STUDENTS' PERCEPTIONS OF VIDEO TAPE COLLEGE COURSES:
IMPLICATIONS FOR THE STUDY OF SOCIAL PRESENCE AND NEW
COMMUNICATION TECHNOLOGIES

by

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ABSTRACT

Previous research about "social presence," the "perceived personalness" of a communication channel or experience, has been conducted primarily in business or organizational settings. This study was designed to investigate the effects of social presence on student perceptions of liking, benefits (incentives), and convenience in videotaped distance learning situations. The results support the prediction that there is an inverse relationship between student perceptions of convenience and "personal presence" when participating in a videotaped distance learning situation. While social presence had only a moderate impact on student perceptions of the incentives that are received by participating in videotaped distance learning courses, it had a stronger impact on how well students liked and/or enjoyed videotaped distance learning.
STUDENTS' PERCEPTIONS OF VIDEOTAPE COLLEGE COURSES: IMPLICATIONS FOR THE STUDY OF SOCIAL PRESENCE AND NEW COMMUNICATION TECHNOLOGIES IN DISTANCE EDUCATION

Advances in new communication technologies have provided new options for distance education students and alleviated constraints that previously seemed unavoidable. Several of the new media, for example, are perceived to possess qualities that approximate face-to-face, "interpersonal-like transactions between individuals or groups of communicators" (Williams, Phillips, & Lum, 1985, p.250). These perceived attributes or qualities are frequently referred to as "social presence."

These inherent qualities of the new technologies are important in the study of human communication behavior, because they are expected to make interpersonal communication more comfortable and satisfying to participants. However, the exact degree to which mediated communication can approximate face-to-face human interaction is an important question. Equally important is the impact social presence has on those students who would use these new technologies for educational purposes.

Distance education is an attractive alternative to student populations who are constrained by time, location, work and/or family commitments. Technological delivery of education under these circumstances "widens access to
education" by providing convenience and flexibility (Jevons, 1987, p.15). In most instances, however, students and teachers are physically separated and interpersonal interaction between them is often limited.

Educational literature indicates that personal contact with other students and faculty is an important aspect of learning. For example, we may intuitively expect that students learn more from face-to-face teaching (Kelly & Gorham, 1988), and that the absence of face-to-face contact would have a less than positive impact on the distance learner.

No doubt, the face-to-face method of instruction is essential "in achieving some aspects of academic socialization" (Smith, 1987, p.33). Nevertheless, the empirical evidence to be reviewed shortly will show that academic performance does not differ significantly when instruction is delivered via technological devices. Performance levels do not differ even when levels of interpersonal communication are restricted.

These outcomes, however, do not guarantee that distance education is a suitable or preferred mode of instruction for all students. Different student populations have different needs and/or preferences for learning methods; thus, the technological impacts may vary accordingly. Whether the fulfillment of these needs and preferences is associated with the degree of social presence conveyed by a communication technology is the primary question of this
study. This study will also examine the degree to which social presence influences distance learners.

In an attempt to answer this question, the first chapter will give a background of the new communication technologies, and will discuss the impact that these technologies have on the social perceptions of those who would use these media for educational purposes.
Chapter 1
PROBLEM AND SIGNIFICANCE

Communication Technologies and Social Perceptions

New Communication Technology

New technologies have changed the processes by which communication can occur (Rice & Associates, 1984). When human interaction (e.g., student-teacher dialogue) is mediated by technological devices such as computers, videodiscs, satellite transmissions, and other innovations, the communication process and our perception of this process is altered (Rogers, 1986).

Human communication processes have changed primarily because many of the new communication technologies possess characteristics of both interpersonal (face-to-face) and mass (mediated) communication channels (Rogers, 1986; Williams, 1987). In many instances, these technologies allow us to maintain levels of human socialization (Gumpert & Cathcart, 1986), because they can reach mass audiences and still approximate face-to-face, "interpersonal-like" exchanges between communicators (Williams, Phillips, & Lum, 1985, p.250).

Although some research regards face-to-face
communication as a standard against which mediated communication should be compared (Williams, 1977), "new media have capabilities not found in face-to-face communication" (Culnan & Markus, 1987, p. 431). According to Rogers (1986) and Williams (1987), interactivity, demassification, and asynchronicity are three general characteristics that describe how the new media have changed human communication process.

The interactive qualities of new technologies resemble human face-to-face conversation because they allow immediate, two-way, co-active communication exchanges between participants. Public videotext or two-way cable systems, for example, allow cable users to exchange data across video display units (Williams, 1987).

Technology capabilities for interactivity, in turn, increase the potential for "demassified" or personalized message exchanges. Special computing or word processing functions, for instance, can make mass produced documents appear as if they were originally addressed to each member of a particularly large audience.

Unlike interactive qualities of new media, the characteristic of asynchronicity permits more flexible interaction and feedback (i.e., when messages can be sent and received). Time-shifting capabilities of new media (e.g., video cassette records and computer-based communication) shift control from the source to the receiver's communication systems. For example, electronic
message systems allow users to return and/or leave messages regardless of another individual's availability (Williams, Rice & Rogers, 1988).

In sum, interactivity, demassification, and asynchronicity, are capabilities of new technologies that increase users' participation in communication processes. These capabilities also influence our perceptions of and reactions to mediated human interaction (Gumpert & Cathcart, 1986).

Although many of the new communication media approximate face-to-face interaction, some media are accused of "depersonalizing" interactions between communicators because they filter out important communication cues (Williams, 1987). In some cases, for example, satellite transmissions restrict the visual and/or audio cues that may be exchanged during television instruction courses. As a result, students at remote satellite locations may not be able to see and/or hear students in classrooms on-campus or at other sites (Barker & Platten, 1988).

In his comparison of "big" versus "little" media, Schram (1977) suggested that we use different media for specific needs. According to Gumpert and Cathcart (1986), for example, media that do not employ a wide range of communication channels (e.g., audio, visual, tactile, etc.) deprive users of interpersonal contact. This deprivation, in turn, causes some communicators to feel uncomfortable in situations that involve mediated communication. Based on
Schramm's (1977) assertion, it seems that our choice not to use communication channels that limit our perceived range of contact, is based on our need to "personalize" our interactions.

Research shows that interactive and personal qualities are elements of mediated communication that bring social and psychological gratification to users (Rogers, 1986; Williams, 1987; Williams, et al., 1985). As mentioned earlier, the interpersonal qualities that are attributed to new media are often referred to as "social presence."

**Social Presence**

"Social presence" is conceptually defined as the perceived personalness of a communication channel. Short, Williams, and Christie (1976) introduce this concept in a study of the psychological aspects of using telecommunication media. They equate social presence with the feeling that a communication experience is sociable, warm, sensitive, and personal. For example, a communication that is perceived as high in social presence, can be thought to convey a person's "presence" (Rice & Williams, 1984; Williams, 1987). In contrast, the absence of social presence is equated with the perception that a communication experience is unsocialable, cold, insensitive, and impersonal (Williams, 1987; Williams et al., 1985).

Short et al., (1976) argue that social presence is a
subjective quality of a communication medium. Therefore, it can be defined by an individual's subjective perceptions of and attitudes toward communication channels. Because these perceptions are often based on preferences for and familiarity with certain media, the concept of social presence can be explored using the cognitive paradigm of communication research (DeFleur & Ball-Rokeach, 1989).

Cognitive Paradigm. According to this perspective, an individual's attitudes, beliefs, and behaviors are shaped by his or her past experiences. DeFleur and Ball-Rokeach (1989) suggest that prior learning experiences contribute to our cognitive responses to external sensory stimuli. Thus, our past experiences with certain communication channels influence how we will respond and adjust to new and subsequent encounters with these channels.

For example, a person may respond more readily in situations where mediated communication closely mirrors the aspects of interpersonal communication that are most familiar and comfortable. Berger and Calabrese (1975) suggest that familiarity and comfort concepts help to predict the development of interpersonal relationships. However, whether interpersonal communication theories help explain issues of social presence remains an open questions.

Short et al. (1976) also posit that the degree of social presence influences users' selection of communication media. Therefore, social presence may also be examined
under the "uses and gratifications" paradigm of communication.

**Uses and Gratifications Approach.** Palmgreen and Rayburn (1982) suggest that there are close ties between the tenets of the uses and gratifications approach and the theory of social presence. The uses and gratifications perspective may be particularly useful in this analysis, because it relates social and psychological phenomena to the interpersonal-like qualities of new media.

Uses and gratifications is an audience-centered approach that focuses on people's use of media (Palmgreen, Wenner, & Rosengren, 1985). Uses and gratifications research is generally concerned with identifying the various needs and gratifications that are applied to mass media environments (Williams, 1987). This perspective assumes that people are active and purposive users of technology, and that various social and psychological needs are met or "gratified" through the use of different communication media (Dozier & Rice, 1984; Williams, 1987; Williams et al., 1985).

According to Rogers (1986) and Williams (1987), these gratifications may include perceptions that a mediated communication experience is interactive, personalized, and asynchronous. Using media that possess these qualities can bring social gratification to users because the media
closely resemble familiar aspects of face-to-face, interpersonal contact.

Palmgreen and Rayburn (1982) claim that the concept of "personalness" is what links the uses and gratifications phenomena to the social presence theory of media.

Perse and Courtright (1993) found that normative images, commonly shared perceptions about a medium's use, may also be related to social presence. In their examination of various communication media, Perse and Courtright (1993) found that the communication media that rated the highest in social presence were most useful in fulfilling personal needs.

The theory of social presence assumes that people select and use different media based on certain attributes and contextual characteristics each medium possesses (Short et al., 1976).

Researchers who subscribe to the uses and gratifications approach assume that people behave differently across communication settings and use certain types of media content more actively than others (Levy & Windahl, 1984). Their behavior, according to this perspective, is influenced by the level of perceived gratification or the degree to which they feel gratified.

Based on the premises of the cognitive paradigm, and the users and gratification perspective, we can conclude that perceptions of social presence are affected by the experiences of the users. However, social presence is also
influenced by other factors, such as the technical aspects of the medium, and the context of use (Short et al., 1976).

**Media-Related and Context-Related** In most cases, social presence is conceptualized as a function of the communication channel; different media, for example, are assumed to possess different levels of social presence. Individuals perceive face-to-face communication channels on one end of a continuum as conveying a higher degree of social presence. In contrast, written correspondence or audio-only channels are rated lowest in social presence (Rogers, 1986; Williams 1987).

The context of use can also have an impact on the perceived social presence of a medium (Culnanm & Markus, 1987). Williams (1977), for example, reviewed experimental studies that compared face-to-face and mediated contexts. He found that the selection of a communication medium is often influenced by the communication situation. Several other researchers found evidence to support that media low in social presence are preferred in situations requiring routine requests for information or suggestions (Rice & Williams, 1984; Rogers, 1986; Stohl & Redding, 1987). In contrast, communication exchanges involving conflict or negotiation benefit most from media that convey high social presence.

While social presence is believed to affect our use of certain media in different contexts, "media richness" is a
related concept that also influences our selection of communication channels.

Media Richness. "Media richness" is a concept employed by organizational communication researchers to denote the 'potential information-carrying capacity' of a medium (Daft & Lengel, 1984; 1986). Different media are used depending on the situation and the amount of information that is needed.

According to this perspective, "rich" media (e.g., face-to-face and video conferencing) possess the capacity for immediate feedback, language variety, personalness, and multiple cues and channels (Daft & Lengel, 1984; 1986). These qualities help to facilitate understanding more quickly. On the other hand, media low in richness, such as telephones and electronic mail systems, are assumed to delay understanding because they have fewer of the capabilities.

Like social presence, media richness contributes to our knowledge of media choices in different communication contexts. Unlike social presence, however, media richness is an objective, rather than a subjective quality of media which is perceived by users (Culnan & Markus, 1987). This concept is important, mainly because it facilitates understanding between communicators (Daft & Lengel 1984; 1986).

