

AN EXPERIMENTAL STUDY OF TEACHERS' VERBAL AND NONVERBAL
IMMEDIACY, STUDENT MOTIVATION, AND COGNITIVE LEARNING
IN VIDEO INSTRUCTION

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This study used an experimental design and a direct test of recall to provide data about teacher immediacy and student cognitive learning. Four hypotheses and a research question addressed two research problems: first, how verbal and nonverbal immediacy function together and/or separately to enhance learning; and second, how immediacy affects cognitive learning in relation to student motivation. These questions were examined in the context of video instruction to provide insight into distance learning processes and to ensure maximum control over experimental manipulations.

Participants ($N = 347$) were drawn from university students in an undergraduate communication course. Students were randomly assigned to groups, completed a measure of state motivation, and viewed a 15-minute video lecture containing part of the usual course content delivered by a guest instructor. Participants were unaware that the video

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CHAPTER 1

RESEARCH PROBLEM

Introduction

This chapter introduces the purpose of the study and defines the terms involved in the research. The theoretical base and significance of the study are also presented in this chapter.

Purpose of the Study

This study examined how teacher verbal immediacy and teacher nonverbal immediacy function together and separately to enhance cognitive learning, and how teacher immediacy affects cognitive learning in relation to student motivation. These questions were examined in the context of video instruction, both to provide insight into distance learning processes and to ensure maximum control over the manipulation of communication variables. The purpose of the investigation was to further the understanding of the ways in which teacher verbal and nonverbal immediacy behaviors function as effective instructional strategies, especially in the distance education environment where reducing the distance between teacher and learner is of paramount importance.

The communication styles, strategies, and behaviors employed by teachers play a strategic role in student learning outcomes. For example, nonverbal communication behaviors such as eye gaze, smiles, nods, relaxed body posture, movement, and gestures have the effect of reducing physical and/or psychological distance between teacher and students, and ultimately increasing affective and cognitive learning (Andersen, 1979; Christophel & Gorham, 1995; Hackman & Walker, 1990; Plax, Kearney, McCroskey, & Richmond, 1986). When classroom teachers employ these nonverbal immediacy strategies, students indicate greater affect or liking for the teacher, greater enjoyment of the class, and increased perceptions of having learned from the course (e.g., Richmond, Gorham, & McCroskey, 1987). Similarly, verbal communication strategies may be employed by teachers to reduce student perceptions of psychological distance. For example, inclusive references, self-disclosure, and present verb tense are often perceived by students as expressions of interpersonal approach or closeness, and the use of verbal immediacy as an instructional communication strategy may lead to positive learning outcomes (Gorham, 1988; Jordan, 1989; Mehrabian, 1971, 1981; Menzel & Carrell, 1999; Sanders & Wiseman,

1990). "Teachers who feel close to their students will use immediate pronouns like 'our,' 'we,' and 'us.' In this way teachers verbally show that they feel a part of their students and imply that they are working together toward a common goal" (Jordan, 1989, p. 1).

Communication researchers are increasingly turning their attention to immediacy in the distance learning environment, and initial findings indicate that teacher communication strategies can help achieve the goal of reducing the distance in distance education (e.g., Comeaux, 1995; Freitas, Myers, & Avtgis, 1998; Guerrero & Miller, 1998). For example, remote students do indeed perceive the nonverbally immediate behaviors of their teachers through video transmission (Walker & Hackman, 1991), and verbal and nonverbal immediacy contribute to learning outcomes across a range of differing delivery systems (Hackman & Walker, 1990; Walker & Hackman, 1991). Furthermore, perception of immediacy in distance learning may be enhanced by new communication technologies that enable distance educators to engage in frequent interaction with remote students. This teacher-student interaction contributes to a sense of social presence which, in some cases, may approximate that

of the traditional classroom (Murphy & Farr, 1993; Schlosser & Anderson, 1993).

Despite these findings supporting teacher immediacy's effects on cognitive learning, distance educators remain uncertain about the relative role of verbal immediacy and nonverbal immediacy in video instruction. Further research is needed to explain how verbal immediacy and nonverbal immediacy function together and/or separately to enhance cognitive learning.

