movement around the distance classroom, it was determined that generally, due to the virtually stationary configuration of the Teletechnet camera system, movement around the classroom appeared next to impossible. The "variety of media" used in both settings included writing tablets, newspaper clippings, pages from tests and course packs, chalkboard, figures, slides, PowerPoint outlines, and videos.

Total frequencies also were calculated for each instructor, representing how often all 18 behaviors occurred in each of the two settings during a one-hour period (see Figure 1). While most of the behaviors were exhibited with the same general frequency, "eye contact" was exhibited by the instructors far more often than other behaviors, particularly in the traditional classroom. An explanation for the high count could be the greater ease with which it was to observe such a behavior in person than from a distance. When shown in a figure, such results appeared to deemphasize or deflate the significance of the other behaviors displayed in Figure 1. Therefore, Figure 2 illustrates these same frequency totals, excluding "eye contact" in both settings, to

Table 2

Frequency Count Summary - Distance Classroom

Teaching Behavior	Instructor										AVG.
	1	2	3	4	5	6	7	8	9	10	
<b>NONVERBAL BEHAVIOR</b>											
* Uses eye contact with students	16.5	7.0	18.5	86.0	51.5	47.5	35.0	18.0	15.5	77.0	37.25
* Smile, laughs, nods/ Shows approval	3.5	2.5	9.0	11.0	1.5	22.0	5.0	12.5	8.5	23.0	9.85
* Steps away from podium/notes	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.10
<b>EXPLANATION</b>											
Uses examples	3.5	6.5	5.5	13.0	13.0	5.0	15.0	10.0	13.5	21.0	10.60
Repeats concepts/ideas as necessary	1.0	6.5	7.5	7.0	9.5	0.5	6.5	3.0	4.5	6.5	5.25
Stresses important points	10.0	6.5	0.5	7.5	2.5	3.5	18.5	3.5	3.5	0.5	5.65
<b>ORGANIZATION</b>											
* Explains how each topic fits in	1.5	8.5	1.5	5.5	1.0	2.5	1.5	2.0	1.0	3.0	2.80
Summarizes lecture topic periodically	0.0	4.0	1.0	4.0	1.0	0.5	1.5	2.0	2.0	2.0	1.80
<b>INTEREST</b>											
Uses humor	0.5	0.0	1.5	1.5	0.5	4.5	1.0	6.0	5.5	6.5	2.75
Uses variety of media	11.5	8.0	12.5	11.0	5.0	12.5	10.0	7.5	2.0	2.5	8.25
Contributes personal anecdotes	11.0	0.5	0.0	2.5	1.5	1.0	4.0	1.5	4.0	3.0	2.90
* Suggests practical applications	10.5	3.0	3.0	4.0	2.5	0.0	5.0	3.5	4.5	1.0	3.70
<b>RAPPORT</b>											
* Addresses students by name	2.5	0.0	0.0	1.5	0.5	20.0	17.0	1.5	3.5	1.0	4.75
Offers help with problems/questions	3.0	0.5	13.5	2.0	15.0	5.0	3.0	5.0	3.5	3.0	5.35
<b>PARTICIPATION</b>											
* Encourages feedback i.e. asks for question/comment	4.5	1.5	4.0	4.0	4.5	1.5	3.0	3.0	3.0	0.5	2.95
Asks questions of individual students	2.5	2.5	1.5	1.0	1.5	30.5	7.0	0.5	1.5	0.0	4.85
Asks questions of class as whole	11.5	9.5	3.0	2.0	1.0	20.5	2.5	11.5	4.5	2.0	6.80
* Acknowledges students for good ideas	<u>2.0</u>	<u>0.0</u>	<u>0.5</u>	<u>2.5</u>	<u>0.5</u>	<u>3.0</u>	<u>2.0</u>	<u>2.0</u>	<u>1.0</u>	<u>0.5</u>	<u>1.40</u>
TOTAL	95.5	67.0	83.0	166.5	112.5	178.0	137.5	81.5	81.5	153.0	

\* Behaviors of particular importance in a distance learning setting (Dillon & Walsh, 1992, 1993; Hackman & Walker, 1990; Haughey, 1983; Metcalf & Cruikshank, 1991; Pekich, 1979; Ward, 1990).

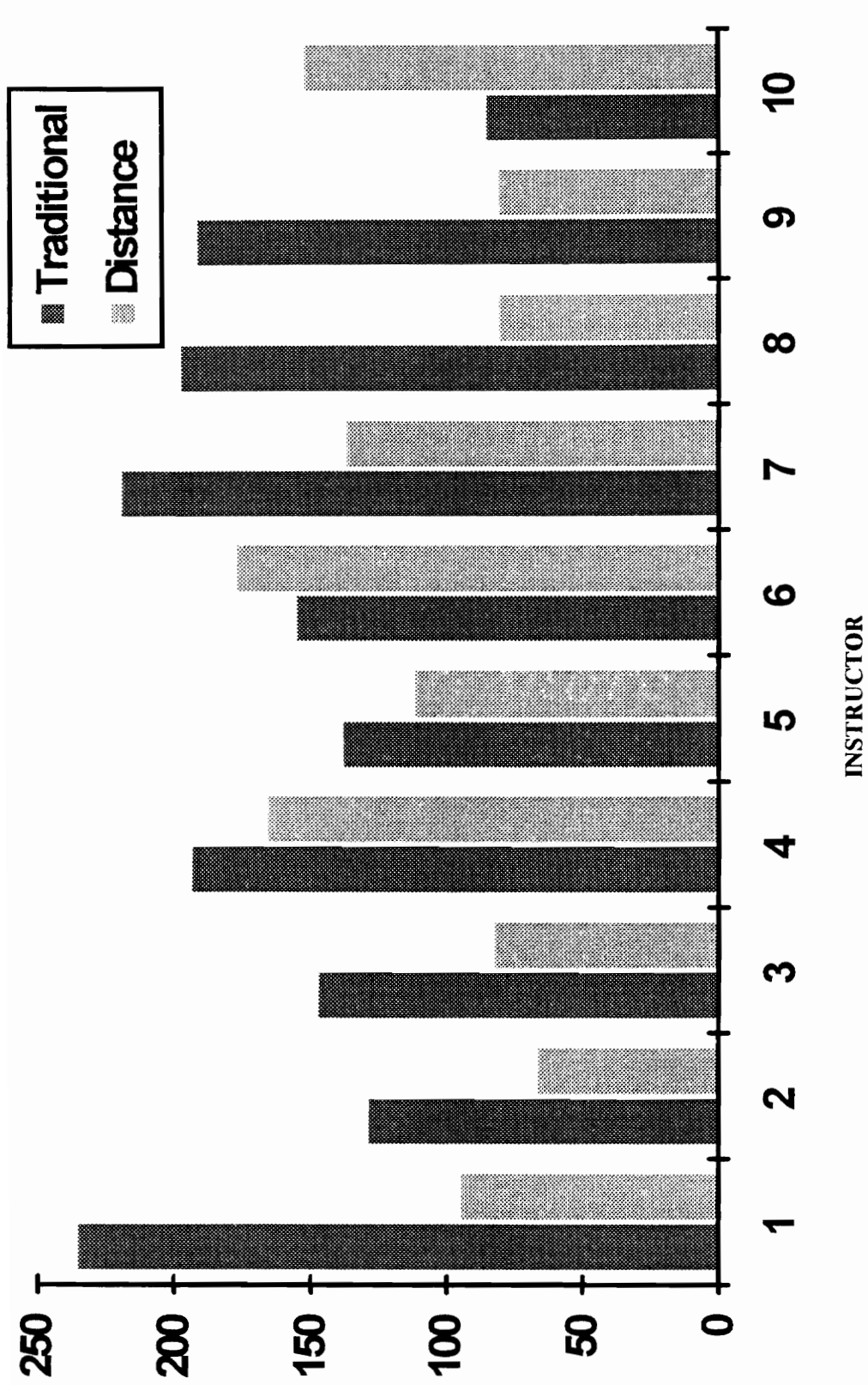
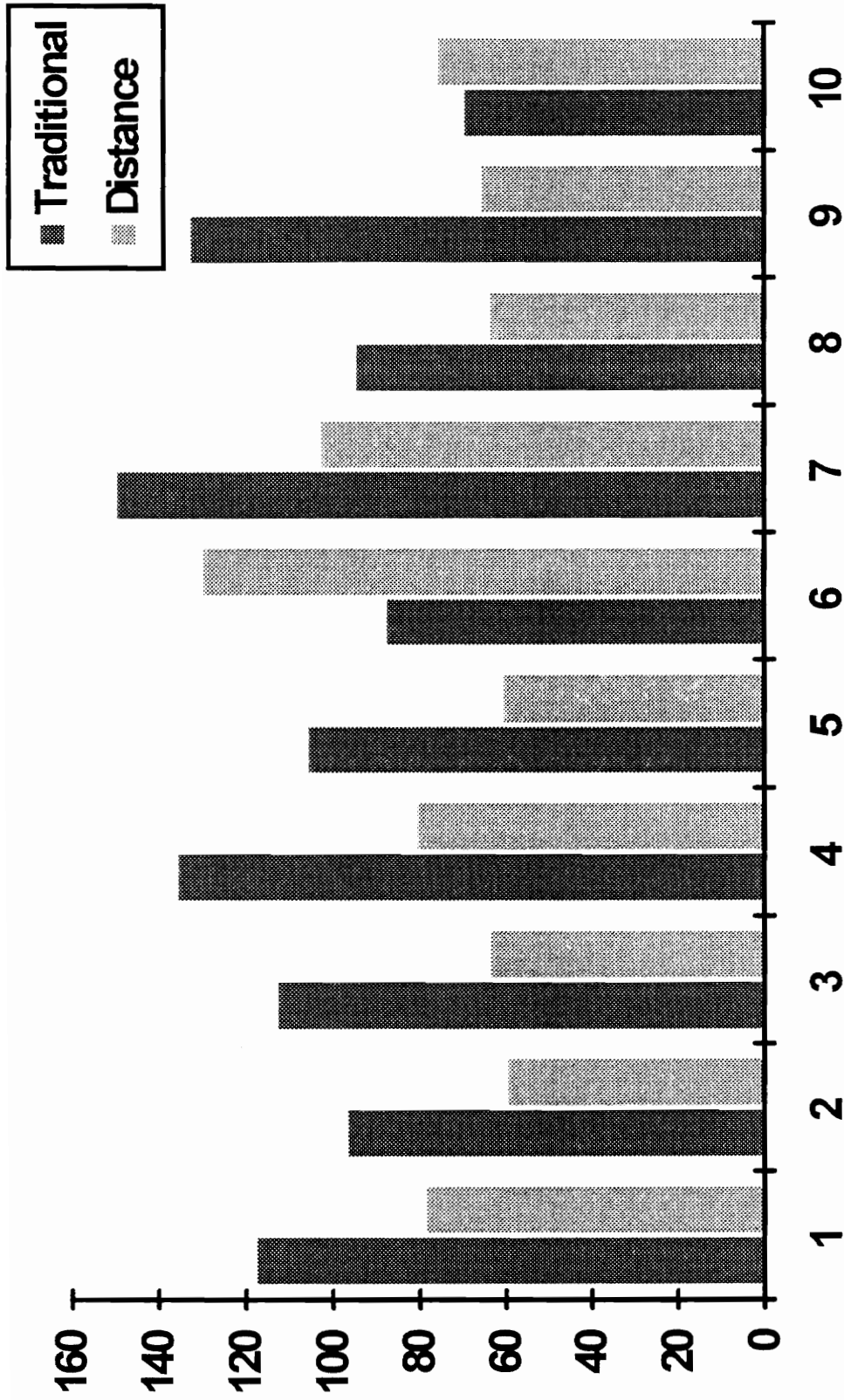


Figure 1. Total Frequency of Observed Behaviors by Instructor in Traditional and Distance Class Settings



**INSTRUCTOR**

Figure 2. Total Frequency of Observed Behaviors by Instructor in Traditional and Distance Class Settings (does not include "eye contact")

convey a more realistic portrait of these results. Figure 3 provides a summary of these same averages in both classroom settings, according to behavior. Once the observations were completed, instructors were contacted again in order to disclose the results and to allow them to compare the reality of their actions in the classroom with their perceptions of their classroom activity, as well as to compare their perceptions as to their rationale for their behaviors and their effectiveness.