Interestingly, however, both media richness and social presence seem to involve an interaction between the inherent
capabilities of new media and the perceptions of users. Despite its difference in meaning, the concept of media richness has enhanced our knowledge and understanding of social presence.

Some researchers claim, however, that the meaning of social presence needs to be refined. Rice and Williams (1984), for example, argue that social presence is an altogether vague concept because the four original measures (i.e., warm, sensitive, personal, and sociable), are subjective in nature. While most studies continue to rely on the Short et al., (1976) original operationalization of social presence, few studies have been conducted to expand its original meaning.

Burton, Kovner, Lears, and Sen (1991), however, did explore some additional meanings of social presence in a study of electronic mail use in an undergraduate science class. The original concept of "personalness" was challenged by considering perceptions of comfort and familiarity with computers in an educational setting, as opposed to an organizational communication setting. Findings indicated that computer comfort was positively related to social presence. Computer comfort was related to frequency and duration of use, and self-rated levels of computer expertise.

No doubt, the concept of social presence, although elusive, has become an integral part of understanding how the perceived personalness of communication channels affect
their use (Short et al., 1976). Research in this area is important because these same perceptions may influence how effective and satisfying a mediated communication experience is perceived by the user.

While social presence research has primarily been conducted in business or organizational settings, this study will consider social presence issues in an educational setting. The distance learning experience is a mediated communication situation that may be influenced by social perceptions of the communication technologies that are used to deliver education material.

**Communication Technologies in Education**

**Distance Education**

Distance education, unlike most traditional classroom education, is broadly categorized by a physical separation between teachers and students, as well as some level of independent learning (Faibisoff & Willis, 1987). According to Smith and Kelly (1987), it is an alternative to mainstream campus-based education, directed primarily at students who do not attend a campus on a regular basis.

Other researchers suggest that distance education comes in different kinds, and can be described by different adjectives; correspondence education, tele-education, external studies, home study programs, off-campus education, and other terms (Bray, 1988; Faibisoff & Willis, 1987;
Jefferson & Moore, 1990; Smith, 1987; 'Smith & Kelly, 1987). More importantly, however, distance education may be distinguished from traditional campus-based education by the degree of interpersonal communication that may be achieved between and among students and instructors.

Smith and Kelly (1987) argue that "distance education and mainstream education are located at the extremes of a continuum which is paralleled by the continuum showing the degree of face-to-face teacher support received by students; distance education students are assumed to receive less face-to-face support than campus-based students" (p. 2). Conversely, students in traditional classroom settings are assumed to receive a higher degree of face-to-face communication.

Smith and Kelly (1987) also assert that "until recently, face-to-face teaching has had the advantage of interactivity, while distance education has had the disadvantage of a lack of interactivity. However, modern communications technology is allowing the lack of interactivity in distance education to be overcome" (p. 4).

Perhaps most notable is the widespread use of new communication technologies in homes and businesses, which has greatly facilitated their use for educational purposes (Harcleroad, 1982; Reider, 1984; Smith, 1987). Distance educators, responding to the rapid growth in educational and training needs, designed technological distribution systems to deliver instruction and other learning resources beyond
regular classrooms on-campus (Dede, Bowman, & Kierstead, 1982; Harcleroad, 1982).

Smith and Kelly (1987) note that distance education was historically designed to serve the "educational needs of geographically isolated, or highly mobile populations (p. 3) ... [providing] access to education regardless of geography, work, or family commitments" (p. 4). Thus, a more diverse population of educational consumers can be served (Faibisoff & Willis, 1987). For example, adult continuing education students who are employed full-time can enjoy the convenience and flexibility of classroom learning without having to travel to evening classes on-campus.

Technological developments used in the distance education market have, undoubtedly, made education more accessible. They have not only changed the way we learn, but they have changed our expectations for the learning process as well (Smith, 1987). As video technology has become available to many colleges and universities for instructional purposes (Riccobono, 1986), its use for distance instruction has broadened educational opportunities, and changed our methods, as well as our expectations for learning. These expectations may, in turn, be related to the social presence that is conveyed by the video technology that is used for educational purposes.

Use of Video in Distance Education. Having reached 60% of the consumer market, and achieving a substantial
education market by the late 70's, video hardware and software technologies had become an attractive alternative for educational purposes (Harcleroad, 1982; Reider, 1984). Educational institutions across the country are now utilizing video distribution systems as alternative modes of instruction because of their low cost and versatility (Ellis & Curless, 1986). When used for the delivery of distance instruction, however, video technology offers some additional advantages.

Based on a series of studies on home video use, Levy (1980, 1981, 1983) concluded that the most frequent and popular use of the videocassette recorder (VCR) was "time-shifting," the capability for a user to record messages or programs for delayed viewing. This same function has made the videocassette a viable medium for the delivery of university curriculum in distance education environments (Massoumian, 1989).

When it is time-shifted, the conventional 1/2" VHS videocassette provides flexibility and control in the delivery of distance education (Hannafin & Philips, 1987; Stone, 1988, 1990b). For example, when students with work or family commitments cannot attend live lectures, or participate in televised classes, they may benefit from lectures that have been recorded for later viewing (Stone, 1987a). Because most people own or have access to VCR's, they can also have access to learning material through distance learning programs.
Riccobono (1986), in a national study of educational technology, found that there was a substantial increase in the percentage of institutions offering video telecourses. The increase ranged from 25% in 1979 to 32% in 1985. Riccobono describes video telecourses as "alternatives to parallel nonmedia courses offered for the same subjects and levels" (p. IV.7).

In most cases, video-based distance courses are taught on-campus in specially designed video classrooms and then distributed to off-campus students (Riccobono, 1986). Lecture material is videotaped in unedited form so that distance students may benefit from the questions and answers that are posed during regular classroom discussions. Videotapes, handouts, and other class materials are then duplicated and distributed to students at remote locations by mail, facsimile transmission, or other means.

Because video communication has been successful as an instructional technology, educational curriculum can be delivered to more students across a larger number of sites, and at more convenient times and locations (Jefferson & Moore, 1990; and Zimmerer, 1988). In this respect, the new communication media have contributed to positive changes in our alternative modes of instruction, and our potential access to education.

As a consequence, we might also expect changes to develop in our expectations for the videotaped distance learning experience. Unfortunately, not all of these
changes have had a positive impact on distance learning.

**Videotaped Distance Learning**

Because distance students are physically separated from their instructors, and interaction between them is often limited, time-shifted video instruction may be perceived as a situation low in social presence. The absence of direct personal contact may affect our expectations for the interpersonal communication levels that are possible. For example, regardless of proxemic constraints, students taking video distance courses may expect levels of interpersonal communication with their instructor to approximate that of students on campus.

Although videotapes and other supplementary class materials are provided for distance students, this method of instruction hardly approximates "ideal" levels of classroom interaction. The physical barriers between teachers and students prevent some remote students from interacting with instructors and fellow classmates as freely as their counterparts on campus (Barron, 1987c).

Occasionally, however, some courses are structured to provide remote students with an instructor or tutor with whom they can interact on a regular basis (Riccobono, 1986 Stone, 1987b). Even though tutors and instructors are provided, in these cases, student-teacher interaction is still limited. For example, if these instructors are not physically present on-site, communication is usually
maintained through special telephone office hours (Riccobono, 1986). However, this can often be both time-consuming and inefficient.

According to Massoumian (1989), video instruction of this nature is still a "significant departure" from personal, face-to-face contact, regardless of these special provisions (p. 16). One of the primary reasons for this departure is a lack of social presence achieved by using this form of instruction. Clearly, the video instruction is not as "socially present" as the face-to-face method of teaching.

Hackman and Walker (1990) maintain that there are substantial distinctions between these two contexts. "The complexities of these disparate contexts have been of interest to communication scholars for several decades" (p. 196). Rice and Williams (1984) believe that communication researchers are specially skilled at addressing the impacts of mediated communication, particularly in situations where it is expected to operate at interpersonal levels. Video distance learning presents such a case.

As mentioned earlier, independent learning is an integral and necessary component of time-shifted video instruction. Independent learning is inevitable because students and teachers are physically separated. Consequently, face-to-face contact is often limited. Smith (1987) advocates that personal contact with other students and faculty is an important, sometimes necessary, aspect of
learning. For example, face-to-face contact is an essential component of academic socialization.

Anyone who has experienced effective and stimulating face-to-face instruction can agree that there is no easy substitute. Therefore, we may intuitively expect that students learn more from face-to-face teaching (Kelly & Gorham, 1988), and that the absence of face-to-face contact would have a less than positive impact on the distance learner.

Surprisingly, however, empirical studies show that distance education does not always necessitate face-to-face contact for learning. Scholastic performance and achievement can be positively affected by video distance instruction. In many cases, levels of student performance have been comparable for students receiving conventional and video instruction.

The following section will review studies that have compared the academic performance of students receiving these two types or forms of instruction.

**Comparisons of Learning Performance.** In 1975, Thorman conducted a controlled experiment of two adult continuing education psychology classes. Pre-test and post-test scores were obtained from both classes to determine if students in off-campus video classes would perform differently from students taught on-campus by conventional methods. Both classes covered the same material, used the same course
objectives and examinations, and were taught by the same instructor.

Students in the video class, however, were taught via videotaped recordings produced in a television studio, and they only met face-to-face with the instructor on alternate weeks. Results indicated that there was no significant different between pre-test and post-test achievement scores of students on- and off-campus. Thus, there was no significant difference in how well students performed via conventional instruction or video instructional methods.

Whittington (1987), in an extensive research review, examined several studies to determine the effectiveness of televised instruction. In his review of "telecourses" (i.e., "the subset of televised instruction that uses pre-produced television programs as the primary mode of instructional delivery," p. 47), Whittington found that students in telecourses achieve "as well as students taking courses via traditional methods" (p. 54). Although he reviewed some studies that did not involve the use of media for distance education, he concluded that student achievement is not affected by the use of technological communication devices.

Ellis and Mathis (1985) found that 'students can learn introductory college material as well from videotaped lectures as from lectures taught in-person (p. 171). Ellis and Curless (1986) also concluded that test performance by students in television/video courses was the same as
performance by students in live lectures taught with the same or similar course material.

While student learning performances in both studies (Ellis & Mathis, 1985; Ellis & Curless, 1986) was based on test grades over time, note that the video and lecture class sessions were both taught on-campus during regularly scheduled class periods, rather than off-campus. Although these two studies do not necessarily involve distance education, they each provide further evidence to support that technology does not significantly affect learning performance levels.

Pirrong and Lathen (1990) surveyed business education students in traditional classrooms, and interactive television (ITV) classrooms on- and off-campus, to assess their attitudes and performance levels. While this study did not specifically involve the use of time-shifted video instruction, there were no significant differences reported in student performance among the three groups.

In an in-depth study of on- and off-campus engineering students, Stone (1987a, 1987b) found similar results. He obtained five years of student data and analyzed the characteristics and performance measures of engineering students enrolled in graduate level video telecourses. Video telecourses are described as "televised instruction that is recorded for delivery by videotape, microwave or satellite" (Stone, 1988, p. 18).

In one study, Stone (1987a) compared chronological age,
undergraduate grade point averages (GPA), and graduate record exam (GRE) scores of the students. He concluded that performance between on-campus students and off-campus students did not significantly differ. In a second investigation, Stone (1987b) reanalyzed his original data to compare the performance of students in non-tutored videotaped courses with those in tutored sections of the same course. He concluded that off-campus, engineering students enrolled in videotaped courses without the benefit of local tutors (or site coordinators), performed at levels comparable to students enrolled in either on-campus or video-based courses supported by local tutors.

This section has reviewed literature that has compared the learning performance of students who received conventional instruction, and those who received mediated distance education. Although the communication channel, the research methods, and academic courses subjects varied from study to study, the outcomes all indicate that mediated distance education does not significantly effect student learning performance. This conclusion is contrary to claims made by Gorham (1988) and Richmond, Gorham, and McCrosky (1987), who suggest that verbal and nonverbal immediacy cues have an impact on cognitive learning.