Another research problem addressed by this study involved the communication traits and behaviors of students and how they confound or mediate immediacy's effects on learning. For example, students' state motivation has been shown to be a factor in immediacy's effects on learning (Frymier, 1993, 1994), and some researchers have hypothesized that student motivation mediates the effects of teacher immediacy on cognitive and affective learning (Christophel, 1990; Frymier, 1994; Richmond, 1990). By contrast, some scholars believe student motivation is merely a confounding variable in the measurement of cognitive learning, and that immediacy's effects are more likely to be mediated by student affect for the teacher than by student motivation (Rodriguez, Plax, & Kearney,

1996). Therefore, while teacher immediacy and student motivation appear to be related, the exact nature of the relationship and its effects on cognitive learning are not yet clear.

The majority of immediacy studies conducted to date have analyzed data collected from student surveys alone, and many have focused on students' affective learning. This present study furthered the investigation of teacher immediacy, student motivation, and cognitive learning through the experimental manipulation of verbal and nonverbal immediacy behaviors employed by a teacher through video instruction. Students' recall of instructional content was tested as a measure of student cognitive learning.

Definition of Terms

Nonverbal immediacy

The construct of nonverbal immediacy describes behaviors which reduce physical or psychological distance between people (Andersen, 1979). Early researchers conceptualized immediacy as those behaviors which "enhance closeness to and nonverbal interaction with another" (Mehrabian, 1969, p. 203). In the instructional context, nonverbally immediate teachers reduce physical and/or

psychological distance when they approach their students in order to communicate at close distances, smile, engage in eye contact, use direct body orientations, use overall body movement and gestures, touch students, assume a relaxed posture and communicating style, and are vocally expressive (Andersen, 1979).

Verbal immediacy

The construct of verbal immediacy encompasses linguistic messages that convey interpersonal approach or liking, thus reducing the psychological distance between individuals (Mehrabian, 1969, 1971). In the classroom, students perceive as more immediate those teachers who use inclusive references such as "we" instead of "you," expressions that minimize distance such as "this university" instead of "that university," present tense instead of past tense, probability such as "will" instead of "may," and ownership such as "I agree" instead of "most people agree" (Jordan, 1989; Kearney, 1994b). Also interpreted as verbally immediate behaviors are teachers' use of humor and self-disclosure in the classroom, calling students by name, and engaging in conversation before, during, and after class (Gorham, 1988).

Student state motivation

Situational or state motivation is defined as "a temporary condition in which individuals direct high levels of concentration and attention toward the competent completion of a task" (Beatty, 1994, p. 343). In the context of instructional communication, students' state motivation refers to students' specific and current attitudes toward a certain course, subject, or class (Christophel, 1990). Descriptors of higher student motivation include such attitudes as "interested, involved, stimulated, challenged, and desire to study" (Christophel, 1990).

Cognitive learning

In his classic taxonomy of educational objectives, Bloom (1956) identified cognitive learning as one of three domains of human learning, along with affective and psychomotor. Cognitive learning refers to students' acquisition, understanding, and recall of specific facts, concepts, and theories covered in the course (Angelo & Cross, 1993; Bloom, 1956). Researchers in the fields of Communication and Education have operationalized cognitive learning in a variety of ways, including grades on specific exams or quizzes, final course grades, overall GPA,

performance on standardized tests such as SAT or GRE, and self reports of students' own perceptions of learning. As a measure of cognitive learning, this study employed a direct test of student recall of instructional content.

Theoretical Considerations

Immediacy research is grounded in approach-avoidance theory, which suggests that "people approach what they like and avoid what they don't like" (Mehrabian, 1981, p. 22). Early conceptualizations of approach-avoidance observed that "approach indicates preference, positive evaluation, and liking, whereas avoidance indicates lack of preference, dislike, and, in extreme cases, fear" (Mehrabian, 1981, p. 14). Thus, a person's affinity for or liking for another person may provide motivation to approach the other, to reduce the physical or psychological distance between them (Mehrabian, 1969).