### Post-observation Interviews

Results of the post-observation interviews were grouped according to the following categories: (a) formats; (b) teaching behaviors; (c) approachability; (d) delivery style; (e) instructor feedback; (f) perceived effectiveness; and, (g) distance site supervisor evaluations. Prior to disclosing the results of the observations, instructors were asked to reconfirm their teaching approach (i.e. instructor-centered, interactive, experiential, or individualized) and to offer their opinions on the use of certain teaching behaviors which had been included in the observations. Instructors also were asked to consider their approachability to students in both classroom settings and to describe their delivery styles. Once the results of the observations were revealed, instructors were questioned as to how closely the observations matched their perceptions of how they conducted each of their classes and their teaching effectiveness. Finally, instructors were asked to describe their expectations of the role of the distance site supervisor and suggest ways in which these supervisors can support faculty in their teaching endeavors.

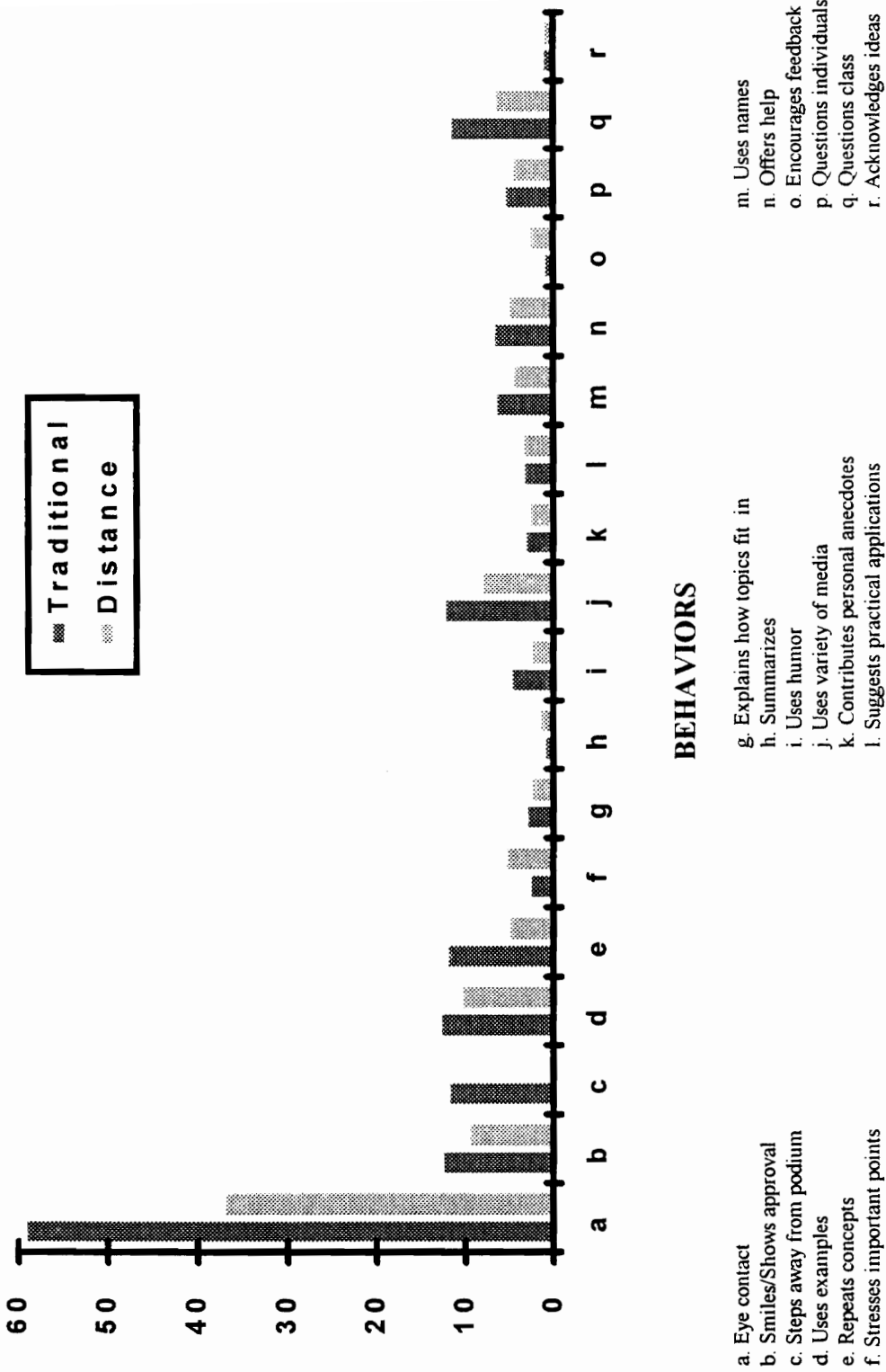


Figure 3. Average Frequency of Each Behavior in Traditional and Distance Class Settings

Formats. In both classroom settings, instructors were observed not only for their teaching behaviors but for their teaching format as well, to determine if the teaching formats identified in the pre-observation interviews actually were employed in the classroom. While two instructors previously identified themselves as being either group-oriented or interactive, upon observation, the researcher found them to be predominantly lecture- or instructor-centered. The remaining eight were identified as instructor-centered. When these results were disclosed, all of the instructors confirmed that they employed instructor-centered formats, including the two who had originally perceived themselves otherwise.

Teaching behaviors. Instructors were asked to give their opinions as to the use of seven specific teaching behaviors identified in the literature as particularly important in a distance learning setting (Dillon & Walsh, 1992, 1993; Hackman & Walker, 1990; Haughey, 1983; Metcalf & Cruikshank, 1991; Pekich, 1979; Ward, 1990). These behaviors also were included in the researcher's observations. The purpose for the questions was to determine the level of importance the instructors afforded these behaviors in order for them to compare their opinions with their actual performance in the classroom. The first behavior discussed was "calling on students by name." In the traditional classroom, nine of the ten instructors believed it was a positive reinforcement; however, of those nine, five said they typically or consistently did not follow through with it:

"I usually don't do that. I think it's a good idea."



"I know all their names and I like to be able to do that. [But] I don't always say their names . . . "

"Generally I don't do that . . . [but] I think it's a good idea unless it puts a student on the spot."

While that instructor cautioned against putting students on the spot by calling on them, another considered a certain amount of student discomfort to be worthwhile, saying, "I think if you call on someone specifically by name, it puts them on the spot and I believe that professionally, people are going to be put on the spot and a little bit of that now doesn't hurt." Four mentioned the large size of their classes as a barrier both to learning and using their names on a regular basis.

In the distance classroom, only two instructors mentioned specifically that they thought it was a good idea, although they did not do it because either they "don't know who's there" or they preferred not to "force them [to talk], even if I am supposed to." Yet, while that particular instructor considered the behavior embarrassing to the student, another found it embarrassing for himself: ". . . I only do it when I absolutely have to, because inevitably, that student may not be present at that site and that becomes *very* [italics added] embarrassing . . . boy, that's devastating." Another two added that it would be worthwhile only if "you can manage it" or "be able to do it naturally." One instructor was adamant about not doing it: "Flat out, no way. There's no time . . . [the subject matter] does not lend itself to that if you want to do an honest job of covering it." Only two instructors wholeheartedly believed it was a worthwhile endeavor:

"We *have* [italics added] to do it. We probably don't do it enough . . . But I feel we have to do that in the distance learning [setting], especially because we can't see them. It's easy for them to feel detached from what's going on . . . They're [the trainers] very sensitive to making sure that people at the remote sites feel a part of the class."

"I think it's good."

With regard to maintaining "eye contact with students" in the traditional classroom, all 10 instructors felt it was very important, although the degree of contact varied from, "I think I use that all the time," to, "I probably don't do it as much as I should . . ." Eye contact was used by one instructor as a means of discipline:

"I notice that if I make a lot of eye contact directly to that group [who is talking during class], they are more attentive and don't end up digressing into a conversation with one another." As another instructor put it, "You get so much out of the students' eyes . . .," while yet another asked rhetorically, "How can you communicate with people if you don't look them in the eye?"

Virtually all of the instructors mentioned at least attempting to establish some amount of eye contact with their distance students, while at the same time, admitting to difficulty:

"It's a problem. I try to do that and they [the trainers] told me I did."

"It's important to look as much as possible, but it is also hard to do because of the lights."

"I think I'm improving on that. I think it's really important. It's so tough not to talk to the people in front of you, because they are the human bodies."

"I guess I do, but I'm not sure because I can't see what I'm looking at."

"I think that's about the best I can do. I try to remember to do it -- sometimes, maybe not as much as I should."

"I try to maintain that as best I can, but without appearing to be just staring into the camera."

Only one instructor seemed ambivalent about this behavior, saying, "I think that's difficult and not essential."

"Moving around the classroom" in the traditional setting seemed to be a natural behavior for most of the instructors:

"You have to do what you do normally. I probably wander around from side to side . . ."

"I do that a great deal."

"I do it when I can."

Other instructors used it as a tool for keeping their students' attention:

"Absolutely essential . . . During the doldrums [of a class], you have to get the juices flowing and walking around, moving behind the students, forces them to turn around and look at you. You get their interest that way. You get their contact. Elsewise [sic], they're wherever."

"I don't think you should stand there like a statue. I think you should jump around . . . The lecture format is my chosen format because I have a tremendous amount of material to cover. So there is no way I can sit down and discuss the finites of a certain area and cover it all. So a combination of running around, keeping it lively, and lecturing as much information as I can is a formula that seems to be working."

"I think that's helpful because they have to watch you. To me, it makes it more comfortable. I can't stand there and just talk."

None of the instructors felt they were able to move around in their distance classroom setting due to the stationary configuration of the cameras. Most mentioned feeling restricted or confined:

"I wish you could. It's kind of a problem to have to just sit there all the time, especially if you're used to wandering around the room."