However, academic performance is just one portion of the distance education experience. Measures of academic performance that are based on student registration data, may not be the best indicators of whether distance education is
a suitable or preferred mode of instruction for all students.

Stone (1987b), for example, noted that "although off-site tutors are not a requisite", human support may still be preferred by some students (p. 255). Nonetheless, Stone (1987a, 1987b) focused on data recorded as a normal part of a student's registration (e.g., age, course grades, performance on standardized tests, etc.). As a result, he failed to address student perceptions and evaluations of video distance instruction. Likewise, the other researchers who compared learning performance in this section, neglected to examine student perceptions of distance education, not to mention specific reactions to videotaped distance education.

In a discussion of adult learning theories for motivating adult distance learners, Hough (1984) asserts that adult learning situations consist of two types of processes: "the intrapersonal processes within a learner based on needs and values and the interpersonal aspects between persons which result in projection or perceptual distortion" (p. 15). He concludes that both personal attitudes and personal interactions and relationships with other students may affect adult learners. This insight may prove useful in examining perceptions of videotaped distance learning.

Student reactions may be especially important in understanding the overall impact of video instruction on distance learners. Thus, the following section will discuss
how student reactions may give additional insight about
distance education and the consequences of using
communication technologies.

Student Evaluations. In 1986, Riccobono reported that
the average enrollment per video telecourse had decreased
from 75 students in 1979 to 38 students in 1985. Although
this general decrease in enrollment, by itself, does no
indicate an overwhelming dislike for video instruction, it
may indicate that students vary in their needs and/or
preferences in regards to this learning method.

In some cases, traditional classroom teaching is viewed
as the model delivery of instruction, and thus a more
desirable mode of education (Smith & Kelly, 1987). Distance
education students who advocate this point of view may
prefer the face-to-face contact of peers and instructors,
because they feel that it enhances the quality of their
education.

This preference may persist, despite the convenience
and flexibility offered by alternative technological
delivery systems (Barron, 1987b). Unfortunately, these same
students may become disillusioned and experience social
dissatisfaction, when instructional distribution systems
(e.g., time-shifted video instruction) prevent "rich" levels
of social interaction (Barron, 1987b).

For example, Hackman and Walker (1990), in a study of
interactional television (ITV), found that variations in
system design factors (e.g., visual-audio quality) and teacher verbal and nonverbal immediacy cues (i.e., vocal variety, body posture, etc.) have an impact on students' perceived learning and satisfaction.

Zimmerer (1989) found that some distance education students experience feelings of inhibition, frustration, and isolation when they are deprived of peer and instructor contact, and timely feedback. For example, distance students may become disgruntled in cases where feedback obstacles include waiting for correspondence, avoiding telephone "tag," and scheduling face-to-face meetings with instructors.

In their comparisons of traditional and remote site business education classes, Pirrong and Lathen (1990) measured student perceptions of the televised instructional experience. Results indicated a significantly higher level of dissatisfaction among students at remote sites. Dissatisfaction was, among other things, related to the lack of "ability to communicate with the instructor" (p. 53). Remote students who experienced dissatisfaction, reported that they took the televised course mainly for convenience. Some students further indicated that they would not have otherwise taken the course.

A sizable number of students, on the other hand, may not experience social isolation as a result of restricted instructional interaction. In their view, the convenience and flexibility of video distance courses may outweigh the
absence of personal contact with peers and instructors.

Research suggests that communicators, to some extent, consciously weight the overall costs and benefits of a mediated communication experience. Svenning and Ruchinskas (1984), for example, in their study of organizational teleconferencing, point out that individuals "may be willing to 'trade-off' on social presence dimensions for other functional capabilities offered by new electronic media" (p. 240). Based on this assumption, we might expect distance learners to weight the costs and benefits of the distance instructional experience.

Stone (1987a) suggests that benefits from the use of an instructional medium, such as the videocassette recorder, may offset or exceed its inherent limitations (e.g., the lack of social presence). Similarly, Pirrong and Lathen (1990) found that dissatisfaction levels for some students were "offset" by the perceived benefits of taking the ITV course. These benefits most often included factors associated with convenience. Apparently, a large portion of students indicated that they like the ITV system well enough to take additional courses.

Silvernail and Johnson (1990) conducted a controlled experiment to assess the performance and attitudes of students in traditional classrooms and ITV classroom on- and off-campus. Results from this experiment, like previous research (Stone, 1987a, 1987b; Thorman, 1977; Whittington, 1987), showed no significant differences between groups.
However, attitudinal data revealed that students enroll in ITV courses primarily for convenience (i.e., times when classes are offered, proximity of classes, etc.). Nevertheless, further examination is required to determine the degree to which "these factors influence achievement and attitudes" about mediated distance instruction (Silvernail & Johnson, 1990), particularly those attitudes regarding issues of social presence.

In addition to convenience and flexibility, researchers (Faibisoff & Willis, 1987; Silvernail & Johnson, 1990) have also reported other benefits derived from or motivations for participation in videotaped distance learning. These benefits include: (1) career advancement; (2) personal enrichment; (3) college credits toward a degree; and (4) personal preferences for independent study. However, it is not clear whether these other perceived benefits are associated with social presence.

Overall, this discussion of student reactions indicates that the lack of social presence does not have the same effect on all distance students. While some students sacrifice social gratifications for convenience and flexibility, others do not. In any case, student perceptions and evaluations are essential to our understanding of the effects of new technologies on the delivery of distance education. But how will student evaluations of video distance learning further our knowledge
about distance education and the consequences of using communication technologies?

Summary

This chapter has examined literature on the new communication technologies and the options that they provide to distance education students. Some of the new technologies are perceived to possess qualities that resemble interpersonal human contact, otherwise referred to as "social presence." These feelings of conveyed personalness are assumed to make mediated human communication more gratifying.

Distance education literature revealed that while new communication technologies have increased access to education, and changed the way we learn, they have not significantly affected the academic performance levels of students. Research does, however, suggest that students have developed different perceptions and evaluations of mediated distance education, and the extent to which it is enjoyable or gratifying.

For example, videotaped distance instruction, a form of distance education frequently characterized by the physical separation of teachers and students, is preferred by some students and not others. Researchers have speculated about the fact that distance students seem to make conscious trade-offs between the need for personal human contact, the personal convenience afforded by this method of instruction,
and other perceived benefits provided by the videotaped distance learning option.

Formal research, however, has not been conducted to specifically address issues in this area. For example, research has not established the degree to which students are actually concerned about the social presence associated with videotaped instruction, and the convenience afforded them by this learning mode. These issues are pertinent to videotaped distance education, and a discussion of these issues will enhance our current knowledge about communication technologies and the distance education experience. The following chapter will examine these issues more closely and discuss methods for addressing them.
Chapter 2
RESEARCH PROCEDURES

The previous chapter revealed that student perceptions and evaluations are essential to our understanding of the effects of new technologies on the delivery of distance education. By examining student perceptions of videotaped distance learning, we can gain additional insight about the distance education experience.

This chapter will outline the methods that were used in order to examine the relationship between social presence and student perceptions of videotaped distance learning.

Hypothesis and Research Questions

Throughout the literature on distance education, there has been a great deal of concern about the interactivity, or the levels of interpersonal contact between students and instructors (Smith & Kelly, 1987). With few exceptions, however, distance education literature fails to make explicit reference to the concept of social presence.

While Hackman and Walker (1990) explicitly operationalize social presence in terms of system design features and teacher immediacy behaviors, their operationalization is not necessarily or directly applicable
or transferrable to discussions of time-shifted videotaped instruction. Remember that videotaped distance instruction is characterized by a physical separation between teachers and students, and an expected amount of individualized learning.

Perhaps, then, it is necessary to change the conceptualization of social presence as the context for mediated-communication is altered. Therefore, in this study, social presence will be conceptualized as the level of social contact perceived by students participating in videotaped distance courses.

Because time-shifted video instruction is assumed to be less "socially present" than conventional teaching, or highly interactive audio-visual systems, one might intuitively expect students who engage in this type of learning to experience social isolation and less enjoyment. However, research suggests that while some students are adversely affected by the lack of social presence, others are not.

For example, students who reported being dissatisfied with distance learning also claimed to have enrolled mainly for personal convenience. Personal convenience is a primary benefit that students perceive from time-shifted video instruction, despite the lack of social presence associated with this medium.

Researchers (Pirrong & Lathen, 1990; Stone, 1987a; Svenning & Ruchinskas, 1984) report that there is a
conscious trade-off made between social presence dimensions and the personal convenience variables associated with distance education. However, these same researchers have not determined the degree to which convenience and social presence influence students' attitudes toward mediated distance learning. By examining the relationship between personal convenience and social presence, we may be able to more accurately evaluate the extent to which these variables affect student satisfaction.

Based on the previous assumption, the following hypothesis is presented:

**Hypothesis**

The salience of social presence (i.e., perceived personalness) will be inversely related to the salience of the perceived convenience of videotaped courses.

In other words, the more an individual values the convenience of taking a videotaped course, the less he or she will value or consider **important** the social presence associated with the medium of delivery. There will be a conscious trade-off between the importance of convenience and social presence.

Note that this prediction is based, in part, on assumptions of the cognitive paradigm, which suggest that our past experiences with certain media influence how we respond and adjust to new and subsequent encounters with communication research.
As stated earlier in this paper, the uses and gratifications approach implies that we are active and goal-oriented in our use of media to satisfy certain needs. The review of literature suggests that one particular social need is related to the perception of whether a mediated communication experience closely approximates interpersonal contact. The interaction involved in videotaped distance learning is considered far from approximating face-to-face human interaction in this study.

Finally, because the literature review suggests that personal convenience is a primary benefit perceived by most distance education students, this issue must also be addressed. In this study, personal convenience has been conceptualized as a function of flexibility in time (i.e., the physical location or proximity of the class). The concept of convenience has been measured on two levels: (1) personal convenience and (2) geographical convenience.

In addition to personal convenience, there are other perceived benefits derived from video distance learning, or additional motivations for choosing this mode of instruction. For example, one might consider educational merit, personal satisfaction, or the potential for career advancement, as other benefits achieved by participation in this type of learning option. Therefore, this study will explore the relationship between social presence and some additional perceived benefits that are obtained through
distance education. Thus, the following research question asks:

**Research Question One**

What is the relationship between the salience of social presence and the salience of other perceived benefits and/or motives for considering the videotaped distance learning option?

The review of literature suggests that the level of social presence affects how some students perceive the total distance education experience. Even though face-to-face contact is not required for learning to occur, some students still prefer face-to-face methods of teaching over videotaped distance instruction, because they feel that it enhances the quality of education (Weingand, 1987). The degree of personalness of a medium may, therefore, determine how gratifying the distance education experience is to students.

Past research findings indicate that distance students who receive mediated instruction are significantly more dissatisfied with their educational experience than their counterparts on-campus. However, this research did not explore whether dissatisfaction was specifically related to the degree of perceived personalness associated with videotaped distance learning.

Accordingly, another goal of this study is to determine whether social presence is related to students' enjoyment or satisfaction with videotaped distance learning. Thus, a
second research questions asks:

**Research Question Two**

Is the perceived degree of personalness related to how well students like and/or enjoy video distance learning?

In the following section, methods for investigating the hypothesis and research questions are described.

**Method**

Based on conclusions drawn from past research, student perceptions are essential to our understanding of distance education that utilizes new communication media. Thus, an analysis of student perceptions may be the best way to assess this information.

Although Stone (1987a, 1987b) has done the most in-depth research that specifically addresses videotaped distance instruction, he focuses on comparisons of student registration data. These data do not, however, provide any insight into students' assessments or perceptions of the distance education experience.