The social impact of approach-avoidance behaviors may be further explained by theories of interpersonal attraction, i.e. affinity between persons and their propensity to interact in order to initiate or maintain a relationship. Among the many factors contributing to interpersonal attraction are proximity (closeness) and reinforcement (Richmond & McCroskey, 1995). Reinforcement

suggests that "we like people who reward us and we dislike people who punish us" (Berscheid & Walster, 1978, p.23). In anticipation of physical or psychological reward, then, one may employ immediate behaviors in order to approach another individual. Teachers who desire to be viewed positively by their students may employ immediacy as an affinity-seeking strategy, which in turn may increase learning (Rodriguez, Plax, & Kearney, 1996). Moreover, because classroom teachers are among those whose role and status in relation to students carry potential reward value (French & Raven, 1960), students may perceive the nonverbal immediacy behaviors of their teachers as positive and potentially rewarding. Likewise, nonimmediate teachers may not be perceived as rewarding and may even be considered as punishing.

Although many studies have shown that teacher verbal and nonverbal immediacy contribute positively to learning outcomes, questions remain as to how and why teacher immediacy behaviors enhance student learning. In addition to cognitive learning, another factor that appears to be associated with teacher immediacy is student motivation. Richmond (1990) and Christophel (1990) reported a relationship between teacher immediacy and student

motivation, leading McCroskey and Richmond (1992) to conclude that "some teacher behaviors may have the result of increasing student motivation" (p. 111). A large body of educational research has established that highly motivated students exert more energy and focus and therefore learn more. A leading educator and motivation theorist observed, "Motivation is not only important because it is a necessary causal factor of learning but because it mediates learning and is a consequence of learning as well" (Wlodkowski, 1985, p. 4). Thus, some scholars believe that teachers who employ verbal and nonverbal expressions of immediacy enhance students' motivation to learn, which in turn increases their initiative and application to course work and ultimately their cognitive learning (Frymier, 1994). Other researchers have hypothesized that immediacy's effects are mediated by student affect for the teacher (Rodriguez, Plax, & Kearney, 96) or student arousal and attention (Kelley & Gorham, 1988). Thus, important questions remain about the role of teacher verbal immediacy, teacher nonverbal immediacy, and student motivation in relation to cognitive learning.

Significance of the Study

Particularly in the context of distance education, the impact of teacher immediacy as an instructional strategy awaits thorough investigation. Walker and Hackman (1991) observed that "immediate nonverbal behaviors are communicated across television," and that "these behaviors function much as they would in face-to-face interactions" to increase student affect for the instructor (p. 10). These important findings contribute to the expanding literature that supports teacher immediacy, both verbal and nonverbal, as an effective communication strategy in televised instruction. However, the majority of distance learning research, including Walker and Hackman's study, has examined distant students who elected to take the course at a remote site for reasons such as class schedule, commuting distance to campus, and/or an affinity toward technological systems. Therefore, generalization of the findings of these studies should probably be restricted to the population of students who willingly choose distance learning as a preference. Such a student population probably does not represent students in general. Consequently, this present study examined communication and learning among students who were required to receive video

instruction as a part of a traditional classroom course, and results of the study provided useful information about teacher communication and student learning in the wider context of college instruction.

Much of the data that have been analyzed in immediacy research, both in the traditional classroom and the distance learning environment, have been collected through the use of student surveys alone. In some studies, even the dependent variable of cognitive learning has been operationalized as students' own opinions about how much they feel they have learned in the course (e.g., Richmond, McCroskey, Kearney, & Plax, 1987). Conclusions based on these findings would be strengthened if they were supported and corroborated by more objective data collected in more controlled circumstances. Consequently, this present study was conducted as a quasi-experiment involving the controlled manipulation of verbal and nonverbal immediacy and the quantitative measurement of students' recall of course content. Cognitive learning was operationalized as short-term recall (immediately following the video instruction), and cognitive learning data consisted of test scores designed to measure recall of specific instructional content.

This study also offered new insight into the ways that teacher verbal immediacy and teacher nonverbal immediacy function separately and/or together to influence learning. By carefully manipulating verbal and nonverbal communication cues and employing them in various combinations of higher and lower immediacy, this study evaluated the interaction effects of verbal and nonverbal immediacy. In previous research, many of the conclusions advanced in support of teacher immediacy as an instructional strategy have been based upon studies of nonverbal data alone. Even those studies which have included both verbal and nonverbal immediacy measurement have not thoroughly examined the interaction effects of these two communication variables.