"I think it's a terrible restriction for me, but I don't see how it can be changed because, as long as I can't write on the board, I have to stand next to that podium. So I don't see any solution under the current system."

"I'd love to be able to do that with a degree of effectiveness, but our current situation makes it a little difficult. I hate sitting down at the table simply because it promotes a little bit of doldrums and a difficulty in keeping the stimulation."

"I think if you can do distance learning just like the classroom, that would be the ultimate."

"I just don't. You'd trip on the mike cord. I don't try."

"I feel a bit strapped in the television studio because I don't have as much opportunity to do that. I would like to be able to move more than I can. The way I'm doing the lecture with these sheets [on an overhead camera], I can't inspire somebody at New River by moving around the room. They're going to know I'm still 200 miles away. So I don't know if that's going to inspire somebody to feel close or not. Now if I could see them, which is coming, then I would feel differently about that because I could directly address them."

"In the distance classroom, just in terms of the demand that it places on the engineer, with the graphics that I do, I don't do that too much. I try to be as lively as I can while sitting."

While all of the instructors agreed that "eliciting feedback from students" in the traditional class was necessary, two reasons were verbalized. The first reason was to encourage discussion among the students:

"Getting students to talk is dynamite, simply because they can reinforce what you have just provided for the other students . . . students believe other students."

"If you can get them talking, then they'll talk to each other and you'll get more folks involved in the conversation."

The second reason for eliciting feedback was to determine comprehension of the material:

"If it's a theory, it's not too important, except to know if they've understood it."

"I know I lost the group [on a particular concept], and I even took the question off the test because I knew I had lost them, [so], I think it's a good idea to stop and ask questions."

"I'll ask, 'Does anybody have any questions about this? Is there anything about this that people don't understand?' So I do that fairly often."

"It's used as a guide to see if I'm hitting the mark."

In the distance classroom while the majority of the instructors again believed that "eliciting feedback from students" was important, the technology lent some ambiguity to the situation:

"It's important but complicated. I don't always know the students and their response patterns."

"Again, with the limited technology, to have a call/respond-type dialogue with folks at a distance is sometimes difficult. You tie time up and cut down on the amount of time you have to cover the material."

"I try to deliberately -- at times when I feel there is a dull sensation going on -- to become controversial, just to evoke some response from people. But sometimes, that backfires because you have five or six sites deciding they've had enough they're going to tell me what it's really like and they all talk at the same time. So you get more than you bargained for sometimes."

"It's really tough to give everyone a chance to talk. So what I usually try to do, instead of throwing open the floor for discussion, is call on different sites and ask them for their feedback."

One instructor mentioned the lack of visual cues in the distance setting which typically alerted him to ask for questions in the traditional classroom:

". . . many times in the traditional classroom, if I'm feeling someone is lost, nonverbally, they will often express that to me . . . So a lot of times in the distance classroom, I have to ask more because I can't see them. If somebody is not understanding, nonverbally I have no cues to know that. In some ways, I think it's more important in the distance classroom because of that reason ... "

All of the instructors perceived there was a place and a purpose for "smiling or laughing" in their traditional classrooms as a means of easing tension and motivating their students:

"I try to do that. I probably smile more in class than I do normally."

"The lightheartedness tends to be a stimulant as far as acceptability of something perhaps a little more difficult coming up. So, if you introduce something in a lighthearted fashion, I think you get students to accept it a little more."

"It's important because there is a certain amount of tension in the classroom. Laughter can also help to motivate."

"Humor is very important. Keeping it animated is a big part of being able to sit through an hour and a half lecture or an hour and a half of anything."

"I think sometimes if you can engage them, seeing some of the irony or loosening the tension, decreasing the stress level a little bit, I think humor can be a positive tool."

"Essential. If you can make them laugh, you can keep their attention."

In the distance classroom setting, "smiling or laughing" is seen as a way of letting their students get to know something of their personality:

"That's really important, because they don't know you as a person. They don't know you outside of class. It's probably even more important."

"Very important I think. Now you are removed another step by not being in the room. You have to convey your interest in the subject and keep it light if you can; add some warmth to it."

"To come across as being human."

"As important if not more important because of wanting not just to be a talking head and a monotone. So, laughing and kidding around is something I try to do when I can."

Humor is also used in the distance classroom as a means of maintaining attention:

"It's got to be done to keep them awake. And for a three-hour class from 7:00 p.m to 10:00 p.m., I'm going to have to put on tap shoes and get on the table."

Creating "segues between topics" in the traditional classroom again was considered by the instructors as an important and logical tool to use in conveying their lecture material:

"I try to avoid 'one topic to the next' where possible, unless you announce to the students that we are going to have some very different

segments here; give some break, something so that they don't try to continue on."

"I think it's a good thing to do to make sure things are connected and more importantly to make sure that the students see the connection."

"Here's the program. Here's a list of the topics we're going to cover. Here's why. We're moving through the list and today we're here. This is how it fits into the overall picture."

"It's the logical thing to do."

"I try to make those kind of connections. I probably do that more within topics; that is, subtopics within subtopics, rather than between large topics."

Instructors found that "segueing between topics" in distance classrooms carried equal weight; however one instructor expressed an even greater need at a distance:

"I think I probably do that more so at a distance. It just seems like you really have to organize it a little tighter."

Comments from the other instructors, in many ways, mirrored those regarding the traditional classroom:

"Oh, very important too. I don't think any differently about that."

"I would tend to do it the same way. I think it's important to tie them together. "

"Pretty much the same importance in terms of trying to make certain connections between one aspect of information and the next aspect of information so that they understand, in some respects, the organization of what I'm talking about, the relevance of one part to another part."



The last behavior questioned, "acknowledging positive student responses," drew additional concurring responses as to its usage and importance in the traditional classroom. Four instructors noted its importance, even if the student is incorrect:

"I think you should do that. I try to at least be positive even if it's a bad response."

"Critical. Anytime a student says something, whether it's totally right or wrong is immaterial. You have to acknowledge receipt of it."

"I think that's important and I think I do a lot of that. 'Excellent question' or, 'Good question' or, 'I'm glad you brought that up.' I usually never say that they are wrong. Most of the time I'll say, 'That's good. What else?'"

"I often will say, 'I'm glad you brought that up' or, 'That's a good question.' So, I tend to be fairly rewarding of student responses and if a student brings up an incorrect answer, I usually will say, 'I appreciate your risking being wrong, but guess what? You're wrong! Does anybody else have an idea?'"

Three instructors mentioned positive reinforcement as their rationale for acknowledging good student responses:

"It's tough in a lecture format with 60 students because they intimidate each other. A lot of people don't like public speaking, so if somebody has the guts to speak out, I try to reward them as hard as I can."

"Absolutely. It's a good positive reinforcement."

". . . I believe it's very important. I believe they need positive feedback. If they can't ever tell you everything they want to hear, or don't feel like they tell you everything they want to hear, then they'd be frustrated and less likely to respond and I believe a response from them is essential."

Four instructors felt that "acknowledging positive student responses" carried equal importance in the distance classroom as in the traditional classroom:

"Absolutely. No difference there from any place else. If the student has a response, you have to acknowledge them."

"Also important. No difference at all."

"Again I think it's important. You've got to do that. I can't imagine anybody asking a student a question and then just blowing it off if they said it right. I would think the students would be very unlikely to respond in any other case."

Three instructors found it even more important in the distance setting:

"Yes, that's especially important on television because they have to overcome inhibitions."

"I think in the distance classroom, they really do like to hear you acknowledge their contributions and they really like it when you can identify their voice with their name. That really seems to mean a lot."

"Oh yes, definitely. Even more important perhaps."

Although one instructor considered acknowledging good student responses important, he found it more difficult in the distance environment:

"It is still important, but difficult particularly when several students come together and you can't tell who is answering. You don't know who these people are and you might get John and Jim together, so now you are confused as to who you are talking to . . . So you let the student finish and at the end say, 'Thank you very much' in a vague sort of way, without knowing who you're talking to."

Approachability. Instructors were asked to consider how approachable they were to either their traditional or distance students, meaning how comfortable did they believe students were in coming to them with questions or problems. Regarding their traditional students, seven instructors seemed relatively confident that they were considered approachable:

"Looking at the ones in my office, they're pretty comfortable."

"Actually, I think relatively high. I've had students just sit and talk about [things]. That happens quite often. I don't know if it's me or my field, though."

"Very comfortable, as far as I know."

"More than they ought to be. My office is right across from the big lecture classroom. . . and I find it hard if a student comes to the door asking for a couple of minutes, to say no."

While considering themselves approachable, five instructors believed it was timidity on the part of their students which kept them from speaking up:

"I had one person who did horribly and she said she's afraid of all teachers. I said, 'You can't be afraid of me, I don't bite,' and she came to me finally. But I think I'm approachable . . . "

". . . While I don't believe this true, students tend to feel that they would rather not come see me. But then again, once they break down and come sit down and we have a discussion during office hours, they always come back."

"I feel like I'm pretty approachable. I don't think they perceive any of us as being as approachable as we perceive ourselves to be. I think there's a reluctance among students, because of the position you are in, to come up and just feel like they can talk freely."

". . . At least from their behavior, a lot of people believe that I'm approachable. There are always going to be people who are afraid to talk to the professor, particularly if the class fairly large."

"Students are different. Some are shy and some don't care; some are very energetic, some are more mature than others. I would say if you took the average maturity level of students, I would say on a scale of 1-10, that I am an 8 in terms of approachability."

Looking at their approachability from the distance students' perspective, all of the instructors relied on either telephone, voice mail or electronic mail as their primary ways to reach students. Six instructors continued to consider themselves approachable, as least in equal parts to their traditional students:

"I think fairly approachable. I seem to get enough E-mails and voice mails, and comments and questions on the papers they send back and forth."

"Pretty approachable. I get calls from students who just want to talk. I get voice mail. I've had a fair amount this semester actually call me with questions and comments."

"Also the same . . . It's more fun to get them on the phone and talk to them . . . The bottom line is, sure it's very important and they're very easy to approach and vice versa I think."

"There, I am still approachable because they call me and I will call them back, sometimes from home . . . I think it's harder to be accessible to the distance students, even with voice mail. Now as E-mail becomes more and more used, I expect that to change, because while I'm working on the computer, if I see E-mail come up, I generally go to it right then and take care of it."

An instructor who also considered himself approachable recognized the difficulty of reaching the distance student, saying, "In terms of personality, I am an eight. In terms of practicality, I am a six, because the telephone lines and time schedules are between us and it's much more difficult for a distance student to get in touch with me." Another identified the use of electronic mail as being the sole medium of communication to be a difficulty for him; however, that is the medium he had chosen and, "There are some students who have gotten on the bandwagon very well."

Two instructors deemed themselves less approachable, attributing this to the "impersonality [sic] of the format":

"They can't just drop by the office, pass me in the hall, or stop me in the hall. They have to call or send me E-mail . . . [But] I think those who will use the technology will find me approachable."

"Probably less approachable. I mean, I've gotten some messages. Only a couple have called me, and I'm glad they did. It made a big difference to me."