Hackman and Walker (1990) suggest that the distance education experience, as perceived by students, provides a very rich source of information. These authors provide justification for why student perceptions are a valid way of assessing social and/or psychological needs and course benefits. They say that students themselves can best decided whether video-based distance courses "offer
acceptable trade-offs for the anticipated sacrifices of limited social networking and interaction" (p. 197).

Galloway and Meek (1981) also assume that "individuals are sufficiently self-aware as to be able to report their gratification dimensions or at least to recognize them when confronted with them" (p. 439).

Based on these two assertions, the assessment of student perceptions will be considered a valid approach to investigating the videotaped distance learning experience. A survey in the form of a questionnaire was distributed in order to assess student perceptions of videotaped distance education.

**Sample Choice and Background**

The sample consisted of a list of students enrolled in the FOCUS (Flexible Options for Continued University Study) videotape program at the University of Delaware. Included on the list were business, engineering and nursing students from the Continuing Education Department.

The FOCUS videotape program is designed to combine quality instruction and video technology to bring the on-campus educational experience to the home, as well as the worksite.

Since the Fall of 1988, FOCUS has recorded live on-campus courses in specially equipped video classrooms in unedited fashion so that FOCUS students may benefit from all questions and answers discussed in class. Lecture
videotapes (1/2" VHS), course syllabi, handouts, and bookstore order forms, are duplicated and distributed to FOCUS coordinators at work sites where participants are enrolled. Worksite coordinators and students arrange distribution and viewing of the tapes to suit their particular schedules. Although most faculty-student interaction is maintained through special telephone office hours, appointments can be scheduled to meet faculty in person.

A variety of academic disciplines at the University of Delaware offer credit courses through FOCUS. However, the majority of students are enrolled in the nursing, business, and engineering departments.

The data collection for this study was initiated in May 1991. During the summer semester, the address information for future enrollees was unavailable. Therefore, data collection was completed in July 1991. Also, because FOCUS had only been in existence for the previous three years, this study surveyed only the students who had enrolled between the years of 1988 and 1991. This group included students who registered, but later withdrew from the courses for whatever reasons.

The total number of students who had enrolled during these three years was approximately 450. An adequate response rate, in this case, would be approximately 135 students, or at least 30% of the total population.

As stated earlier, FOCUS is designed to meet the needs
of adult continuing education students enrolled at different home or worksites. In the past, two separate evaluations forms (see Appendices A and B) had been developed to assess student reactions to and evaluations of the program. One response form (see Appendix A) was mailed to students to assess the types of courses for which students were interested in registering. Based on this assessment, arrangements are made for recording the on-campus lectures for the FOCUS videotape program.

Another form (see Appendix B) was mailed to generate student reactions to the total learning experience offered through FOCUS. This form had been used as a standard sort of course evaluation.

Although these two evaluation forms were geared toward generating student reactions to the videotape program, they were not theoretically based, nor were any formal statistical analyses done to evaluate the results of the surveys. Furthermore, these evaluations did not examine whether social presence is an integral part of understanding how videotaped distance education affects students.

The research instrument that was compiled for this study provides a more theoretically-oriented approach towards generating student reactions to videotaped distance learning. Ideally, it serves as an aid in examining the hypothesis and in answering the research questions that were posed in the previous section.
Research Instrument

The questionnaire (see Appendix C) was divided into four main sections, with each section designed to assess different types of perceptions. The first section measured general attitudes toward videotaped distance learning. The second section measured the social presence of videotaped distance instruction versus that of traditional, face-to-face teaching. Section three assessed the amount of experience students have with videotaped distance learning. And, section four included questions regarding personal information.

Perceptions of Videotaped Distance Learning

In this first section, students were asked to respond to twenty-nine statements that reflect different attitudes toward videotaped distance learning. The twenty-nine items in this section were compiled and adapted from information in the literature review that addressed student reactions to mediated distance learning.

These statements measured the following four concepts which are all directly related to the research questions and the hypothesis posed in this paper: (1) students’ feelings about the need for personal human contact; (2) the convenience afforded by videotaped distance learning; (3) other benefits provided by the videotaped distance learning option; and (4) the overall enjoyment level of the learning experience. In this case, the need for human contact can be
considered a measure of social presence. A five-point Likert scale (1=strongly agree; 2=agree; 3=neutral; 4=disagree; and 5=strongly disagree) was employed.

Note that the twenty-nine items are responses to one general open-ended statement and three questions that reflect general attitudes toward videotaped distance learning. They are as follows: (1) "videotaped distance courses are"; (2) "why did/do you participate in the videotaped distance learning program?"; (3) "how do you feel about videotaped distance learning?"; and (4) "how well do you like videotaped distance learning?".

Respondents were asked to indicate their agreement with the response items that are listed below each question or open-ended statement. For example, when asked, "what do you like most about videotaped distance learning?, respondents indicated their agreement with a series of responses that followed (e.g., "the ability to view the videotapes at my own convenience", etc.).

**Social Presence**

In the second section of the questionnaire, students were asked to respond to eight semantic differential scales with references to the statement "I feel that videotaped distance learning is...". The scales employed are as follows: (1) impersonal-personal; (2) sensitive-insensitive; (3) cold-warm; (4) sociable-unsociable; (5) comfortable-uncomfortable; (6) accessible-unaccessible; (7)
inconvenient-convenient; and (8) flexible-inflexible.

This instrument is an expansion of the four-item instrument previously employed by Short et al., (1976). The first four bipolar pairs represent the original operationalization of social presence, except that Short et al. (1976) used a seven-point bipolar scale instead of a five-point scale. The last four bipolar pairs are an adaptation of the scales that Burton et al., (1991) used to expand the meaning of computer social presence.

Students were also asked to respond to the statement, "I feel that face-to-face teaching is...", by using the same eight scales.

Experience

Nine items were used to assess the experience that the respondents had with videotaped distance learning. The items addressed the following: (1) the number of videotaped courses taken; (2) when the courses were taken; (3) the subjects or course titles; (4) the number of videotaped courses dropped; (5) the amount of communication with instructors and (6) peers (calculated by the number of times per week); (7) access to a VCR; (8) the number of hours per week spent watching videotapes; and (9) the number of different videotapes watched per week.
Personal Information

The last section of the survey focused on descriptive information about the respondents, and included information about age, gender, occupation, employment, and geographical location.

Again, all of the data was completely anonymous, and no individuals were identified.

Procedures

Questionnaires were mailed directly to FOCUS students with a cover letter (see Appendix D) identifying the researcher and briefly describing the purpose of the study. Out of the 450 students who were enrolled over the previous three years, only 330 had current addresses on file. Once the questionnaires were completed and returned, there was no way to link a set of answers to a particular respondent. An identification number was coded on each self-addressed, stamped envelope that was enclosed for the convenience of the respondents. The identification code provided a means for allowing the researcher to associate follow-up correspondence with the appropriate questionnaire.

After about two weeks, a follow-up postcard (Appendix E) was sent as a reminder to the respondents and as an appreciation for their cooperation in the study. As a result of the procedures described above, all responses were kept completely anonymous.
Summary

The goals of this study were presented in the form of the hypothesis and the two research questions in this chapter. Also outlined was the sample selection process, a description of the research instrument, and the procedures for administering the instrument. Detailed results of the survey are presented in the following chapter.
Chapter 3
RESULTS

Demographics/Sample

Of the 330 student surveyed, 119 responded by returning completed surveys at a response rate of 36% (note that, this was well-above the generally accepted 30% response rate). The sample was largely comprised of female students (82.2%) averaging thirty-six years of age, who were employed full-time (84.7%) in the nursing profession (76.3%). This is a fair representation of the general population of FOCUS students at the time of data collection.

The commuting distance for the sample of students was approximately one hour and fifteen minutes from the University of Delaware campus and within fifteen minutes of their employment location.

Students who participated in the survey, reported that they had completed an average of two FOCUS videotaped courses. During their enrollment in these courses, students acknowledged having interaction with fellow FOCUS classmates about once per week. They also described having very minimal interaction with their course instructors.

On the average, students reported that they watched three FOCUS course videotapes per week. The average amount
of viewing time varied as did the location of the viewing. Students reported viewing the videotapes for an average of five hours at home, forty-five minutes at work, and fifteen minutes in other locations. A summary of the demographical background of the students can be found in Table 1.

After compiling information about the sample of students, several steps were taken to determine the results of the survey questions in relationship to the hypothesis and research questions. Preliminary factor analyses were computed for social presence, convenience, benefits, and liking variables. This helped to determine the internal structure of the variables in relationship to the survey instrument. Following this procedure, reliability checks were performed for each of the scales. Finally, Pearson correlations were computed to test the perceived affects of the social presence factors on liking, benefits, and convenience factors.

**Factor Analyses**

Principal components factor analyses were performed on the social presence, convenience, benefits and liking variables. Following this process, rotations were performed on the variables to achieve factor scores.

**Social Presence Factors**

Two different methods were used to measure the concept of social presence. The first method involved using an
adaptation and an expansion of the semantic differential items that were used in past research to define social presence (Short et al., 1976). A second method of measurement involved using a scale of the survey questions.

Several of the survey responses revealed that students based their evaluations of videotaped courses on the level of human interaction that was achieved when the videotape medium was used. Because social presence was conceptualized in this study as the "perceived personalness" of a communication channel or experience, the survey questions provided an additional source of information and measurement. The survey items also functioned as an expansion of the social presence scale. A more detailed description of both social presence scales is provided below.

Scale. In order to measure social presence, respondents were asked to rank their feelings about videotaped distance courses according to the eight five-point semantic differential items that were used to define social presence. Table 2 summarizes two factor loadings.

Factor #1, the perception of "warmth" was derived from the first four bipolar pairs on the social presence scale (personal-impersonal, sensitive-insensitive, warm-cold, and social-unsociable). (Cronbach Alpha = .82). These four scale items of the social presence analysis were
the original social presence items employed by Short et al., (1976).

Factor #2, the feeling of "discomfort" was derived from the last four bipolar pairs listed on the social presence scale (comfortable-uncomfortable, accessible-inaccessible, convenient-inconvenient, and flexible-inflexible). This factor represents a negative perception about videotaped courses. (Cronbach Alpha = .75).

Survey Items. Respondents were asked to indicate their agreement (5 = strongly agree, 1 = strongly disagree) with survey items numbered 2, 3, 5, 14-23, and 25-27 of the questionnaire. These 16 statements about videotaped distance courses were subjected to principle factor analysis. The factor analysis accounted for 62% of the total variance. Using the criteria of an eigenvalue greater than 1.0, three factor loadings were identified. See Table 3 for a summary of the factor analysis.

Factor #1 was comprised of seven survey items (2, 5, 15, 16, 17, 19, and 23) that reflected feelings of "restriction" related to the video courses. (Cronbach Alpha = .91). This factor represents a negative perception about videotaped courses. (Cronbach Alpha = .75).

Factor #2 was comprised of four survey items (20, 25, 26, and 27) that represented feelings of "satisfaction" that students perceived from this type of learning. (Cronbach Alpha = .90).
Factor #3 accounted for two survey items (21 and 22) that expressed feelings of "affiliation." (Cronbach Alpha = .75).

All three factors represented student perceptions of the videotaped distance learning experience, that helped to explain the concept of social presence in such settings.

Convenience Factors

In order to measure the concept of convenience, respondents were asked to indicate their agreement (5 = strongly agree, 1 = strongly disagree) with questionnaire items numbered 1, 4, 10, 11, 13, 18, and 20. These 7 statements about videotaped distance courses were subjected to principle factor analysis with oblique rotation. The factor analysis accounted for 51% of the total variance. Using the criteria of an eigenvalue greater than 1.0, two factor loadings were identified. See Table 4 for a summary of this factor analysis.

Factor #1 was comprised of four survey items (4, 13, 18, and 20) that reflected feelings of "personal convenience" experienced as a result of participation in videotaped distance courses. (Cronbach Alpha = .83).