This study also investigated the role of student motivation in immediacy's effects on learning. The rationale held that, if student state motivation was found to be a confounding variable, then covarying motivation would reduce statistical error in the measurement of immediacy's effects on learning. On the other hand if student state motivation, in conjunction with teacher verbal and nonverbal immediacy was found to further enhance

learning outcomes, then student motivation would be considered as a partial predictor of cognitive learning.

In summary, this study contributed to communication research in the following ways. First, the investigation broke new ground in the analysis of how teacher verbal and nonverbal immediacy work separately and/or together to enhance learning. Second, it furthered our understanding of the effects of verbal and nonverbal immediacy in video instruction. Third, through experimental design and use of established learning assessment techniques, the study reexamined some conclusions of previous immediacy studies that relied on student survey data alone. Fourth, it sought to clarify the role of student motivation in relation to teacher immediacy and cognitive learning.

Summary

This chapter introduced the purpose of the study, defined the terms involved in the research, and examined the theoretical base and significance of the study. The next chapter presents a review of the literature relating to teacher nonverbal immediacy, teacher verbal immediacy, and student motivation in the traditional classroom and in distance learning, as well as the hypotheses and research question that will guided this study.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

This chapter contains a review of the literature pertaining to teacher nonverbal and verbal immediacy in the traditional classroom and in video instruction at the college level. The chapter continues with a discussion of the theoretical basis for teacher immediacy and issues surrounding the effects of teacher immediacy and student motivation on cognitive learning. The chapter concludes with the hypotheses and research question that guided this investigation.

Teacher Immediacy in the Traditional Classroom

The study of instructional communication is guided by the assumption that verbal and nonverbal messages conveyed by teachers have the potential to significantly affect student learning outcomes. One instructional communication construct that has received considerable attention during the past two decades is that of teacher immediacy, which describes verbal and nonverbal behaviors that reduce physical and/or psychological distance between individuals (Andersen, 1979; Mehrabian, 1969, 1971, 1981). A

significant body of research indicates that teacher immediacy, both verbal and nonverbal, is positively associated with student learning outcomes. Therefore, the communication variable of teacher immediacy should occupy a place of strategic importance for educators and communication professionals who share the goal of increasing student learning.

The construct of teacher immediacy has evolved gradually over the past two decades. At first, communication researchers focused their investigations on the relationship between teacher nonverbal immediacy and student learning (Andersen, 1978, 1979; Andersen, Norton, & Nussbaum, 1981; Kelley & Gorham, 1988; McDowell, McDowell, & Hyerdahl, 1980; Plax, Kearney, McCroskey, & Richmond, 1986; Richmond, Gorham, & McCroskey, 1987). Collective findings from these early studies support a positive relationship between teacher nonverbal immediacy and affective, behavioral, and cognitive student learning. Although Mehrabian's foundational work (Mehrabian, 1969, 1971; Wiener & Mehrabian, 1968) had included verbal immediacy, it was not until much later that the instructional communication concept of teacher immediacy was broadened to include specific verbal behaviors (Gorham,

1988), which have similar effects of reducing distance between teachers and students. A large body of communication research followed, in which teachers' verbal and/or nonverbal immediacy behaviors were examined in relation to student learning outcomes in a variety of classroom settings (Christophel, 1990; Christophel & Gorham, 1995; Gorham & Christophel, 1990; Jordan, 1989; Menzel & Carrell, 1999; Moore, Masterson, Christophel, & Shea, 1996; McCroskey, Sallinen, Fayer, Richmond, & Barraclough, 1996; Neuliep, 1995; Rodriguez, Plax, & Kearney, 1996; Thweatt & McCroskey, 1998).