Another instructor, new to distance teaching, was not sure of how approachable he appeared, but noted that, "Our goal is to be approachable and to be perceived as approachable, given the student reluctance. Another factor is that I will see the on-campus students more often out of class. The distance students don't have that opportunity . . ."

Delivery style. Six instructors described their delivery styles in the traditional classroom to be fairly organized:

"I think the overall class is fairly organized."

"Normally, I'm very organized. "

"When I walk into class, I walk in with a prepared lecture and a second prepared lecture that's totally different, as well as a hip pocket of questions they are going to ask and I already have the answers laid out . . . [Except for this semester with back-to-back classes], I feel pretty comfortable in class. I've done my homework. I think preparedness is the critical component there."

"The delivery is somewhat structured with interludes of informality, storytelling, practical applications, and in terms of it all fitting together, I think it's pretty good. I think it's pretty smooth."

Other instructors added a level of comfort as well:

" . . . By and large, I'm really comfortable, because I don't teach things I don't know about. I'm comfortable with my knowledge base . . . My style is didactic."

"I feel comfortable and organized ..."

"I think most of the time, it comes off fairly smoothly. Especially in the last year, I've become more comfortable doing it. I feel pretty comfortable with it most of the time."

"My general style is more of a casual style and I would hope more open. I feel pretty comfortable with it."

Three instructors mentioned specifically the need to come across as energetic:

"I try to do an enthusiastic presentation of the material and make it as relevant as possible."

"I think I'm fairly energetic."

"Based on feedback that I've gotten, they find my delivery style stimulating . . . I get that word a lot in my written feedback; that I'm very enthusiastic, that I like what I'm doing as opposed to just lecturing in a monotone or going through the motions."

In the distance setting, four instructors found relatively no difference in their delivery style; however, three noted the need to be more organized:

"A lot more organized for the most part because of the need to prepare overheads and get everything ready, which in many ways is more organized, but in other ways, it seems to be more restricted as well."

"A little more structured, again with interludes for informality, questioning, and stories involving real life situations."

"I think similar, but probably a little more structured. I think because of the sort of talking head issue and not being able to move around, I don't

come across quite as dynamic, but the feedback I have gotten is still that I'm enthusiastic."

Another instructor mentioned feeling restricted, saying, "It tends to more of a forced lecture because I can't generate interaction. I think that's maybe what frustrates me more than anything; that I can't move, make contact, can't do the things that allow me to know if I'm really reaching these students." One instructor feared her delivery style looked disorganized due to the cramped desk space provided for the instructors in front of the camera. She stated, ". . . I'm not less organized, but it comes across that way . . . [because] there's so many papers there, even if I know exactly what I want, there is so little space up there . . . If it were a normal desk, I would have two piles. There, I end up in a single pile because there's not enough room and that's why I can't find things sometimes, even though I'm totally organized . . ." A final instructor who had not been teaching in general for very long, seemed to feel he was growing with the situation:

"The environment is a little more intimidating, but I'm becoming more comfortable with it. I think it's really going to help when I can see the other students [when two-way video is introduced]."

After this series of questions, the instructors were given the results of the observations for both the traditional and the distance classroom settings. The results were presented as the average frequency count between the two observation periods for both settings. Instructors were then asked to express their opinions according to the following questions.

Instructor feedback. Due to the similarity between the first two questions involving instructors' opinions on how they "approach" and "conduct" their classes in each of the two settings, the first question was struck from the data. The next question asked the instructors if the results of the observations closely matched their opinions of how they conducted each of their classes, first in the traditional and then in the distance classroom. Seven of the instructors agreed that the frequency counts for the traditional class were fairly accurate, adding just a few disclaimers:

"[In terms of if the results match perceptions], I guess so. I'm not surprised by the things you said."

"It's pretty accurate."

"In general yes, with only one factor with the zeros, probably the [acknowledges students for good ideas]. That would be a bit surprising. It would have had to have been one of those days."

"I'd say in general it sounds about right."

"I would have guessed I would have asked for questions more than you observed in both classrooms, [but] I think the observations are pretty accurate. I don't have a problem with that."

One instructor found the results to be quite different from his own perceptions saying, "I'm surprised I don't show how things fit in together as much as I thought I did . . . [In terms of the traditional class], stressing key points once in a whole hour is surprising. [Only being observed for the first hour], I was probably going full speed until the after-burners went. The last two hours would probably be substantially



different." Comparing their perceptions of how they conducted their distance class with the observation results, some instructors found a commonality, albeit fewer:

"It's probably pretty much right."

"Yes. The points look pretty much the same. Unsolicited questions were very high and that tends to be that way simply because you don't have any other way. You have to encourage information. So that's expected."

"In general it sounds pretty close. There's some places where the technology does not limit me in doing what I want to do, so it should not differ from what happens in the normal classroom. It's just the general affect is vastly different. Some of the mechanics are the same, but just the chemistry and the general relationship that the students have with one another and with me is different."

"I would say so. Once again, some of those numbers would change depending on the topic . . . [Controlling the amount of discussion to insure material is covered] is what I've got to do in what amount of time and so sometimes, I know I'm pretty much on time with what I have to present and I can devote more time to discussion and personal examples."

One instructor was concerned that her heavy use of overheads did not allow her face to be seen would negatively impact her frequency counts. She explained, "[The results were] pretty close. I thought that when my head was on the [screen], I was smiling; it turned out less. Was it less because of taking time out for the overhead? [Yes]. So, you aren't taking into consideration the times you can't see me. Now that makes sense. So no, I'm not surprised by anything you've said . . ." Three instructors found the reality to be less than they expected, identifying specific behaviors which were in contrast:

"I wonder if as I learn their names and voices, I will call on them more by name. I don't know; that would be interesting to see. Looking at behaviors, I would have guessed I would have made eye contact more

than you observed . . . [Regarding asking for questions], I was thinking that's important, but I bet I don't do it a lot, so I guess that's probably the surprise to me . . . My intention is to link material more, so I probably don't link it as much as I think I do."

"Comparing the traditional class numbers to the ones for the distance class, I think some of the incidents are not as prominent in the distance class as I would like them to be . . . It's a little more difficult to do because of the distance, but I need to look at it and see if there's a way I can get some more of that in. I think it keeps their interest."

"I can't really say how closely the observations match to either the traditional or the distance classes. I would say that I am surprised at the explaining of things and fitting things together [being so low] for the distance. And summarizing? I thought I was doing a better job than that. Maybe that was that night. Showing humor [being low] flabbergasts me."

Another instructor considered the information from a learning perspective, noting, "I guess I was not aware of the volume of some of these occurrences. In general, yes, some of the numbers were higher than I expected. The lower numbers in some of the categories are wonderful opportunities for me to work on [them]. In a couple of categories, I think the numbers were a touch low. That's where I need to do some work. I got some feedback from students last year that they'd like more summarizing. So they're probably accurate. I can't argue."

Perceived effectiveness. When asked if the observation results compared with their perceived effectiveness in the traditional class, eight instructors felt as though the results were consistent with their perceptions:

"I look at that in terms of how the students are expressing themselves, in their tests and their papers, what I want them to learn. And they seem to be doing that. To get what I want them to get and to be able to use

it, which is the way their exams are structured. [They seem] to be getting what I want them to get."

"Without a norm to base that on, I would say okay."

"Probably accurate. I see my effectiveness as good, but it can be improved. And those two or three areas you pointed out are the basis for that improvement."

"Again, I don't think there was anything that you said that was surprising or seems very unrepresentative. So, I would say it compares reasonably well."

"Fair to middling' effective. . . . I think in both classrooms, I'm pretty effective. The evaluations I get from students in both classrooms are generally favorable."

One instructor noted his surprise at some of the results, but noted, "I still feel that I will carry the day, but I rely a lot on evaluations, and I'm waiting to see." Another instructor added simply, "There's always room for improvement."

In comparisons between perceived effectiveness and the actual observations of the distance classroom, six instructors continued to believe that the comparison was valid ("The same"; "Again, about the same"; "The same way"; "Same thing"); however, two thought they may be even more effective at a distance:

"Yes. I think even more so, in terms of the papers they're writing and the exams they've turned in."

"I'd say if anything, they're probably a little better."

#### Distance Site Supervisor Evaluations

Instructors' expectations as to the role of the site supervisor seemed to be met fairly well for six of the instructors interviewed:

"Quite well. If you consider there are eight or nine people overall, I'm not dissatisfied."

"The contact that I have had with them has been high level performance. The folks out there are supposed to corral the troops, receive the [materials], distribute it, corral it, send it back, and I think watch over them as they [the students] take the test, and coordinate if there are problems. I think they've had their hands full, but they've done a good job."

"They seem to do their jobs most of the time. I don't have a lot of direct contact with them, but papers seem to get there and get back, which is my basis for judging them and they seem to do fine."

"On average, 7.5 out of 10. Some are 10s."

"I would say generally pretty well. It does vary from site to site. The sense that I get is that the site supervisor and staff are really in synch with the students -- know them, know their families sometimes, and are very hands-on and personable and that comes through in their communications with me. So, it's somewhat variable, but by and large, I'm pleased."

"[One of the site supervisors] is really good in helping them understand that they are really several hundred miles away and the distance really does change things and [it is done] without blaming. That's really one of the things a site supervisor can do that's so important. I think that the role is so tremendously important and when it is a neat person who is really invested in it, it goes so well. . . ."

Two instructors expressed a lack of clarity regarding the site supervisors' roles, except to acknowledge that their responsibilities are many:

". . . I don't know exactly what their role is. But they have to support a lot of different classes at a lot of different times, not just this class, which makes things more confusing."

"Too many personalities and too many other problems to really make a judgment in that area. The site directors don't work for the instructors. They have many things pulling at them and their time. Whenever I

have asked for something, they have generally been very responsive, so I have no complaints."

The final question of the post-observation interview asked the instructors to suggest ways in which the site supervisors might support the distance faculty to improve the learning experience of the distance student. The overwhelming response was for site supervisors to provide more feedback to the instructors on everything from the students and their lives, problems, and triumphs, to any information on the actual technical aspects of transmitting the class including difficulties in either the reception of the broadcasts or transfer of documents between locations. Some of the more common response included:

"I think they should encourage students to tell them their feelings and convey those feelings anonymously. It would be nice that if they had problems, I knew it."

"Perhaps the greatest thing they can provide is feedback as to effectiveness or particular problems students may vocalize to them and not to the instructor."

"I would like for them to give me a feel for who these people are as students."

"I would like to know if people aren't coming to class or are struggling. If they could pick up on that, that would be helpful. [If they could listen to] what students are complaining about and if something can be done."

"I would think if there are problems with some mode of operation -- it's hard to tell, because people are reluctant to criticize, but if there was a gross shortcoming on the part of the instructor with the students . . . I would think it would be their place to pass that information on."

"An example would be to keep the teacher informed of irregularities, and they do a pretty good job of that. Another would be to pick up on

student problems and advise the faculty member of those problems so that the faculty member can initiate some opportunity for assistance."

"Mostly that's in terms of communicating any problems that students may have [and] any technology problems. Mostly just support by communication of any problems or difficulties as that are occurring."