Factor #2 loaded on three survey items (1, 10, and 11) that represented student perceptions of "geographical convenience." (Cronbach Alpha = .69).
Benefits of Videotaped Distance Courses

Table 5 summarizes three factor loadings that were identified when survey items numbered 6 through 13 were subjected to factor analysis. Factor #1 loaded on survey items numbered 9 through 13 which reflect perceptions of "accessibility." (Cronbach Alpha = .46). Factor #2 loaded on survey items (6 and 8) which describe perceptions of "career advancement." (Cronbach Alpha = .66). Factor #3 loaded on one survey item (item #7) which expresses the perception of "personal enrichment." (Cronbach Alpha could not be tested on a single item).

The low index of reliability for the "accessibility" factor is far from desirable. As will be seen later, however, this variable did exhibit significant correlations with other theoretically meaningful indices.

Liking Factor

The "liking" variable was submitted to a factor analysis and found to be unidimensional. All four variables (items numbered 24 - 29 of the survey) clustered on a single factor which was simply referred to as "liking." See Table 6 for a summary of this analysis. (Cronbach Alpha = .91). For a summary of statistics for each factor (see Table 7).

After the preliminary factor analyses, Pearson correlations were computed for the five (5) social presence factors and their perceived affects on liking, benefits, and convenience variables.
Pearson Correlations

Social Presence and Convenience

Please recall that the initial hypothesis reads as follows:

The salience of social presence will be inversely related to the salience of convenience.

As Table 8 clearly shows, there is an inverse relationship between social presence and convenience, with regards to videotaped distance courses. When the perceived level of social presence was relatively high, the respondents’ perceived level of convenience was significantly lower.

More specifically, when students perceived a high level of "warmth" from videotaped courses, they had significantly lower perceptions of "personal" and "geographical" convenience ($r = -0.35; p < 0.001$, and $r = -0.18; p < 0.05$). Likewise, students who perceived a high degree of personal satisfaction from videotaped courses, had relatively lower perceptions of personal and geographical convenience ($r = -0.32; p < 0.0005$, and $r = 0.30; p < 0.001$). These two findings support the prediction that there is a trade-off between the importance or value of perceptions regarding social presence and convenience.

Similarly, the social perceptions of discomfort and restriction were inversely related to perceptions of convenience. For example, the more that students perceived
the videotaped learning experience to be uncomfortable, the less they perceived personal convenience and geographical convenience \( (r = -0.27; p < 0.002, \text{ and } r = -0.19; p < 0.05) \).

The more that students perceived the restrictiveness of the videotaped courses, the less they were able to perceive personal convenience \( (r = -0.42; p < 0.0001) \). Perceptions of geographical convenience had no significant relationship to perceptions of restriction.

Note, also, that perceptions of affiliation were not significantly related to either of the convenience factors.

**Social Presence and Benefits**

The first research question was phrased as follows:

What is the relationship between social presence and the salience of other perceived benefits or motives for considering the videotaped learning option?

Pearson correlations helped to identify four significant relationships between social presence and the benefits of participating in videotaped courses. The findings which pertain to this research question are summarized in Table 9.

Student's perceptions of warmth were directly related to perceptions of accessibility \( (r = 0.19; p < 0.03) \) and inversely related to perceptions of career advancement \( (r = -0.18; p < 0.04) \) and personal enrichment \( (r = -0.20; p < 0.001) \). The more that students perceived personalness and "warmth" as a result of their participation in videotaped courses, the more that they perceived the classes to be
accessible (See Table 5). However, the more warmth and personalness that students perceived, the less that they perceived career advancement and personal enrichment as benefits for enrolling in videotaped courses. This finding suggests that the value or importance of some apparent benefits is offset by other needs and/or concerns.

Students' perceptions of discomfort had no significant relationship to the perceived benefits of accessibility and personal enrichment. However, students' perceptions of discomfort were inversely related to perceptions of career advancement \( (r = -0.023; p < 0.01) \). The more discomfort that students experienced while participating in videotaped classes, the less they were able to perceive career advancement as a benefit for enrollment in the classes.

Students' perceptions of restriction were directly related to their perceptions of accessibility \( (r = 0.32; p < 0.0005) \), and inversely related to their perceptions of career advancement \( (r = -0.29; p < 0.001) \). The more that students perceived the restrictions involved in videotaped courses, the greater their concern for more accessibility \( (r = 0.32; p < 0.0005) \). Moreover, the more restriction that students perceived as a result of the videotaped courses, the less they regarded career advancement as a benefit for enrollment in the classes \( (r = -0.29; p < 0.001) \).

Students' perceptions of satisfaction were directly related to their perceptions of accessibility \( (r = 0.24; p < 0.01) \), and inversely related to perceptions of career
advancement \( (r = -0.28; p < 0.001) \) and personal enrichment \( (r = -0.23; p < 0.01) \). Students who felt a sense of satisfaction from their participation in FOCUS videotaped courses, were more able to perceive the benefit of accessibility. However, the more satisfaction that students felt, the less they perceived career advancement and personal enrichment as benefits.

There was no significant relationship between students' perceptions of affiliation or their perceptions of accessibility, career advancement, and personal enrichment. Note, that the Cronbach Alpha for "accessibility" was notably low (0.46). Given the large percentage of random error associated with this variable, the discovery of several significant correlations is remarkable. Had reliability been higher, even more robust relationships may have been exhibited.

Social Presence and Liking

The second research question asked:

Does the degree of social presence have a significant affect on how well students like and/or enjoy videotaped distance courses?

Table 10 clearly indicates that liking is positively related to social presence, regardless of the dimension of social presence \( (r = 0.70, 0.40, 0.82, 0.91, 0.50; p < 0.0001) \). Apparently, students experienced a high level of enjoyment in videotaped courses, particularly when they perceived feelings of warmth, satisfaction and affiliation.
Their enjoyment level, however, was not adversely affected by the perceptions of discomfort and restriction commonly associated with this type of learning. Subsequently, students' survey responses indicated that they would: (1) suggest an increase in videotaped course offerings; (2) enroll in future videotaped courses; and (3) recommend these courses to other students.

**Summary**

In this chapter the survey results about videotaped distance learning have been summarized. More specifically, the relationship between social presence and the perceptions of liking, benefits, and convenience have been examined. The results supported the prediction and helped to define the relationships between the different perceptions outlined in the two research questions. For an overall summary of the correlations, see Table 11.

The following chapter offers a theoretical interpretation of these results.
Chapter 4

DISCUSSION

Social Presence and Convenience

The goal of this study was to examine students' perceptions of social presence during their enrollment in FOCUS videotaped courses at the University of Delaware located in Newark, Delaware. Earlier research suggested that students make conscious trade-offs between their perceptions of social presence and their perceptions of convenience.

Based on past research, it was predicted that "the salience of social presence would be inversely related to the salience of convenience in videotaped courses." Results of the study supported this prediction. Students who perceived a high level of warmth, comfort, and satisfaction during their participation in videotaped classes, indicated that their perceptions of personal and geographical convenience were less salient.

This finding has important implications for interpersonal communication theorists who subscribe to the cognitive paradigm or to the uses and gratifications approach, particularly because videotaped instruction
involves the use of communication technology that influences social perceptions.

According to cognitive theorists, media users are predisposed to the use of certain media based on prior experience with communication channels. Previous encounters with certain media influence how users respond to new and subsequent encounters. The students who were registered in the FOCUS program were expected to have prior access to a VCR at home, work, or in some other location. Therefore, the students must have been somewhat familiar with the physical features of a videotape, and accustomed to its use. Based on this assumption, we can conclude that students adjusted well to using the videotape to complete courses.

Because a large portion of the students were full-time nurses trying to balance family, school, and work related commitments, it is logical that the salience of their perceptions of convenience would have been greater than those of their perceptions of social presence. However, despite the flexibility and convenience afforded by the videotaped courses, students perceived social presence factors to be more salient. Familiarity with conventional classroom interaction may have influenced students' needs for videotaped course interactions to approximate the personalness associated with conventional classroom interactions.

Please recall that the guiding principle of the uses and gratifications approach to communication is that a
variety of social and psychological needs are met through the use of certain media. Consistent with the aforementioned prediction, FOCUS students made a conscious trade-off between the salience of their perceptions of social presence and those of convenience. According to this school of thought, the shift in salience indicates an adjustment based on the immediacy of the needs or the gratifications in question. In this case, the salience of perceived convenience was offset by the students' immediate needs for warmth, comfort, satisfaction and less restricted interaction.

Social Presence and Perceived Benefits

Findings for the first research question revealed correlations that identify an inverse relationship between perceptions of social presence and the perceived benefits for enrollment in FOCUS videotaped courses. Accessibility was the only perceived benefit that was directly related to perceptions of warmth, discomfort, restriction, and satisfaction. Perceptions of career advancement and personal enrichment was inversely related to these dimensions of social presence.

One explanation for the direct relationship between perceptions of social presence and accessibility surrounds the inherent human need for control and flexibility. Proponents of the uses and gratifications approach argue that certain social and psychological needs are fulfilled
(i.e., "gratified") through the use of different media channels. Apparently, the sample of students, largely full-time, female nurses, had an inherent human need for accessibility. The "time-shifting" capabilities of the videotape, no doubt, allowed students a greater span of control in managing work, school, and family obligations. In addition, eliminating the hassle of a lengthy commute to the university campus provided students with the opportunity for more time to address other needs.

There are undoubtedly several possible explanations for the inverse relationship between social presence and career advancement and personal enrichment. One explanation concerns the nature of the nursing profession.

Generally speaking, the nursing profession has its own "built-in" path for career advancement and continued education. Nurses are routinely expected to refresh their background and knowledge regarding new medical and technical advances, especially as the medical and health-related fields continue to grow and develop in our society.

Perhaps, for these reasons, the nursing students in this study did not easily recognize career advancement and personal enrichment as benefits, but rather as inherent progressions in their vocation. With these perceived benefits already intrinsic to the nursing profession, students' needs for social presence were more salient.
Social Presence and Liking

An analysis of the second research question revealed a direct relationship between students' perceptions of social presence and liking. Students expressed an overall favorability towards FOCUS videotaped courses, regardless of their perceptions of the social presence dimensions. For example, students who indicated a dislike for the geographic isolation and the restricted classroom interaction, nonetheless, recommended that others enroll in the videotaped courses.

One possible explanation for this finding involves the concept of self-motivation. In the earlier review of literature, it was reported that a moderate level of self-motivation is expected and required in non-conventional classroom environments, such as in the FOCUS videotaped course program. Students are expected to work at the same pace and complete the same tests and assignments as students participating in the on-campus classes.

However, because the decision to enroll in FOCUS videotaped courses was a personal option for these students, they may have been more willing to tolerate the perceptions of discomfort and the restricted interaction for the sake of other needs or gratifications. Another possible explanation for the direct relationship between liking and social presence is based on a recent study conducted by Pearse and Courtright (1993). In their study of the normative images of communication channels (i.e., broadly shared perceptions
of media functions), these researchers found that the communication channels that were most useful in fulfilling personal needs had the highest ratings of social presence. Perhaps, this explains why perceptions of social presence and liking were directly related in this study. Students who perceived that the FOCUS videotaped courses were helpful in fulfilling their needs for warmth, comfort, satisfaction and accessibility, liked the courses.

Now that theoretical interpretations for the research results have been presented, several strengths and limitations must be addressed.

Evaluation of Strengths and Limitations

One apparent strength of this study is that research had not established the degree to which students were actually concerned with social presence as it relates to videotaped instruction, and the convenience afforded them by this method of instruction. Addressing these issues has enhanced the current and previous knowledge about communication technology, social presence, and the distance education experience. The findings of this study were also consistent with prior research explorations in the area of distance education.