Next, researchers turned their attention to teacher immediacy in the context of televised instruction and other distance learning contexts (Comeaux, 1995; Freitas, Myers, & Avtgis, 1998; Guerrero & Miller, 1998; Hackman & Walker, 1990, 1994; McHenry & Bozik, 1995; Walker & Hackman, 1991), and initial results indicated similar positive effects of teacher immediacy as in the traditional classroom. Thus, the constructs of verbal immediacy and nonverbal immediacy have undergone an evolutionary development that is not yet complete. There are still issues to be addressed regarding the interaction of verbal and nonverbal immediacy and the

ways that teacher immediacy and student motivation function to increase learning.

Nonverbal Immediacy and Student Learning

Although the body of immediacy research is broad and substantial, a careful examination of immediacy studies reveals that there are still many unanswered questions about how and why immediacy works in teacher-student interaction. Early researchers conceptualized immediacy as those behaviors which "enhance closeness to and nonverbal interaction with another" (Mehrabian, 1969, p. 203). When such behaviors grow out of a person's liking or affinity for another, they demonstrate the approach-avoidance principle that "people approach what they like and avoid what they don't like" (Mehrabian, 1981, p. 22).

Foundational studies of nonverbal immediacy suggest that social affinity or liking is expressed through such immediate behaviors as physical proximity (Argyle & Dean, 1965; Mehrabian, 1971), direct eye contact (Argyle & Dean, 1965; Kendon, 1967), smiling (Ekman & Friesen, 1975), head nods (Mehrabian & Williams, 1969), touching (Bassett & Smythe, 1979; Hurt, Scott, & McCroskey, 1978), symmetrical and shared body positioning (LaFrance, 1972), and vocal expressiveness (Davitz, 1964; Mehrabian, 1971).

In the traditional classroom setting, nonverbally immediate teachers reduce student perceptions of physical or psychological distance when they approach their students in order to communicate at close distances, smile, engage in eye contact, use direct body orientations, use overall body movement and gestures, touch students, assume a relaxed posture and communicating style, and are vocally expressive (Andersen, 1979). Students generally perceive these teacher communication behaviors as expressions of personal warmth and affinity toward the students (Ryans, 1964), which in turn enhances student affinity for the teacher, course, and subject matter (Andersen, 1979). Andersen's (1979) study was the first to document a significant relationship between student perceptions of teacher nonverbal immediacy and learning outcomes (i.e., affective and behavioral learning). Sorenson & Christophel (1992) noted that "this seminal work inspired an entire genre of research that continues investigating the relationship of communication constructs to affective learning in the classroom" (p. 40).

Andersen's (1979) examination of nonverbal immediacy behaviors in the classroom revealed a significant relationship between students' perceptions of teacher

immediacy and learning outcomes. In her initial study of 238 communication students evaluating 13 instructors, nonverbal immediacy predicted learning on measures developed by Scott and Wheelless (1975). Perceived nonverbal immediacy behaviors predicted 46% of the variance in affect toward the teacher, 20% of the variance in affect toward the course content, and 18% of the variance in student behavioral intent (likelihood of using behaviors recommended in the class). Data from Andersen's initial study did not support a significant correlation between immediacy and cognitive learning, as operationalized by grades on a single test given early in the semester. However, several subsequent studies demonstrated the likelihood that such a relationship does indeed exist (e.g., Gorham & Christophel, 1990; Kelley & Gorham, 1988; McCroskey, Sallinen, Fayer, Richmond, & Barraclough, 1996; Richmond, Gorham, & McCroskey, 1993; Sanders & Wiseman, 1990).

Andersen (1979) utilized the Generalized Immediacy (GI) scale and the Behavioral Indicators of Immediacy (BII) scale. The validity and reliability of these measures have been subsequently well-documented (Kearney, Plax, & Wendt-Wasco, 1985; Plax, Kearney, McCroskey, & Richmond, 1986).

The GI scale presents students with two general questions about their instructor's communicating style and a semantic differential scale for multiple responses. In commenting on the effectiveness of the GI scale, Kearney (1994) observed that it is a highly inferential instrument which "measures a general or gestalt impression of an individual's overall level of immediacy" (p. 169). Andersen utilized the GI Scale along with a lower inference instrument, the Behavioral Indicators of Immediacy scale. The BII scale consists of 15 items depicting specific teacher nonverbal behaviors, which students evaluate using a Likert-type scale. Included are such behaviors as eye contact, body position, movement, gestures, and smiling. Both instruments utilized by Andersen are reliable and valid data collection instruments that are still in use today. However, Andersen's BII scale formed the basis of the Nonverbal Immediacy Behaviors (NIB) instrument (Richmond, Gorham, & McCroskey, 1987), which is more widely used in current research.