Two instructors mentioned attempting to clarify some of the ambiguity of the problems and issues by bringing the parties together:

"We are all supposed to be working together toward a common goal which is effective delivery over this system. And somehow, we are structurally separated from one another to the point where it is difficult for me to understand what they are dealing with and conversely, I think it's difficult for them to understand what I'm dealing with. What has to happen is that we need to bring together the parties."

"I think they should have some input. They should add it. If they want to come down here and talk to us, that's fine. I think they should be involved. I think they should have as much input as they can as to what they see, because they're observers too."

### Summary of Post-observation Interviews

Post-observation interviews revealed that the majority of the instructors were consistent when previously identifying themselves as instructor-centered in their choice of format. Asked to consider specific teaching behaviors later identified as important in a distance learning setting, most instructors in both settings generally believed that "calling on students by name" was or could be worthwhile, as long as students were not made to feel uncomfortable. Virtually all of the instructors found that maintaining "eye contact with students" was beneficial in both settings, albeit with varying levels of intensity and success. "Moving around the [traditional] classroom" came naturally to

most of the instructors; however, in the distance setting, all felt restrained in their movements due to the stationary camera position. "Eliciting feedback from students" in either setting was deemed necessary in order to keep them involved in the material; however, in the distance setting again, technology sometimes made their efforts more difficult, particularly due to the lack of visual cues. Instructors in both settings used "smiling or laughing" in their classrooms, mostly as a means of easing tension and motivating their students to pay attention. "Segueing between topics" carried equal weight for the instructors in terms of importance in their classrooms. The final behavior highlighted during the post-observation interviews, "acknowledging positive student responses," again was considered vital to the learning experience in both settings, particularly as a means of positive reinforcement.

Just over half of the instructors identified themselves as equally approachable in either their traditional or distance classrooms. The most common lecture delivery style exhibited in the traditional classroom was one based on organization and preparedness, along with a healthy dose of energy. At a distance, the recipe was the same, although the need for organization in the distance classrooms appeared greater.

After disclosing the results of the observations to the instructors, most believed that their perceptions of how they conducted their traditional classes were fairly consistent with the reality of the observations and that the results compared favorably with their perceived effectiveness as well. However, when comparing perceptions with reality from the distance perspective, fewer than half found a common ground between

what they believed occurred in their distance classroom versus what was observed. Regardless of these results, most felt as effective or more effective in their distance classrooms.

Considering the role of the distance site supervisors, most instructors concluded that their expectations were being met, although some possessed a lack of clarity as to some of the supervisors more specific duties. According to the instructors, the most important service that these individuals could provide was feedback from the students regarding any problems or comments about the course which may be affecting their ability to learn.



## CHAPTER FIVE

### Summary, Recommendations, and Conclusion

#### Summary

Distance learning has been considered a viable educational alternative during times of budget crises and shrinking federal funding. Additionally, expanding the availability of higher education to populations with little to no access to it increases students' employment opportunities and their ability to compete for jobs. While the technology involved in providing distance learning has been studied heavily, as have the students who typically participate in this form of education, little has been reported on the instructors who teach using this medium. Specifically, research has been lacking in the qualitative study of instructors who teach either the same or similar courses in a traditional, on-campus classroom and in a distance learning classroom.

The purpose of this study was to determine how instructors view their effectiveness with, and their rationale for, employing selected teaching approaches and behaviors in each of the two classroom settings. Also, the expectations of these instructors regarding the role and the responsibilities of the distance site supervisors was solicited.

The means by which this purpose was accomplished was through the use of interviews and on-site classroom observations. Ten instructors (eight men, two women) were selected for this study based on two criteria. The first criterion involved teaching either the same course or courses within the same discipline in both the traditional and

the distance classroom. The second criterion was that the courses fall into a non-conflicting schedule to permit on-site observations at both the main campus of ODU and at the off-site locations. Interviews were conducted with the instructors both prior to and after the observations, asking questions as to their rationale for selecting particular teaching approaches, their perceived teaching effectiveness, and their opinions on the role of the site supervisors. Observations also were collected, focusing on the frequency with which each of the instructors exhibited 18 predetermined behaviors over two one-hour observation periods in each of the settings. These behaviors intentionally were expressed in a unidirectional fashion; that is, all of the behaviors were interpreted in the same positive direction. Therefore, the underlying construct of the observations was based on the assumption that the higher the frequency with which the behavior was exhibited, the better, despite the fact that there existed no benchmark number in the literature by which to make a comparison.

### Summary of Results

The research questions upon which this study was based included:

1. How effective do instructors, teaching courses in both a traditional classroom and a televised classroom setting, believe their teaching approaches to be?
2. What are the differences in rationale, teaching approach, and instructional training among instructors who teach:
  - a. the same course in a traditional classroom setting and in a televised setting; or

- b. a different course in the same discipline in a traditional classroom setting and in a televised setting?

3. According to distance learning faculty, what type of functions do distance site supervisors, acting as student services professionals, serve and what are their expectations of the role that distance site supervisors should play in enhancing their collaborative effort with faculty?

Same Course, Different Settings. In response to these research questions, those five instructors who taught courses in both a traditional classroom and a televised classroom setting, believed their teaching approach of instructor-centeredness to be virtually identical between the two environments. Regarding the type of teaching approach used by instructors who teach the same course in both classroom settings, all five of the instructors in question identified their approach or format as lecture- or instructor-centered; hence, no differences were observed.

Examining the differences in rationale for selecting the lecture approach, instructors who taught the same course in both classroom settings identified reasons associated with class size, increased participation with distance students, the amount of material needing to be covered, and a desire for a balance between instruction and interaction. Most, if not all, of the instructors' rationale for selecting certain teaching behaviors in these two settings was based on some level of conscious choice, years of practice, trial and error, and personality characteristics, regardless of the setting.

Formal instructional training was virtually nonexistent for each of the five instructors teaching the same course in both settings. The means by which they compensated, particularly in the traditional classroom included hard work, learning by doing, conferring with peers and colleagues, and picking up tips from instructors during their own education. All five recognized the seminar workshops provided by the Teletechnet staff as the chief training procedure for teaching distance courses. Quite often, such training was augmented by consulting with instructors who also had taught in this medium.

Different Courses, Different Settings. The teaching approaches or formats selected by instructors who taught different courses in the same discipline across the two settings included a slightly greater variety than that of the same-course instructors. An explanation for this finding lies in the variation in content for each course and hence, the need to employ different skills and methods to convey the message. Two of the five instructors did use the lecture-centered format in both settings, while a third attempted more interactive techniques in the distance setting. The remaining two employed either an interactive or group process format across both settings. The rationale given for selecting these formats ranged from the nature and amount of the material to be covered, or class size, to creating and enlivening a discovery process of the material, if only to keep their students' attention.

The selected rationale for employing certain teaching behaviors included looking to what had been used successfully in the past, trial and error, conscious

choice, training (specifically in the distance setting), and personality attributes. Other objectives or expectations about teaching identified by the instructors included a desire to pass on information that students would find worthwhile either personally or professionally, to assist in developing better citizens, and, from the distance perspective, to make every effort to include the distance students in the learning and discussions occurring in the on-site classroom.

Formal training for these instructors also was missing at any level of their education; however, the means of compensation for this deficiency included asking questions of colleagues, educational site visits, some teaching assistant work initiated by the instructor during his education, and on-the-job experience in the field. Again for these instructors, their basic means of training to teach in the distance setting were the Teletechnet seminars, in conjunction with working with distance teaching faculty already in the system.

Roles and Expectations of the Distance Site Supervisors. According to the distance learning faculty contacted for this research, the most commonly perceived functions of the distance site supervisors included coordinating the distribution and mailing of test papers and other class assignments, acting as a liaison between students and faculty, advocating on the students' behalf, overseeing certain student affairs responsibilities (i.e. recruiting and admissions, academic advising, financial aid, counseling), and overall, to be a prominent figure in distance learning function.

The overall expectations of these instructors for the supervisors was to continue in those administrative roles (i.e. paper management, liaison, and advocate), while at the same time providing that personal touch which remains just outside of the reach of these distance learning faculty.

### Commonalities Between the Study Results and the Literature

Issues of Format and the Literature. Results of this research substantiated conclusions drawn previously regarding the preponderance of an instructor- or lecture-centered format in the distance classroom. Instructors often mentioned that the rationale behind the use of a lecture-centered teaching format was the extensive amount of course material they are obligated to convey in a short amount of time. This way of thinking relates to previous findings in the literature where instructors noted both the distracting nature of the technology, as well as their tendency to present only material that translated well into the medium being used. Therefore, due to these variations, less information was being conveyed than in traditional classrooms (Gilcher & Johnstone, 1988). The current research supported this idea, in that attempts to incorporate more discussion often left less time to cover necessary material. In addition, technical problems often interfered with the dissemination of information, also reducing the amount of material which could be conveyed in one lecture period.

Because of the differences in the medium used for instruction, research suggests a very different approach be employed when teaching at a distance, such as the use of open-ended questioning (Ward, 1990; Wolcott, 1995), rather than simply choosing

traditional teaching approaches without modification (Dillon, Hengst, & Zoller, 1989; Gilcher & Johnstone, 1988). Instructors continued to believe that the methods used in one setting automatically should work in another; however, as the literature suggested, attempts to use approaches employed successfully in the traditional classroom rarely, if ever, translated effectively to the distance classroom (Haughey, 1983).

Because of the preference for lecturing, particularly in the distance classroom, it was suggested that, to enhance the lecture materials, music and visuals be used as a supplement (Bland, Morrison, & Ross, 1992; Lacina & Book, 1991). Current research confirmed the instructors' concerns with maintaining their students' attention, through their frequent use of a "variety of media" at a level only slightly below that which was used in their traditional classroom.

Issues of Behaviors and the Literature. Looking to specific data found in the study with regard to the instructors' behaviors, only two of the ten instructors exhibited all of the specified behaviors more often in their distance classrooms over an observation period of one hour than in their traditional classrooms. In terms of the frequencies of specific behaviors across all of the instructors, "stresses important points," "summarizes," and "encourages feedback" had higher frequencies of occurrence in the distance classroom over the traditional classroom. "Suggesting practical applications" and "acknowledging positive responses" were equally exhibited in both settings. Such results positively correspond to earlier research which noted that specific approaches such as the use of feedback, praise, and an articulate lesson plan

were found to be important to distance students (Pekich, 1979). Most of the instructors in the current research already strongly exhibited several other behaviors considered important in the distance setting, such as the use of students' names, positive facial expressions such as smiling, and personalizing the experience (e.g., personal anecdotes), although still at a level below that found in their traditional classrooms (Hackman & Walker, 1990, cited in ASCCC, 1993).

While slightly higher in the traditional classroom, "questioning individual students" was virtually comparable in the current research's distance classroom. Such behaviors were suggested as being particularly useful with students using a one-way audio system and who, therefore, experienced difficulty in creating a connection with their instructors (Ward, 1990).