The use of student perceptions in evaluating the videotaped learning experience can be interpreted as a strength. Student perceptions have proven to be an effective means of gathering data in prior research, and
were also very useful in providing data about videotaped
distance courses in this study. This information is
important in shaping how students will benefit from the
FOCUS program in the future.

Some critics, however, may argue that the assessment of
student perceptions did not sufficiently evaluate or measure
the concept of salience in this study. Students were asked
to express their own personal feelings about videotaped
college courses by responding to open-ended survey
statements. Only two survey items (#18 and #20) directly
and specifically addressed the concept of salience. Critics
may argue that, in reality, asking about perceptions does
not readily indicate a true measure of salience.

Others may contend that measures of salience can be
inferred by an overall weighting of the survey responses
(i.e., 5 = strongly agree - 1 = strongly disagree). When
something is of value or importance to an individual, he or
she responds aggressively. Therefore, it is possible to
infer the salience of perceptions regarding FOCUS videotaped
courses by examining weighted survey responses.
Nonetheless, future researchers should consider employing
scales that directly assess salience.

There are some other factors that limit the usefulness
of the findings in this study. First, the FOCUS program has
made modifications to its existing course list and structure
since the time of actual data collection. For example, in
addition to arrangements for telephone contact and face-to-
face meetings with instructors outside of the videotape viewing time, provisions have been made for contact via facsimile transmission and electronic mail. Researchers who wish to expand this study of the FOCUS program should consider these enhancements.

Second, although the social presence factors had a substantial measure of reliability, future researchers should take precautions in wording the survey items. Survey items that were worded with double negatives (e.g., #25 and #27 in Appendix C) were difficult to interpret when calculating the results. Consequently, there was inconsistency in reporting the direction of the relationships for the correlations. Although the double negative items were reversed and corrected through statistical measures, they are best avoided by taking the necessary precautions in the design of the survey instrument.

Third, the sample, largely professional female nursing students, limits the generalizability. Additional research should reexamine the hypothesis to find out whether the dimensions of social presence differ according to the following demographical data: (1) age; (2) gender; (3) occupation; (4) employment status; (5) geographic distance; and (6) academic discipline. Future researchers should also take steps to generate a more random sample of students.

Finally, the findings regarding the perceptions of benefits for enrollment in videotaped courses were not
clearly conclusive. I explored them superficially and now believe that the perceptions of benefits should be explored in greater depth. Additional research will provide a greater understanding of the motivations and/or the perceived benefits for enrollment in videotaped courses and their impact on the salience of perceptions of social presence.

Implications for Future Research

The findings of this study have several implications for future communication research. First, the review of literature presented the cognitive approach and the uses of gratifications approach as frameworks for guiding the examination of data in this study.

The cognitive approach to communication research suggests that past experience with particular communication channels influence how communicators will respond in subsequent encounters with other media. Future research should explore how media socialization (i.e., habits regarding the use of different media) may influence the students who enroll in FOCUS classes.

Students who have access to and are familiar with technological enhancements such as, computer electronic mail and facsimile machines, may adjust well to FOCUS classes. However, students who are not comfortable with and do not have immediate access to these media channels, may view these enhancements as barriers or restrictions in their
opportunities for interaction.

Therefore, program administrators may want to further explore the media socialization of prospective FOCUS students. A more thorough examination of students’ media environments (i.e., how much time do students spend watching television, using electronic mail and other media?) may give additional insight that will aid in increasing the marketability of the FOCUS program.

Studies also show that social presence is an important gratification associated with certain media. Perceptions of the social presence in videotaped classes, may be related to the personalness or immediacy exhibited by the videotape instructors. Therefore, future research should explore whether teacher immediacy cues (i.e., gestures, eye contact, posture, and other idiosyncracies) have an affect on the salience of students’ perceptions of social presence regarding FOCUS videotaped classes. These nonverbal cues may vary according to the instructor.

An exploration of parasocial involvement may also give additional insight about whether students can form intimate or imagined relationships with instructors and other students through their participation in FOCUS videotaped classes.

Finally, uses and gratification research has helped to explore how social presence influences the needs or gratifications that are fulfilled by involvement in videotaped distance classes. The perceptions of social
presence were very salient, and strongly influenced by the
inherent needs of the students in this study of videotaped
courses. Perhaps, future students may examine social
presence as a student need or gratification.

Summary

Past research only speculated about the fact that
distance students make trade-offs between the need for
personal human contact, the personal convenience afforded by
the videotaped distance learning option, and other perceived
benefits provided by this method of instruction. Formal
research had not been conducted to specifically address
these issues. Nor had previous research established the
degree to which students were actually concerned about the
social presence associated with videotaped instruction.

In this study, a mail questionnaire was developed and
compiled based on past research speculations, and
administered via mail to students for their evaluations of
the videotaped instruction method. The cognitive approach
and the uses and gratification approach to communication
research provided a framework for examining the perceptions
of social presence in videotaped instruction.

Findings supported the prediction that students make
conscious trade-offs between their perceptions of personal
contact and perceptions of convenience. Findings revealed
that social presence was directly related to the perceived
benefit of accessibility, but inversely related to
perceptions of career advancement and personal enrichment. Finally, results also indicated that students liked videotaped FOCUS course regardless of the social presence dimensions. Despite any perceived limitations associated with this method of instruction, students valued its usefulness in fulfilling their personal needs for personalness and convenience.
APPENDIX A

The following instrument is a copy of the mailed survey questionnaire used by the FOCUS Administration to assess the videotaped courses that distance students were interested in.

To help you plan your spring schedule, we have enclosed our prepublication listing of the spring 1990 courses offered through FOCUS VIDEO in the BSN for the RN program. To help us better meet your needs, please take a minute to check off a few responses on this form. YOU WILL NOT BE UNDER ANY OBLIGATION BY YOUR ANSWERS!

If my schedule permits, I would like to take the following FOCUS courses:

Spring 1990
Summer 1990
Fall 1990
Future

The thing I like best about FOCUS is

For me, the biggest problem with FOCUS is

I have or plan to (date______) matriculate in the BSN for the RN Program ________.

I do not plan to matriculate. ________

Name_____________________________________________________

Work Site __________________________________________________

Thanks for your help in improving FOCUS. Please return this form in the prepaid mailer and feel free to add any comments about the program.

Additional Comments:
APPENDIX B

FOCUS COURSE EVALUATION

We are interested in your reactions to and evaluation of the FOCUS video courses. We hope that this experience was a positive one for you and that you have benefited from this course. Please return this evaluation in the enclosed envelope. You may complete it anonymously if you choose.

Please rate the video course(s) on the following criteria with one being lowest and five being the highest.

RATING SCALE
1....2....3....4....5

VIDEO TAPES
a. Promptness of tape delivery
b. Quality of tapes
c. Availability of tapes

STUDENT SUPPORT
a. Support from University faculty
b. Support from FOCUS Office
c. Support from Site Coordinators
d. Support from worksite management

WRITTEN MATERIALS AND EXAMS
a. Promptness of delivery
b. Availability of materials
c. Grade reporting procedures
d. Arrangement of exam proctoring

TEXTBOOKS
a. Ease of delivery
b. Promptness of delivery
c. Payment procedures

REGISTRATION PROCEDURES
a. Ease of registration
b. Payment procedures
c. Clarity of directions
I AM INTERESTED IN LEARNING ABOUT VIDEOTAPE DISTANCE LEARNING AS IT IS DESIGNED AND IMPLEMENTED BY THE UNIVERSITY OF DELAWARE FOCUS PROGRAM. WOULD YOU PLEASE ANSWER THESE QUESTIONS FOR ME? YOUR ANSWERS WILL BE ANONYMOUS AND YOUR ASSISTANCE WILL BE VERY HELPFUL. THANK YOU.

I. Here are several statements that people might make about videotaped distance learning. Please indicate your agreement with each statement by CIRCLING the response that best expresses your own feelings about videotaped distance learning (as administered by the University of Delaware FOCUS Program).

**Videotaped Distance Learning Survey**

1. Are a flexible alternative for students who are geographically isolated from major college campuses.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

2. Are often associated with an absence of direct face-to-face contact.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

3. Allow distance students to feel present with the instructor and the students in the live lectures although they are physically separated.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

4. Are convenient because they are scheduled and available at times outside normal hours of instruction.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

5. Prevent distance students from interacting with instructors and fellow classmates as freely as students on-campus.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

**Why do/did you participate in the videotaped distance learning program?**

6. In order to earn college credits towards a degree.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree
7. For personal enrichment.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

8. For career advancement.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

9. Because it has made my educational goals more attainable.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

10. Because it reaches students that are geographically isolated from major college campuses.
    Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

11. Because it enables me to avoid travel to a university campus.
    Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

12. Because it allows me the flexibility of being able to stop, play, or rewind the videotape at my own convenience.
    Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

13. Because it enables me to better manage my family, my work schedule, and other outside commitments, in addition to my coursework.
    Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

How do you feel about videotaped distance learning? I feel...

14. A sense of unity and groupness with the students participating in the live lectures, although we have never met personally.
    Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

15. Uncomfortable not being able to participate in the actual class discussions while viewing the videotapes at home, or at the worksite.
    Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

16. That increased contact with the instructor and fellow distance learners would help me to enjoy this type of learning more.
    Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
17. Isolated from the University campus, and the students participating in the live lectures.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
18. That the amount of contact with instructors and peers is more important to me than the added convenience of videotaped distance learning.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
19. Comfortable with the amount of contact with the instructor.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
20. That the added convenience of videotaped distance learning outweighs the restricted amount of personal contact with instructors and peers.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
21. That I have developed strong ties with fellow distance learners.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
22. Satisfied with the amount of interaction between myself and my fellow distance learners.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
23. Uncomfortable when interaction is delayed or restricted between myself and the instructor.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree

How well do you like videotaped distance learning?

24. I would enroll in another videotaped course.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
25. I do not enjoy the minimized personal interaction between teachers and students in videotaped learning courses.
   Strongly Agree Agree Neutral Disagree Strongly Agree Agree Neutral Disagree
26. I would recommend and encourage others to take videotaped courses.

    | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
    |----------------|-------|---------|----------|-------------------|

27. I do not like the lack of interaction with students participating in the live lecture sessions of the courses.

    | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
    |----------------|-------|---------|----------|-------------------|

28. I do not enjoy the feeling of isolation that I experience from being physically separated from the University campus.

    | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
    |----------------|-------|---------|----------|-------------------|

29. I feel that the number of videotaped courses offerings should be increased.

    | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
    |----------------|-------|---------|----------|-------------------|

II. In this section please CHECK (✓) the space between each pair of words that most closely represents your feelings about videotaped learning courses.

I feel that videotaped learning is:

1. impersonal: ___: ___: ___: ___: ___: personal
2. sensitive: __: __: __: __: __: insensitive
3. cold: __: __: __: __: __: warm
4. sociable: __: __: __: __: __: unsociable
5. comfortable: __: __: __: __: __: uncomfortable
6. accessible: __: __: __: __: __: unaccessible
7. inconvenient: __: __: __: __: __: convenient
8. flexible: __: __: __: __: __: inflexible
Next, I would like you to use the same scale to indicate your feelings about face-to-face classroom instruction.

I feel that face-to-face classroom instruction is:

1. impersonal __: __: __: __: __: personal
2. sensitive __: __: __: __: __: insensitive
3. cold __: __: __: __: __: warm
4. sociable __: __: __: __: __: unsociable
5. comfortable __: __: __: __: __: uncomfortable
6. accessible __: __: __: __: __: inaccessible
7. inconvenient __: __: __: __: __: convenient
8. flexible __: __: __: __: __: inflexible

III. EXPERIENCE WITH DISTANCE LEARNING

Please indicate your answers to the following questions in the spaces provided or CHECK (✓) the appropriate spaces where required.

1. How many video courses have you taken? _____ courses.
2. When did you last take a video course? The year 19__. Fall ___? Winter ___? Spring ___? or Summer semester ___?
3. What subjects have you taken through the videotaped distance learning program? Please list the courses below.