McDowell, McDowell, and Hyerdahl (1980) replicated Andersen's study among secondary school students and found a significant correlation between students' perceptions of teacher nonverbal immediacy and affect for the teacher and

course. Furthermore, a moderate relationship was found to exist between immediacy and final course grades, the first indication that immediacy might also affect cognitive learning.

Other studies have found that teacher nonverbal immediacy enhances student affect for both teacher and subject matter. Hypothesizing that teacher communication styles affect learning outcomes in the college classroom, Kearney (Kearney Knutson, 1979; Kearney & McCroskey, 1980) measured a variable called "teacher responsiveness," which she conceptualized as being closely associated with nonverbal immediacy behaviors. Data indicated a correlation between teacher responsiveness and student affect and behavioral commitment. Another interesting result was that responsive teachers apparently enhance student participation by reducing communication apprehension, which in turn correlates positively with student learning outcomes. The significance of Kearney's research, then, is that teachers who are perceived to employ a responsive (immediate) style enhance student affective learning and behavioral commitment.

Although research has revealed much about affective and behavioral learning in the classroom, early skepticism

was voiced concerning the effects of nonverbal immediacy on cognitive learning (Andersen, Norton, and Nussbaum, 1981). Andersen's (1979) initial study of teacher nonverbal immediacy failed to find a significant correlation with cognitive learning, but more recent research has begun to fill the gap. In an innovative study utilizing students' self-reports of cognitive learning, Richmond, Gorham, and McCroskey (1987) found that nonverbal immediacy did, in fact, correlate significantly and positively with their measure of cognitive learning. In order to measure perceived cognitive learning, students were asked two questions: "On a scale of 0-9, how much did you learn in this class, with 0 meaning you learned nothing and 9 meaning you learned more than in any other class you've
much do you think you could have learned in the class had you had the ideal instructor?" The variable "learning loss" was generated by subtracting the score of the first question from the score of the second. Students' perceptions of teacher nonverbal immediacy were measured using the Nonverbal Immediacy Behaviors Instrument, a modified version of Andersen's (1979) Behavioral Indicators of Immediacy (BII), which has since become the most widely-used measure of nonverbal immediacy. Two studies

were conducted: the first evaluated students' best or worst teacher ever, and the second evaluated an instructor from the previous semester. Results from both studies showed that students' perceptions of teacher nonverbal immediacy were positively correlated with the raw learning score (.71 and .69, respectively) and negatively correlated with the learning loss score (.51 and .60, respectively). These results suggest that students believed they had learned significantly more from teachers who employed nonverbally immediate behaviors.

Another important study examined the relationship between nonverbal immediacy and a specific cognitive learning task, short-term recall. Kelley and Gorham (1988) designed a laboratory experiment to test the effects of "physical immediacy" (i.e., proximity, open posture, head nods) and eye contact on students' ability to store and recall word and number sequences. Physical immediacy and eye contact were manipulated in each of four conditions (high immediacy/eye contact, high immediacy/no eye contact, low immediacy/eye contact, and low immediacy/no eye contact). Physical immediacy accounted for 11.4% of the variance on recall, while eye contact accounted for 6.9% of the variance. These researchers concluded that students'

recall was significantly enhanced when teachers utilized nonverbally immediate behaviors to accompany information transfer. It is important to note that Kelley and Gorham manipulated specific immediacy behaviors in a controlled setting, rather than merely surveying students about their perceptions of teacher immediacy. Therefore, this study made an important contribution to the growing body of evidence that supports the existence of a meaningful relationship between nonverbal immediacy and cognitive learning.