Several incidents arose where instructors described themselves in one way while the observations bore out something entirely different. For example, when questioned about "eliciting feedback from students," one instructor stated with much confidence that he engaged in that behavior quite often. However, upon comparing this statement with the observation frequency for that behavior, that instructor elicited feedback only once during the two one-hour observation periods. Another instructor believed it was vital to "address students by name" in the distance classroom and believed he was doing that; however, on average, this instructor addressed a student by name far fewer times in his distance class than in his traditional class.



Results also showed that several of the instructors were able to correctly gauge their abilities and inabilities in the distance classroom. In attempting to maintain "eye contact with students," one instructor had been told during distance training that she was successful in exhibiting this behavior. Upon observing her in both classroom settings, results revealed that eye contact in her distance class was even higher than in her traditional class. Several instructors expressed fairly strong convictions against "addressing students by name" and accordingly, did not do so at any point during the observation periods.

While the literature reported a general lack of effort toward developing and improving the elements of class participation in either classroom setting (Haughey, 1983), instructors interviewed for this research immediately recognized the importance of integrating all of their students at every site. All of the instructors expressed some level of concern about involving distance students in discussions with the on-site class. According to previous research, such a response was one which would have received high marks from most distance students (Bland, Morrison, & Ross, 1992). Specifically, students noted that their comfort level was raised through increased class participation (Turner, 1989).

With regard to the differences between the distance classroom and the traditional classroom, instructors in the distance classroom often noted their discomfort at the lack of visual cues from their off-site students. Other faculty in the literature reported similar discomfort at the inability to rely on nonverbal cues from students

which indicated interest, boredom, anxiety, comprehension, and confusion (Haughey, 1983). Another difference involved the confining aspect of the distance classroom, forcing the instructors to remain virtually stationary due to the camera configuration. As the literature noted, distance instructors, specifically those using one-way video/two-way audio systems, lost their flexibility to move freely about the room, and initiate spontaneously discussions among all sites (Haughey, 1983).

### Conditional Issues of the Study

Upon collection of the observational data, several issues arose which required attention. For example, the inability to view the exact same lesson in both the traditional and the distance setting, due to logistical complications, meant that an instructor may have used different behaviors and conducted his or her class entirely differently depending on the lecture content of each class. Viewing different classes which are also at different course levels also may have effected the way in which the instructors conducted their classes.

The subjective nature of the behavioral definitions is another issue for consideration. The definitions identified by the researcher for each observable behavior may not have been consistent with those held by the instructors involved in the study. The very presence of the researcher in the classroom also may have effected the lecture or, as disclosed by one instructor, served as a distraction. Also with regard to the researcher, because observations were made for a single hour on only two occasions during the semester, not every behavior, nor every occurrence of a behavior,

exhibited by the instructors may have been presented or noted. Perhaps for future research, observations obtained over an entire semester should be considered.

Because all of the instructors had been teaching in a traditional classroom for a greater amount of time than in the distance classroom, the assumption was made prior to the observations that instructors would exhibit the specified behaviors more frequently in the traditional classroom than in the more unfamiliar distance classroom. Besides their lack of experience in teaching in a distance classroom, another assumption regarding teaching experience and frequency of behaviors focused on the level of comfort sensed by the instructors in each of the settings. Because of the lower level of comfort expressed in the distance setting, such uneasiness also may have contributed to the lower frequencies of certain behaviors in the distance classroom.

A final limitation involved the matter of attempting to summarize effectively the data collected for this research. In seeking to identify the major findings of this study in relation to its purpose, there emerged the likelihood that information, important and relevant to the research, may have been omitted in the interest of brevity and succinctness. Should additional edification be necessary, it is suggested that the reader refer to Chapter Four for further information.

### Recommendations

Results of the current study, as well as research from past literature, provided the platform from which to develop recommendations. The recommendations have

been considered in terms of issues involving professional practice and opportunities for future research.

### Recommendations for Practice

Several recommendations for practice arose from the results of this study. They are as follows:

1. Due to the passive nature of the one-way video, two-way audio televised learning system, several references in the literature have expressed the need for more varied teaching approaches in the distance classroom. If instruction was infused with a greater amount of variety in terms of interactive or experiential learning, as has been illuminated in the literature, it is assumed that, while initially students may not react favorably due to the simple act of implementing a change, favorable evaluations would result still, not to mention more and perhaps, better learning. While it may seem difficult initially, instructors who teach in a distance learning setting ought to explore other teaching approaches which would expand their repertoire and encourage more interaction among all students.

2. Complementing that first recommendation, institutions participating in distance training programs also would do well to investigate teaching interventions which would actively expose instructors to the need for varying their teaching formats.

3. A second training issue involved ensuring that the training personnel had some level of experience teaching in a distance learning environment. Drawing from personal experience lends credibility to the subject matter. In addition, hearing

instructors speak first-hand about their triumphs and failures may serve to calm any trepidations while at the same time, better sell the system.

4. It was noted by one instructor that the distance learning administrators were not soliciting enough information from the instructors when developing and making adjustments to the distance learning program under study. Concerted efforts to increase communication and evaluation structures between the faculty and the program administrators would serve to clarify potential problems and bring solutions more quickly.

5. Another instructor who attended the Teletechnet seminars and was far from satisfied, suggested bringing in a marketer. It was advised that a marketing professional would have the objectivity to look at the system from a marketing and a strategic planning perspective. Rather than having the system administrators attempt to correct flaws or make any changes alone, everyone involved in the system itself would be called upon to modify its design so that a comprehensive understanding of the system and the process would be achieved. The goal then, would be to create a better understanding among the parties involved -- the instructors, site supervisors, and administrators -- of each groups' role in the process of creating an effective distance learning environment.

6. According to the literature, distance students indicated the need to meet their distance instructor at least once prior to the completion of the course to establish some level of personal connection (Riddle, 1990). Ways to accommodate this need ought to

be considered. Random site visits by the instructors or student trips to the main campus could be incorporated into the program, to be undertaken at least once during a student's tenure at ODU. An orientation session for all distance students on the main campus could be introduced. While some students may balk at the travel and expense, this practice is one which has proven worthwhile and successful on virtually every residential campus as a means of acquainting the new student with the institution. A second orientation at each site would follow up this first effort to make the introduction to the college complete.

7. On a technical level, converting to a two-way audio, two-way video system would help to facilitate this entire learning and teaching venture; however, financial constraints may prohibit such a conversion at this time.

8. A concern expressed by a few of the instructors related to the three-hour length of the distance classes. Consideration should be given to the feasibility of restructuring the distribution of instructional time to allow for shorter classes over additional days. Such a structure would allow instructors the flexibility to cover the necessary material more comfortably, while at the same time, increasing students' concentration and attention. While this recommendation may be helpful to instructors, additional trips to campus by distance students may prove difficult. Yet, since it has been noted that students' attention spans do not last for three full hours, it may behoove them to put forth the extra effort to attend classes twice a week for an hour rather than once a week for three hours.

9. Student affairs professionals, acting in the role of distance education site supervisors need training to develop and/or improve their support capabilities to distance learning faculty. It has been suggested in the current research that site supervisors require more and regular contact with their instructors. While personal contact may be virtually impossible for distance learning systems serving sites at extreme distances, those systems which could conceivably support more opportunities for greater contact between instructors and site directors should make the effort. For this particular system, at least one face-to-face meeting with instructors would seem appropriate, whether convened at the main campus or through individual meetings at each of the sites. Although it may prove difficult logistically, it may be worthwhile for the instructors to make an effort to visit every site at some point during their tenure with the distance learning system in order to better grasp what goes on with the students and the site supervisors at these sites.

### Recommendations for Research

With these new and innovative advances, which are quickly influencing the way in which education is and will be taught, several recommendations for future research ought to be considered.

1. The nature of the teaching profession will need to change to keep up with the rise of technology. Therefore, the need arises for the current and future professoriate to become more sensitive to these changes and more aware of the effect of these changes on the student population. Further research into the training

necessary to invoke changes, not only in the way these instructors conduct their classes, but also in their perceptions of effectiveness, would be worthwhile, so that such perceptions are more consistent with their behaviors in the distance classroom. Left to their own devices, instructors who move into the televised medium for learning will continue to employ the same methods and behaviors that seemed to work well in their traditional classrooms. The current research has shown that, while most of the behaviors were exhibited with lesser frequency in the distance classroom, most of the instructors felt equally effective in that environment as they did in their traditional classroom, which may or may not be the case.

2. Related to an understanding of the need to vary one's teaching approach is the need to better understand the relationship between effective teaching approaches and effective student learning. Further research into distance instructors' awareness of student learning styles would serve to create more congruence between the instructor's and the students' objectives. It is suggested that more congruence leads to an improved learning experience. Greater emphasis needs to be placed on creating learning environments rather than teaching environments.

3. Having determined teaching effectiveness from the instructors' points of view, a next logical research step would be compare these views with those of the students who are taught by these instructors. An awareness on the part of the instructors is a worthwhile initial step; however, to complete the picture, input from the students would be necessary.



4. In concert with the efforts of those who teach should be those who take on the student affairs role of distance site supervisors. Additional research into the site supervisors' roles, as well as their perceptions and expectations of the roles of the faculty would facilitate a better working relationship. More and better collaboration and cooperation in the future will ensure a fruitful and rewarding experience not only for the students, on whose behalf they are acting, but also for themselves as colleagues in this new paradigm of academia.

5. Replication of the study would provide the opportunity to look at many of the same issues identified here, yet perhaps with the use of different methods. For example, a second study two to three years after this research may indicate if faculty perceptions have changed or teaching approaches have been modified to include more variety. Such research would identify what impact, if any, participation in the current had on teaching behaviors and consequently, the distance learning environment.

6. Other issues, deemed collateral to the current study, ought to be examined through future research. For example, having begun the study of distance learning faculty and their classroom behaviors, another reasonable step would be to examine their motivations for participating in a distance program, and the impact of participation on compensation, evaluation, and promotion and tenure. Understanding the means by which institutions entice faculty to work in this new environment may shed additional light on the current research results regarding faculty perceptions.

7. A final area for future research may be to examine the new faculty entering the teaching profession, particularly those looking into distance education, to determine what their philosophy is regarding teaching and learning. By perpetuating the old-school mentality of teaching as a tool simply to cover material, the teaching profession would be doing a disservice to their students. Attempts are necessary to change or adjust the philosophy of new professionals from that of simply teaching to that of learning.

### Conclusion

Consistent federal and state funding for higher education will continue to be a question mark for many institutions in the years to come. Coupled with increasing demands for greater productivity from dollars invested in higher education, and the growing demand for alternative "customer-oriented" services, receptivity to varying and perhaps radical educational alternatives will continue to be considered. One such innovative approach is distance learning where it is anticipated that, by the end of this century, 50% of all educational instruction in the United States will involve "mediated" formats (Pelton, 1990). Distance learning has the potential of revolutionizing the future of education in its entirety (Bruder, 1989). Programs and delivery systems similar to the Old Dominion University efforts studied in this research can be expected to increase in the years ahead. This growth demands that all aspects of distance learning be investigated as thoroughly as possible, not only from the perspective of the students and the technology, but also from the faculty and the site operations perspectives as

well. If institutional efforts to ensure quality and student acceptance of this delivery system is to be achieved, research creating such "baseline" information is critical.