4. Have you ever withdrawn from a videotaped distance course?

   Yes ___ or No ___

   If yes, why?

5. On the average, how many times per week do/did you communicate with the instructor?

   At least ___ times per week.
6. On the average, how many times per week do/did you interact with fellow distance learners?  
   At least ____ times per week.

7. On the average, about how many different videotapes do you watch per week for schoolwork?  
   About ____ tapes per week.

8. On the average, how many hours a week do you spend watching videotapes for coursework at:  
   home? ____ hours  
   work? ____ hours  
   other? (specify) ____ hours

IV. PERSONAL INFORMATION

Please indicate your answers to the following questions in the spaces provided.

1. What is your age (as of your last birthday). ____ years.

2. Please indicate your gender by CIRCLING the appropriate answer.
   Male or Female

3. Please indicate the highest level of education that you have completed by CIRCLING the appropriate answer.
   a. high school
   b. some college completed
   c. bachelors' degree
   d. master's degree
   e. doctorate degree
   f. post doctorate degree

4. What is your occupation? ___________________________________________

5. Is your position full-time ____? part-time ____? or other ____?

6. About how long does it take for you to commute from your home to the University campus?  
   ____ minutes.

7. About how long does it take for you to commute from your home to the nearest video worksite?  
   ____ minutes.
V. ADDITIONAL COMMENTS: Please write any other comments that you have about videotaped distance learning below.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

YOUR CONTRIBUTION OF TIME AND THOUGHT IS GREATLY APPRECIATED!!
Dear Student:

My name is Pamela Burton, and I am a graduate student in the Department of Communication at the University of Delaware. Under the direction of the Department Chair, Dr. John A. Courtright, I am conducting a research project on the use of communication technologies in education. My particular interest is in videotaped distance learning.

I am contacting you because your name has been listed as a previous or current participant in the FOCUS (Flexible Options for Continued University Study) videotape program at the University of Delaware. I understand that this program enrolls students from several different academic disciplines, and is currently in the process of making some developmental changes. Therefore, your insight about videotaped distance learning would be very helpful.

Enclosed is a brief questionnaire that will survey your feelings about the videotaped learning experience. I hope that you will complete the entire questionnaire which has been developed based on prior evaluations of videotaped distance learning, and literature reporting other distance education research. While your participation is not required, your contribution of time and thought will be greatly appreciated.

Please do not put your name on the questionnaire, as no individuals will be identified. Be assured that your responses will be kept strictly confidential.

After you have completed the entire survey, please return the questionnaire by enclosing it in the self-addressed, stamped envelope that is enclosed.

Should you have any questions about this study, please contact either myself, Pamela Burton at (302) 451-2686, or Dr. John A. Courtright at (302) 451-8042.

Again, thank you for your time and your cooperation.

Sincerely,

Pamela I. Burton – Royster

Enclosures
Dear Student:

Several weeks ago, you received in the mail a brief questionnaire about videotaped distance courses. You were contacted because your name had been listed as either a current or previous participant in the FOCUS (Flexible Options for Continued University Study) videotape program at the University of Delaware, Newark, Delaware.

Although your participation in this survey is anonymous and not required, your insight about videotape learning may have a significant impact on the future development of the FOCUS program, as it is currently undergoing an evaluation.

If you have not already done so, please complete the mailed questionnaire form as soon as possible, and return it in the postage-paid envelope that has been provided.

Again, thank you for your time and cooperation. I am waiting to hear from you!!

Department of Communication
### TABLE 1
**DEMOGRAPHICAL SUMMARY OF STUDENT SAMPLE**

<table>
<thead>
<tr>
<th>GENDER</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALE</td>
<td>14</td>
<td>11.8</td>
</tr>
<tr>
<td>FEMALE</td>
<td>105</td>
<td>88.2</td>
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</table>

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE</td>
<td>90</td>
<td>76.3</td>
</tr>
<tr>
<td>ENGINEER</td>
<td>5</td>
<td>4.2</td>
</tr>
<tr>
<td>OTHER</td>
<td>23</td>
<td>19.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EMPLOYMENT STATUS</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>FULL-TIME</td>
<td>100</td>
<td>84.7</td>
</tr>
<tr>
<td>PART-TIME</td>
<td>16</td>
<td>13.6</td>
</tr>
<tr>
<td>OTHER</td>
<td>1</td>
<td>0.8</td>
</tr>
</tbody>
</table>
TABLE 2

Rotated Factor Pattern: Perceptions of Videotaped Distance Courses – Scale

"I feel that videotaped learning is:"

<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>SOCIAL PRESENCE SCALE (Means, Standard Deviations)</th>
<th>WARMTH Factor #1</th>
<th>DISCOMFORT Factor #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Personal (3.13, 1.12)</td>
<td>0.80</td>
<td>0.21</td>
</tr>
<tr>
<td>31</td>
<td>Sensitive (2.88, 1.05)</td>
<td>0.74</td>
<td>0.17</td>
</tr>
<tr>
<td>32</td>
<td>Warm (2.97, 0.95)</td>
<td>0.71</td>
<td>0.13</td>
</tr>
<tr>
<td>33</td>
<td>Sociable (3.36, 1.07)</td>
<td>0.68</td>
<td>0.09</td>
</tr>
<tr>
<td>34</td>
<td>Uncomfortable (2.03, 1.12)</td>
<td>0.31</td>
<td>0.60</td>
</tr>
<tr>
<td>35</td>
<td>Inaccessible (1.63, 1.04)</td>
<td>0.06</td>
<td>1.01</td>
</tr>
<tr>
<td>36</td>
<td>Inconvenient (1.34, 0.81)</td>
<td>0.23</td>
<td>0.31</td>
</tr>
<tr>
<td>37</td>
<td>Inflexible (1.38, 0.84)</td>
<td>0.12</td>
<td>0.53</td>
</tr>
</tbody>
</table>

% Variance Explained

29.14% 23.06%

Total Variance Explained = 52.2%
<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>PERCEPTIONS (M, StD)</th>
<th>RESTRICTION Factor #1</th>
<th>SATISFACTION Factor #2</th>
<th>AFFILIATION Factor #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>I feel uncomfortable when interaction with teacher is delayed or restricted (3.01, 0.94)</td>
<td>0.75</td>
<td>0.24</td>
<td>-0.18</td>
</tr>
<tr>
<td>17</td>
<td>I feel isolated from students in live lectures on campus (3.04, 1.08)</td>
<td>0.75</td>
<td>0.47</td>
<td>-0.15</td>
</tr>
<tr>
<td>5</td>
<td>Videotaped courses prevent distance students from interacting as freely as those on campus (2.42, 1.12)</td>
<td>0.71</td>
<td>0.24</td>
<td>-0.14</td>
</tr>
<tr>
<td>16</td>
<td>Increased contact would help me to enjoy the classes more (2.78, 1.02)</td>
<td>0.61</td>
<td>0.39</td>
<td>-0.05</td>
</tr>
<tr>
<td>19</td>
<td>I feel uncomfortable with amount of teacher-student contact (3.34, 0.90)</td>
<td>0.59</td>
<td>0.45</td>
<td>-0.30</td>
</tr>
<tr>
<td>15</td>
<td>I feel uncomfortable when I can't participate in live classroom discussions (3.37, 1.02)</td>
<td>0.57</td>
<td>0.55</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>Videotaped distance courses lack direct face to face contact (2.39, 0.97)</td>
<td>0.54</td>
<td>0.17</td>
<td>-0.09</td>
</tr>
<tr>
<td>20</td>
<td>I feel that more personal convenience would outweigh my need for personal contact (3.95, 1.00)</td>
<td>0.33</td>
<td>0.74</td>
<td>-0.18</td>
</tr>
<tr>
<td>SURVEY ITEM #</td>
<td>PERCEPTIONS (M, StD)</td>
<td>RESTRICTION Factor #1</td>
<td>SATISFACTION Factor #2</td>
<td>AFFILIATION Factor #3</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------</td>
<td>-----------------------</td>
<td>------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>26</td>
<td>I recommend others to take videotaped courses (4.13, 0.85)</td>
<td>0.19</td>
<td>0.73</td>
<td>-0.22</td>
</tr>
<tr>
<td>25</td>
<td>I dislike minimized teacher-student interaction (3.29, 1.08)</td>
<td>0.51</td>
<td>0.72</td>
<td>-0.13</td>
</tr>
<tr>
<td>27</td>
<td>I dislike limited interaction with students in live lectures (4.13, 0.85)</td>
<td>0.49</td>
<td>0.68</td>
<td>-0.18</td>
</tr>
<tr>
<td>21</td>
<td>I’ve developed strong ties with fellow distance learners (3.53, 0.96)</td>
<td>-0.05</td>
<td>-0.06</td>
<td>0.85</td>
</tr>
<tr>
<td>22</td>
<td>I’m satisfied with amount of interaction I have with other distance learners (2.97, 0.97)</td>
<td>-0.36</td>
<td>-0.39</td>
<td>0.60</td>
</tr>
</tbody>
</table>

% Variance Explained: 26.52% 26.12% 10.30%
Total Variance Explained = 62.94%

Note: Items #3, #14, and #18 did not significantly load on either of the three factors.
### TABLE 4
Rotated Factor Pattern: Perceptions of Videotaped Distance Courses - Convenience

<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>PERCEPTIONS</th>
<th>PERSONAL CONVENIENCE Factor #1</th>
<th>GEOGRAPHICAL CONVENIENCE Factor #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>I feel that the amount of contact with teachers and peers is more important than the convenience of videotaped classes (2.15, 1.05)</td>
<td>0.79</td>
<td>0.20</td>
</tr>
<tr>
<td>20</td>
<td>I feel that the convenience of videotaped classes outweigh restricted contact with teachers and peers (3.95, 1.00)</td>
<td>0.78</td>
<td>0.17</td>
</tr>
<tr>
<td>13</td>
<td>Videotaped courses allow me to better manage my work, home, and school schedules (1.50, 0.84)</td>
<td>0.77</td>
<td>0.16</td>
</tr>
<tr>
<td>4</td>
<td>Videotaped courses are convenient because they are scheduled outside of the normal class hours (1.34, 0.53)</td>
<td>0.61</td>
<td>0.30</td>
</tr>
<tr>
<td>11</td>
<td>Videotaped courses eliminate unnecessary travel to college campuses (1.68, 0.84)</td>
<td>0.31</td>
<td>0.74</td>
</tr>
<tr>
<td>10</td>
<td>Videotaped courses reach students who are geographically separated from college campuses (1.99, 0.94)</td>
<td>0.01</td>
<td>0.67</td>
</tr>
<tr>
<td>1</td>
<td>Videotaped learning is a flexible alternative for students who are geographically separated from college campuses (1.40, 0.53)</td>
<td>0.21</td>
<td>0.56</td>
</tr>
<tr>
<td>% Variance Explained</td>
<td>29.92%</td>
<td>21.17%</td>
<td></td>
</tr>
</tbody>
</table>

Total Variance Explained = 51.09%
## Rotated Factor Pattern: Benefits of Videotaped Distance Courses