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Appendix A

Sample Letter of Permission - Teletechnet Director

August 1, 1995

Mary Smith, Ph.D.  
Director, Teletechnet  
Distance Learning/Extended Education  
Old Dominion University  
Education Building, Room 145  
Norfolk, Virginia 23529

Dear Dr. Smith:

I appreciate the time you took with me to discuss my thesis research on distance education instructors. Your insight and suggestions were most helpful.

Per our conversation, please allow this letter to serve as my written request to conduct research with the Old Dominion University instructors affiliated with the Teletechnet system. As you suggested, I will be in contact, via phone and mail, with ten instructors I have identified as meeting the selection criteria for my research. I have enclosed a copy of that written correspondence for your information. Those instructors and their courses are as follows:

Name	Department	Class to be observed (10)
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As we discussed, my research will take the form of instructor observations in both the traditional on-campus classroom and in the distance learning classroom. These observations will be as unobtrusive as possible so as not to disrupt the class session. Interviews will be conducted following the observations, primarily by phone. Confidentiality will be maintained throughout this research and results will be reported in aggregate form, thus protecting the identities of the individual respondents.

Should you have any additional comments or concerns you would like to discuss, please feel free to contact me at (504) 555-1234. Again, thank you for your time and consideration and I look forward to working with you.

Sincerely,

Elizabeth G. Nolte

Enclosure

## Appendix B

### Sample Letter of Permission - Instructors

September 1, 1995

John Smith, Ph.D.  
Old Dominion University  
Hughes Hall  
Norfolk, Virginia 23529

Dear Dr. Smith:

I appreciate the time you took to speak with me recently, as well as your willingness to participate in my thesis research on teaching and distance education.

As discussed in our telephone conversation, the purpose of my study is to review issues related to instruction in a distance learning setting versus a traditional classroom setting. My research will take the form of both interviews and observations of instructors in both the traditional classroom on ODU's campus and in the distance learning classroom. Due to the distance involved, the interviews will be conducted by phone with each instructor on an individual basis to gain insight on personal perceptions and rationales. The observations will be as unobtrusive as possible so as not to disrupt the class session. Two observations in each of the classroom settings will be necessary to gain sufficient information. With your permission, a tape recorder will be used to supplement my written observations. Following the observations, brief interviews will be requested to gain additional insights into my research. Again, due to the travel distance involved, these interviews will be conducted primarily by phone.

The course(s) selected for observation are CET 100 (MW/9:00-10:15am) and CET 225 (TR/11:00-12:15pm). If there has been a scheduling change, please contact me at your earliest convenience.

Your confidentiality will be maintained throughout this research. Results will be reported in aggregate form, thus protecting the identities of all of the individuals participating in the research. Should you have any additional comments or concerns you would like to discuss, please feel free to contact me at (504) 555-1234, or by Email at enolte@xxx.xxx. Again, thank you for your time and your participation.

Sincerely,

Elizabeth G. Nolte

cc: Dr. Mary Smith, Teletechnet Director

## Appendix C

### Pre-Study Interview Protocol

Instructions: I am going to ask you a series of questions about teaching in both a traditional classroom setting and in a distance learning setting. We'll be looking at each setting in terms of the teaching format, or the structure of the class such as lecture, interaction, discussion groups, group projects and so on. We'll also be looking at teaching behaviors, or the techniques used by an instructor such as being animated, using humor, moving around the room, etc. I will also be looking at the type of teacher preparation you received in each of these settings. Lastly, we will discuss the role of the distant site supervisor. I would like for you to respond as fully as possible. These questions are structured rather broadly so that you can comment freely and I invite you to do just that. If we hit on a topic that is of real interest to you feel free to discuss it. If a question does not come across clearly to you, please don't hesitate to ask me to repeat it or clarify. This interview will be taped for use as a backup in case I miss something in my notetaking. The tape will be erased immediately following my data gathering and will be used for no other purposes.

*We will first discuss traditional classroom issues.*

#### Traditional Classroom Teaching Issues

*In terms of format:*

- 1) What teaching formats do you typically employ in a traditional classroom setting, meaning how do you structure your class or lesson? (look for lecture, directed questioning, demonstration, discussion, discussion groups, group projects, peer teaching, programmed instruction, laboratory methods, role play, simulation/games)
  
- 2) What was your rationale for choosing the format that you use most often?
  
- 3) How effective do you believe your format(s) to be?

*In terms of teaching behaviors:*

- 1) What typical teaching behaviors or techniques do you use most often in a traditional class setting? (such as humor, different forms of media, participation techniques, etc.)
  
- 2) How would you describe the way in which you took these teaching behaviors as your own (i.e. was it a conscience choice, years of practice?)
  
- 3) How effective do you believe your teaching behaviors to be?
  
- 4) How frequently do you meet with students outside of class?

*In terms of teacher preparation:*

- 1) What were your expectations of teaching in a traditional classroom? By that I mean, what were your objectives going into teaching in a traditional classroom?
  
- 2) Did you receive any training to teach at the college level? (If so, what kind? If not, how have you compensated for that lack of training?)
  
- 3) Suppose I could listen in on the thought processes you used to plan your traditional course. What would I hear?

- 4) On a scale from one to five, rate your comfort level when teaching a traditional class, with one being "very uncomfortable" and five being "very comfortable."

*We will now discuss issues involving distance teaching.*

### Distance Teaching Issues

*Again, in terms of format:*

- 1) What teaching formats do you typically employ when teaching a distance course, meaning how do you structure your class or lesson? (look for lecture, directed questioning, demonstration, discussion, discussion groups, group projects, peer teaching, programmed instruction, laboratory methods, role play, simulation/games)
  
- 2) What was your rationale for choosing the format that you use most often?
  
- 3) How effective do you believe your format(s) to be?

*In terms of teaching behavior while teaching at a distance:*

- 1) What typical teaching behaviors or techniques do you use most often in a distance class setting? (such as humor, different forms of media, participation techniques, etc.)
  
- 2) How would you describe the way in which you took these teaching behaviors as your own (i.e. was it a conscience choice, years of practice?)

Page Four

3) How effective do you believe your teaching behaviors to be?

4) How frequently do you meet with students outside of class?

Regarding teaching preparation:

1) What were your expectations of teaching in the televised delivery medium? By that I mean, what were your objectives going into teaching in a distance classroom?

2) Did you receive any type of training to teach in a distance education setting? (If so, what kind? If not, how have you compensated for that lack of training?)

3) Suppose I could listen in on the thought processes you used to plan your distance course. What would I hear?

4) On a scale from one to five, rate your comfort level when teaching a distance class, with one being "very uncomfortable" and five being "very comfortable."

5) What are the differences between teaching in a traditional setting and teaching a distance class?



Page Five

6) What are the similarities?

In terms of the distance site supervisors:

1) What type of functions do they serve?

2) What are your expectations of the role of the site supervisor at a distance learning site?

Demographic/Background Information

1) Gender: M F      2) Number of years teaching: Traditional Classroom: \_\_\_\_ Distance Classroom: \_\_\_\_

*Follow-up interviews will be conducted after the results of the observations have been determined.*

Appendix D  
 Instructor Observation Sheet  
 Frequency Counts - Traditional/Distance

Instructor # \_\_\_\_\_  
 Observation # \_\_\_\_\_  
 Date \_\_\_\_\_

	Comments	<u>Total</u>
<b>NONVERBAL BEHAVIOR</b>		
Uses eye contact with students		_____
Smiles, laughs, nods/Shows approval		_____
Steps away from podium/lecture notes		_____
<b>EXPLANATION</b>		
Uses examples		_____
Repeats concepts/ideas as necessary		_____
Stresses important points		_____
<b>ORGANIZATION</b>		
Explains how each topic fits in		_____
Summarizes lecture topic periodically		_____
<b>INTEREST</b>		
Uses humor		_____
Uses variety of media		_____
Contributes personal anecdotes		_____
Suggests practical applications		_____
<b>RAPPORT</b>		
Addresses students by name		_____
Offers help with problems/Answers questions		_____
<b>PARTICIPATION</b>		
Encourages feedback (i.e. asks for questions/comments)		_____
Asks questions of individual students		_____
Asks questions of class as whole		_____
Acknowledges students for good ideas		_____

**TEACHING STRATEGIES OBSERVED:** Instructor-centered: \_\_\_\_\_ Interactive: \_\_\_\_\_ Experiential: \_\_\_\_\_ Individualized: \_\_\_\_\_

\* Behaviors of particular importance in a distance learning setting (Dillon & Walsh, 1992, 1993; Hackman & Walker, 1990; Haughey, 1983; Metcalf & Cruikshank, 1991; Pekich, 1979; Ward, 1990).

Adapted from Murray's (1983) *Teacher Behaviors Inventory*.

## Appendix E

### Post-observation Interview Protocol

Instructions: I want to thank you again for allowing me to observe you in your classrooms. Before we go over my observations, I would like to ask you some questions which I have broken into categories similar to those asked before the observations. Again, please feel free to respond as you like. I will be taping this interview as well to provide me with a backup should I miss something in my notetaking. The tape will be erased immediately following my data gathering and will not be used for any other purpose.

First, in terms of teaching formats:

(Discuss similarities and/or differences between formats identified prior to the observations and those actually observed)

In terms of teaching behaviors:

1) What is your opinion on the use of each of the following in a traditional classroom:

- a) calling on students by name?
- b) eye contact with students?
- c) moving around the classroom?
- d) eliciting feedback from students?
- e) smiling or laughing?
- f) seguing between topics?
- g) acknowledging positive student responses?

2) What is your opinion on the use of each of the following in a distance classroom:

- a) calling on students by name?
- b) eye contact with students?
- c) moving around the classroom?
- d) eliciting feedback from students?
- e) smiling or laughing?
- f) seguing between topics?

Page Two

- g) acknowledging positive student responses?
- 2) How approachable to the traditional students do you consider yourself?
- 3) How approachable to the distance students do you consider yourself?
- 4) How would you describe your delivery style in the traditional classroom?
- 5) How would you describe your delivery style in the distance classroom?

After disclosing the results of the observations to the instructor:

- 1) Taking into consideration the results of the observations themselves, do the results closely match your intentions or opinion of how you approach your traditional class?
- 2) Taking into consideration the results of the observations themselves, do the results closely match your intentions or opinion of how you approach your distance class?
- 3) Do the results of the observations closely match your opinion of how you conduct your traditional class? Why? Why not?
- 4) Do the results of the observations closely match your opinion of how you conduct your distance class? Why? Why not?
- 5) How do the results of the observations compare with your perceived effectiveness in the traditional class?
- 6) How do the results of the observations compare with your perceived effectiveness in the distance class?

With regard to the distance site supervisors:

- 1) How well are your expectations as to the role of the site supervisors being met?
- 2) Should site supervisors provide support to the distance faculty to improve the learning experience of the distance student? What forms should that support take?

Some questions amended from Wolcott, 1990, 1995.

# Appendix F

## Observation Schedule

### ODU On-Campus Classes<sup>1</sup>:

Monday	Tuesday	Wednesday	Thursday	Friday
NURS 300 0800-1100 <sup>2</sup>	FIN 300 0800-0915	ECON 300 1000-1050	FIN 300 0800-0915	ECON 300 1000-1050
MGMT 300 1100-1150	CRJS 400 0930-1045	MGMT 300 1100-1150	CRJS 400 0930-1045	
PSYC 400 1200-1250	MGMT 300 1100-1215	PSYC 400 1200-1250	MGMT 300 1100-1215	
GEOL 400 1300-1350	CS 300 1330-1445	GEOL 400 1300-1350	CS 300 1330-1445	
CET 400 1500-1615		CET 400 1500-1615		

### NRCC Distance Classes:

Monday	Tuesday	Wednesday	Thursday	Friday
ECON 300 1300-1545	GEOL 300 1330-1445	NURS 300 0800-1045	GEOL 300 1330-1445	PSYC 400 1615-1900
CRJS 300 1615-1900	CS 300 1500-1605	MGMT 300 1300-1545	CS 300 1500-1605	
	MGMT 300 1915-2200	FIN 300 1615-1900		
		CET 300 1915-2200		

### Legend

CET = Civil Engineering Technology; CS = Computer Science; COUN = Counseling; ECON = Economics; FIN = Finance; GEOL = Geological Sciences; MGMT = Management; NURS = Nursing; and PSYC = Psychology.

NRCC = New River Community College  
 ODU = Old Dominion University

<sup>1</sup> Courses are listed according to level (i.e. MGMT 300 = 300-level management course). Course numbers are not provided.

<sup>2</sup> Observations to occur 10/23/95 and 11/6/95.

Appendix G

Table of Observed Instructors, Classes<sup>1</sup>, and Times

Instructor	Course Level	Course Area	Day/Time	Teletechnet Course	Course Description	Site Location	Day/Time
1	400-level	Civil Engineering Technology	MW/1500-1615	300-level	Civil Engineering Technology	NRCC	W/1915-2200
2	400-level	Criminal Justice	TR/0930-1045	300-level	Criminal Justice	NRCC	M/1615-1900
3	300-level	Computer Science	TR/1330-1445	300-level (SAME)	Computer Science (SAME)	NRCC	TR/1500-1605
4	300-level	Economics	MWF/1000-1050	300-level (SAME)	Economics (SAME)	NRCC	M/1300-1545
5	300-level	Finance	TR/0800-0915	300-level (SAME)	Finance (SAME)	NRCC	W/1615-1900
6	400-level	Geological Sciences	MW/1300-1350	300-level	Geological Sciences	NRCC	TR/1330-1445
7	300-level	Management	TR/1100-1215	300-level	Management	NRCC	T/1915-2200
8	300-level	Management	MWF/1100-1150	300-level (SAME)	Management (SAME)	NRCC	W/1300-1545
9	300-level	Nursing	M/0800-1100	300-level	Nursing	NRCC	W/0800-1045
10	400-level	Psychology	MWF/1200-1250	400-level (SAME)	Psychology (SAME)	NRCC	F/1615-1900

Legend

CET = Civil Engineering Technology; CRJS = Criminal Justice; CS = Computer Science; ECON = Economics; FIN = Finance; GEOL = Geological Sciences; MGMT = Management; NURS = Nursing; and PSYC = Psychology.

NRCC = New River Community College  
 ODU = Old Dominion University

M = Monday; T = Tuesday; W = Wednesday; R = Thursday; F = Friday; S = Saturday.

<sup>1</sup> Actual course numbers have not been provided.

# Appendix H

Sample Instructor Observation Summary Table  
Frequency Count Summary - Traditional/Distance

Instructor #	1	2	3	4	5	6	7	8	9	10	AVG
<b>NONVERBAL BEHAVIOR</b>											
* Uses eye contact with students											
* Smile, laughs, nods/ Shows approval											
* Steps away from podium/notes											
<b>EXPLANATION</b>											
Uses examples											
Repeats concepts/ ideas as necessary											
Stresses important points											
<b>ORGANIZATION</b>											
* Explains how each topic fits in											
Summarizes lecture topic periodically											
<b>INTEREST</b>											
Uses humor											
Uses variety of media											
Contributes personal anecdotes											
* Suggests practical applications											
<b>RAPPORT</b>											
* Addresses students by name											
Offers help with problems/questions											
<b>PARTICIPATION</b>											
* Encourages feedback i.e. asks for question/comment											
Asks questions of individual students											
Asks questions of class as whole											
* Acknowledges students for good ideas											

TOTALS

# Appendix I

## Definitions of Behaviors

### NONVERBAL BEHAVIOR

Uses eye contact with students  
**Looks into camera (@ distance); holds eyes with me or students for approximately one second**

Smiles, laughs, nods/Shows approval

Steps away from podium/lecture notes  
**Moves about the room**

### EXPLANATION

Uses examples  
**For concepts - i.e. "An example of a . . . would be . . ." (sometimes overlaps with "practical applications")**

Repeats concepts/ideas as necessary  
**Literally repeats terms or definitions for notetaking; repeats students' comments verbatim**

Stresses important points  
**Ex: "This is important. . ."; "You'll want to note this . . ."**

### ORGANIZATION

Explains how each topic fits in  
**Ex: "Now that we've seen concept A & B, you'll see that concept C . . ."; tie with past lectures**

Summarizes lecture topic periodically  
**Ex: "So far today we've discussed concepts A, B, C & D. Next we'll discuss concept E."**

### INTEREST

Uses humor

Uses variety of media  
**Chalkboard, overheads, videos, computer graphics, etc. (includes both types media and number of times used)**

Contributes personal anecdotes  
**Ex: "When I was working at XYZ Company, I had this happen . . ."**

Suggests practical applications  
**Ex: "What you'll hear is . . ."; "So with this concept you would be able to . . ." (sometimes overlaps with "Uses examples")**

### RAPPORT

Addresses students by name  
**Ex: "Joe, can you tell me . . ."; "As Joe mentioned, . . ."**

Offers help with problems/Answers questions

### PARTICIPATION

Encourages feedback (i.e. asks for questions/comments)  
**Ex: "Are there any questions?"; "Does everyone understand?"**

Asks questions of individual students  
**Ex: "What does this mean?" (may include name, use of eye contact with one student)**

Asks questions of class as whole  
**Ex: "Who can tell me . . .", etc.**

Acknowledges students for good ideas  
**Ex: "That's a good point"; "Excellent!"**

Lecture w/ questions    Discussion    Labs, etc.    Solo projects

**TEACHING STRATEGIES OBSERVED:** Instructor-centered:   ↑      Interactive:   ↑      Experiential:   ↑      Individualized:   ↑



## VITA

### **ELIZABETH G. NOLTE**

#### **EDUCATION**

**Master of Arts, Education, Student Personnel Services**, May 1996

Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA

**Thesis:** Teaching approaches employed by postsecondary education instructors teaching in both the traditional classroom setting and the distance education setting

**Bachelor of Arts, Speech Communication**, May 1987

George Mason University, Fairfax, VA

#### **RELATED CAMPUS EMPLOYMENT**

Advisor, Program Advising & Student Entertainment

*August 1995 - Present*

*Virginia Tech*

*Blacksburg, VA*

- Advised three student committees for both the Virginia Tech Union and the Black Student Alliance, the university's two largest student programming organizations, maintaining a combined budget in excess of \$100,000
- Negotiated performance contracts worth several thousand dollars with national talent agencies
- Coordinated day-of-show activities with student committee chairs
- Provided program advising on a walk-in basis for all student organizations on campus
- Participated in motivational workshops for students with other program advisors
- Organized musical entertainment for the Brush Mountain Arts and Crafts Fair, Blacksburg, VA

Academic Counselor, Counseling Center

*Summer 1995*

*Northern Virginia Community College*

*Alexandria, VA*

- Advised students of all majors on admissions policies, course selection, and career options
- Collaborated with colleagues on the revision of an orientation course for new students

Academic Advisor, Liberal Arts and Sciences Department

*January 1995 - May 1995*

*Virginia Tech*

*Blacksburg, VA*

- Assisted students with course selection, degree requirements, and career choices
- Facilitated a student workshop on the internship process and employment opportunities
- Constructed, conducted, and fully analyzed a survey of graduates regarding their educational experience

Project Manager, Employee Career Development Lab

*August 1994 - May 1995*

*Virginia Tech*

*Blacksburg, VA*

- Provided assistance to university employees and students regarding career search, education and personal development
- Maintained library of current career reference materials
- Participated in a cooperative education presentation, "A Dialogue on Adults in Transition"

#### **MEMBERSHIPS, HONORS, AND CO-CURRICULAR ACTIVITIES**

- Member - ACPA, Association for Student Development (ASD), NACA, NASPA, VACPA, VASPA
- Member - University Commission on Graduate Studies and Policies; Graduate Student Relations Committee (1995-1996)
- Chair - ASD Professional Relations Committee (1995-1996)
- Conference attendee - VASPA/VACUHO (12/94, 12/95); Graduate Student & Faculty Forum (2/95); ACPA (3/95); ACUI/NACA Graduate Day (1/96)
- Member - Phi Kappa Phi National Honor Society
- Participant - Orientation Leader Selection Workshop (10/95); Provost's Academic Core Values Project (9/95)
- Interviewer - Career Services' Mock Interview Program (1994-1995)

## ADDITIONAL PROFESSIONAL EXPERIENCE

### Office Administrator

October 1993 - August 1994

### **Faison Associates**

Washington, D.C.

- Produced commercial real estate leasing proposals, financial analyses, income and space availability reports
- Provided editing and proofreading skills to brokers during lease preparation and negotiation
- Performed receptionist and front office duties
- Acted as system programmer for computerized multi-line telephone system
- Maintained office supply inventory for 15-person staff
- Assisted in training and familiarizing new employees with the company procedures

### Executive Assistant

May 1990 - October 1993

### **The Hunter Companies, Inc.**

Washington, D.C.

- Produced commercial real estate leasing proposals, financial analyses, income and space availability reports
- Provided editing and proofreading skills to brokers during lease preparation and negotiation
- Created correspondence and other written documents for principals of firm
- Developed computer and hard file organizational system for entire branch
- Organized various broker functions including a \$20,000 broker reception for the introduction of a new office complex
- Supervised one administrative assistant

### Market Systems Manager

April 1988 - May 1990

### **Harlan Brown & Company**

McLean, VA

- Maintained weekly goal of executive level contacts to market customized studies
- Validated executive information within Fortune 500/1000 corporations for direct mail marketing programs
- Developed database and file system for "BRIC Study" reference usage
- Trained and supervised marketing assistants for direct mail marketing campaigns
- Coordinated university recruiting programs for staff expansion
- Invoiced and collected revenues of \$500,000 for accounts receivables

### Customer Service Representative

May 1987 - March 1988

### **Talent Tree Temporaries**

Washington, D.C.

- Interviewed and placed temporary personnel
- Monitored employee work performance on a continual basis
- Maintained open client communication
- Improved time management and organizational skills in fast-paced business environment

## PROFESSIONAL COMPETENCIES

- Computer proficiency: Macintosh; IBM compatibles
- Software knowledge: Excel; MicrosoftWord 6.0; WordPerfect 5.1, 6.1