<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>PERCEPTIONS (M, Std)</th>
<th>ACCESSIBILITY</th>
<th>CAREER ADVANCEMENT</th>
<th>PERSONAL ENRICHMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Videotaped courses enable me to avoid commuting to a college campus (1.68, 0.84)</td>
<td>0.76</td>
<td>0.11</td>
<td>0.14</td>
</tr>
<tr>
<td>12</td>
<td>Videotaped courses allow me to stop, rewind, and play tapes at my own convenience (1.62, 0.79)</td>
<td>0.55</td>
<td>0.15</td>
<td>0.00</td>
</tr>
<tr>
<td>9</td>
<td>Videotaped courses makes my educational goals more attainable (1.75, 0.85)</td>
<td>0.54</td>
<td>0.37</td>
<td>0.04</td>
</tr>
<tr>
<td>10</td>
<td>Videotaped courses reach students who are isolated geographically (1.99, 0.94)</td>
<td>0.54</td>
<td>0.18</td>
<td>0.13</td>
</tr>
<tr>
<td>13</td>
<td>Videotaped courses help me to manage my schedule for work, home and school (1.49, 0.84)</td>
<td>0.47</td>
<td>0.12</td>
<td>0.01</td>
</tr>
<tr>
<td>8</td>
<td>I take videotaped courses for career advancement (1.86, 0.86)</td>
<td>0.14</td>
<td>0.73</td>
<td>0.16</td>
</tr>
<tr>
<td>6</td>
<td>I take videotaped courses to earn college degree credits (1.47, 0.72)</td>
<td>0.29</td>
<td>0.60</td>
<td>-0.04</td>
</tr>
<tr>
<td>7</td>
<td>I take videotaped courses for personal enrichment (2.14, 0.95)</td>
<td>0.11</td>
<td>0.08</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>% Variance Explained</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>22.50%</td>
<td>14.00%</td>
<td>9.32%</td>
<td></td>
</tr>
</tbody>
</table>

Total Variance Explained = 45.82%
### TABLE 6

Factor Pattern: Perceptions of Videotaped Distance Courses - Liking

<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>PERCEPTIONS</th>
<th>LIKING (M, StD)</th>
<th>FACTOR (N = 119)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>I dislike restricted interaction between teachers and students (3.29, 1.08)</td>
<td></td>
<td>0.88</td>
</tr>
<tr>
<td>27</td>
<td>I dislike restricted interaction with students in live lectures (3.27, 0.98)</td>
<td></td>
<td>0.86</td>
</tr>
<tr>
<td>28</td>
<td>I dislike feeling isolated from college campus (3.38, 1.10)</td>
<td></td>
<td>0.80</td>
</tr>
<tr>
<td>24</td>
<td>I would enroll in another videotaped course (1.80, 1.12)</td>
<td></td>
<td>0.79</td>
</tr>
<tr>
<td>26</td>
<td>I recommend others to take videotaped courses (4.13, 0.85)</td>
<td></td>
<td>0.76</td>
</tr>
<tr>
<td>29</td>
<td>I feel that the number of videotaped courses should be increased (1.61, 0.78)</td>
<td></td>
<td>0.69</td>
</tr>
</tbody>
</table>

% Variance Explained 64.10%
TABLE 7
CORRELATION ANALYSIS

10 VARIABLES:
Liking, Warmth, Discomfort, Restriction, Satisfaction, Affiliation, Personal Convenience, Geographical Convenience, Accessibility, Career Advancement

**Simple Statistics**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>N</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIKING*</td>
<td>119</td>
<td>0</td>
<td>0.9610</td>
</tr>
<tr>
<td>WARMTH</td>
<td>118</td>
<td>11.6271</td>
<td>3.4164</td>
</tr>
<tr>
<td>DISCOMFORT</td>
<td>119</td>
<td>12.9580</td>
<td>2.4509</td>
</tr>
<tr>
<td>RESTRICTION</td>
<td>116</td>
<td>20.1293</td>
<td>5.6330</td>
</tr>
<tr>
<td>SATISFACTION</td>
<td>117</td>
<td>12.6581</td>
<td>2.0221</td>
</tr>
<tr>
<td>AFFILIATION</td>
<td>119</td>
<td>6.4958</td>
<td>1.7265</td>
</tr>
<tr>
<td>PERSONAL CONVENIENCE</td>
<td>117</td>
<td>8.9402</td>
<td>1.4756</td>
</tr>
<tr>
<td>GEOGRAPHICAL CONVENIENCE</td>
<td>115</td>
<td>5.0783</td>
<td>1.8645</td>
</tr>
<tr>
<td>ACCESSIBILITY</td>
<td>115</td>
<td>0.4957</td>
<td>1.1726</td>
</tr>
<tr>
<td>CAREER ADVANCEMENT</td>
<td>115</td>
<td>5.0696</td>
<td>1.8765</td>
</tr>
</tbody>
</table>

*The mean for Liking = 0 because it was computed as a factor score.*
### TABLE 8

Pearson Correlations for Social Presence Scale Factors, Social Presence Item-Response Factors, and Convenience Factors

<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>PERCEPTIONS (M, SD)</th>
<th>PERSONAL CONVENIENCE</th>
<th>GEOGRAPHICAL CONVENIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-33</td>
<td>Warmth (12.37, 3.42)</td>
<td>-0.35 (b)</td>
<td>-0.18 (e)</td>
</tr>
<tr>
<td>34-37</td>
<td>Discomfort (5.04, 2.45)</td>
<td>-0.27 (c)</td>
<td>-0.18 (e)</td>
</tr>
<tr>
<td>2, 5, 15, 16, 17, 19, 23</td>
<td>Restriction (20.13, 5.63)</td>
<td>-0.42 (b)</td>
<td>NS</td>
</tr>
<tr>
<td>18, 20, 25, 26, 27</td>
<td>Satisfaction (12.66, 2.02)</td>
<td>-0.32 (a)</td>
<td>-0.30 (d)</td>
</tr>
<tr>
<td>21, 22</td>
<td>Affiliation (6.49, 1.73)</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

(a) p < 0.0005  
(b) p < 0.0001  
(c) p < 0.002  
(d) p < 0.001  
(e) p < 0.05
### TABLE 2


<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>PERCEPTIONS (M, Std)</th>
<th>ACCESSIBILITY</th>
<th>CAREER ADVANCEMENT</th>
<th>PERSONAL ENRICHMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-33</td>
<td>Warmth</td>
<td>0.19 (e)</td>
<td>-0.18 (d)</td>
<td>-0.20 (e)</td>
</tr>
<tr>
<td>34-37</td>
<td>Discomfort</td>
<td>NS</td>
<td>-0.23 (f)</td>
<td>NS</td>
</tr>
<tr>
<td>2, 5, 15</td>
<td>Restriction</td>
<td>0.32 (a)</td>
<td>-0.29 (c)</td>
<td>NS</td>
</tr>
<tr>
<td>16, 17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19, 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18, 20, 25, 26, and 27</td>
<td>Satisfaction</td>
<td>0.24 (b)</td>
<td>-0.28 (c)</td>
<td>-0.23 (f)</td>
</tr>
<tr>
<td>21, 22</td>
<td>Affiliation</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

(a) $p < 0.0005$
(b) $p < 0.008$
(c) $p < 0.001$
(d) $p < 0.04$
(e) $p < 0.03$
(f) $p < 0.01$
**TABLE 10**


<table>
<thead>
<tr>
<th>SURVEY ITEM #</th>
<th>PERCEPTIONS (M, Std)</th>
<th>LIKING FACTOR (N = 119)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 - 33</td>
<td>Warmth</td>
<td>0.70</td>
</tr>
<tr>
<td>34 - 37</td>
<td>Discomfort</td>
<td>0.40</td>
</tr>
<tr>
<td>2, 5, 15, 17, 19, 23</td>
<td>Restriction</td>
<td>0.82</td>
</tr>
<tr>
<td>18, 20, 25, 26, 27</td>
<td>Satisfaction</td>
<td>0.91</td>
</tr>
<tr>
<td>21, 22</td>
<td>Affiliation</td>
<td>0.50</td>
</tr>
</tbody>
</table>

p < 0.0001
### TABLE 11

The SAS System  
Correlation Analysis Summary

<table>
<thead>
<tr>
<th></th>
<th>LIKING</th>
<th>WARMTH</th>
<th>DISCOMFORT</th>
<th>RESTRICT</th>
<th>SATISFACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIKING</td>
<td>1.00000</td>
<td>0.70203</td>
<td>0.39857</td>
<td>0.81842</td>
<td>0.90690</td>
</tr>
<tr>
<td>WARMTH</td>
<td>0.70203</td>
<td>1.00000</td>
<td>0.30930</td>
<td>0.72944</td>
<td>0.66298</td>
</tr>
<tr>
<td>DISCOMFT</td>
<td>0.39857</td>
<td>0.30930</td>
<td>1.00000</td>
<td>0.35368</td>
<td>0.36076</td>
</tr>
<tr>
<td>RESTRICT</td>
<td>0.81842</td>
<td>0.72944</td>
<td>0.35368</td>
<td>1.00000</td>
<td>0.81563</td>
</tr>
<tr>
<td>SATISFCT</td>
<td>0.90690</td>
<td>0.66298</td>
<td>0.36076</td>
<td>0.81563</td>
<td>1.00000</td>
</tr>
<tr>
<td>AFFILL</td>
<td>-0.49772</td>
<td>-0.51583</td>
<td>-0.20132</td>
<td>-0.46799</td>
<td>-0.44057</td>
</tr>
<tr>
<td>PERCON</td>
<td>-0.57738</td>
<td>-0.35412</td>
<td>-0.27471</td>
<td>-0.41553</td>
<td>-0.31894</td>
</tr>
<tr>
<td>GEOCON</td>
<td>-0.41046</td>
<td>-0.18193</td>
<td>-0.18103</td>
<td>-0.14461</td>
<td>-0.30349</td>
</tr>
<tr>
<td>ACCESS</td>
<td>0.26981</td>
<td>0.19392</td>
<td>0.14656</td>
<td>0.32121</td>
<td>0.24444</td>
</tr>
<tr>
<td>CAREERAD</td>
<td>-0.35777</td>
<td>-0.18725</td>
<td>-0.23607</td>
<td>-0.29019</td>
<td>-0.28717</td>
</tr>
</tbody>
</table>

$r = 0.18$, then $p < 0.05$
$r = 0.30$, then $p < 0.001$
$r = 0.34$, then $p < 0.001$
<table>
<thead>
<tr>
<th>AFFILL</th>
<th>PERCON</th>
<th>GEOCON</th>
<th>ACCESS</th>
<th>CAREERAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIKING</td>
<td>-0.49772</td>
<td>-0.57738</td>
<td>-0.41046</td>
<td>0.26981</td>
</tr>
<tr>
<td>WARMTH</td>
<td>-0.51583</td>
<td>-0.35412</td>
<td>-0.16193</td>
<td>0.19392</td>
</tr>
<tr>
<td>DISCOMFORT</td>
<td>-0.20132</td>
<td>-0.27471</td>
<td>-0.18103</td>
<td>0.14656</td>
</tr>
<tr>
<td>RESTRICT</td>
<td>-0.46799</td>
<td>-0.41553</td>
<td>-0.14461</td>
<td>0.32121</td>
</tr>
<tr>
<td>SATISFCT</td>
<td>-0.44057</td>
<td>-0.31894</td>
<td>-0.30349</td>
<td>0.24444</td>
</tr>
<tr>
<td>AFFILL</td>
<td>1.00000</td>
<td>0.11257</td>
<td>0.13594</td>
<td>-0.00536</td>
</tr>
<tr>
<td>PERCON</td>
<td>0.11257</td>
<td>1.00000</td>
<td>0.32129</td>
<td>-0.46835</td>
</tr>
<tr>
<td>GEOCON</td>
<td>0.13594</td>
<td>0.32129</td>
<td>1.00000</td>
<td>0.47962</td>
</tr>
<tr>
<td>ACCESS</td>
<td>-0.00536</td>
<td>-0.46835</td>
<td>0.47962</td>
<td>1.00000</td>
</tr>
<tr>
<td>CAREERAD</td>
<td>0.17114</td>
<td>0.33793</td>
<td>0.46089</td>
<td>0.04783</td>
</tr>
</tbody>
</table>

$r = 0.18$, then $p < 0.05$
$r = 0.30$, then $p < 0.001$
$r = 0.34$, then $p < 0.001$
REFERENCES


Smith, P. J. (1987). Distance education and educational change. In P. Smith, & M. Kelly (Eds.), Distance education and the mainstream (pp. 24- 43). New York: Crom Helm.