Therefore, results of numerous studies provide conclusive support for the use of teacher nonverbal immediacy as a communication strategy to effectively reduce interpersonal distance and enhance student learning. Teachers may engage in nonverbal communication behaviors such as eye contact, smiles, open body position, and physical proximity with the expectation that students will perceive reduced physical and/or psychological distance, and that learning will probably be enhanced. In short, nonverbal immediacy is an effective teaching strategy in the traditional classroom.

Verbal Immediacy and Student Learning

The scope of immediacy broadened and the issues surrounding immediacy deepened when a pivotal study expanded the focus to include verbal as well as nonverbal behaviors (Gorham, 1988). From the outset, Mehrabian (1969) and Wiener and Mehrabian (1968) had acknowledged that certain verbal cues result in perceptions of immediacy or nonimmediacy, and both researchers had developed taxonomies of specific word choices as expressions of liking or closeness (Mehrabian, 1969; Wiener & Mehrabian, 1968). Nevertheless, actual message content as a means of reducing distance was not examined in early communication studies, beyond the inclusion of certain vocal variables such as tone, pace, intensity, variety, pause, and articulation in the construct of nonverbal immediacy (Andersen, 1979).

Thus, immediacy research entered a new phase when Gorham (1988) reported results of an investigation of verbal immediacy. Gorham acknowledged that two important studies laid the groundwork for her verbal immediacy research. "Power in the Classroom VI" (Plax, Kearney, McCroskey, and Richmond, 1986) investigated teachers' choices of verbal control strategies and the resulting effects on affective and behavioral learning. Data

collected from several hundred secondary and college students suggested that teacher nonverbal immediacy behaviors influenced student perceptions of teachers' use of compliance strategies (verbal content). Acknowledging that "nonverbal cues typically provide the framework for understanding verbal messages" (p. 53), researchers reported the following observations: "Students perceive that immediate teachers rely on pro-social BAT's [behavior alteration techniques] for control. In reality, immediate teachers may actually employ occasional anti-social BAT's as well" (Plax et al., 1986, p. 53). In other words, students perceived teachers' verbal messages within a relational or affective context that was influenced by the teachers' nonverbal immediacy behaviors. Reflecting on these findings, researchers concluded that, in relationship to student affect, perceived "nonverbal behavior of teachers served as mediators for teachers' verbal behaviors" (McCroskey & Richmond, 1992). These findings suggested that verbal and nonverbal cues should be examined together to evaluate the effects of teacher communication on student affective learning.

"Power in the Classroom VII" (Richmond, McCroskey, Kearney, & Plax, 1987) provided another important step

toward the development of the verbal immediacy construct, by examining the effect of teachers' verbal strategies and nonverbal behaviors on student perceptions of cognitive learning. Utilizing Richmond, Gorham, & McCroskey's (1987) cognitive learning measure described above (i.e., the ideal teacher and learning loss), researchers reported a positive association between pro-social BAT's (verbal strategies) and student perceptions of cognitive learning. For the developing construct of verbal and nonverbal immediacy, then, the "Power in the Classroom" studies provided the important conclusion that, along with nonverbal immediacy behaviors, verbal message strategies employed by teachers do influence cognitive, affective, and behavioral learning outcomes.

Set against the background of these studies, Gorham (1988) posited a single model of immediacy, both verbal and nonverbal, and identified specific verbal immediacy behaviors that contribute to the effect of reducing psychological distance. Relating verbal immediacy to Mehrabian's (1969, 1981) original theoretical construct, Gorham posited that teachers employ verbal strategies to "reduce psychological distance by recognizing individual students and their ideas and viewpoints, by incorporating

student input into course and class design, by communicating availability and willingness to engage in one-to-one interactions, and by enhancing their 'humanness' via humor and self-disclosure" (Gorham, 1988, p. 52).

Gorham developed a new data collection measure, the Verbal Immediacy Behaviors (VIB) instrument, through student focus groups that generated 21 items (later reduced, then refined to 20) describing "the best teachers they had had" and "the specific behaviors which characterized those teachers" (Gorham, 1988, p. 43). Specific verbal immediacy behaviors include such items as teachers' use of humor in class, conversation with students before and after class, self-disclosure, complimenting students' performance, and use of inclusive pronouns such as "we" and "our." Respondents indicate the frequency (0=Never to 4=Very often) that the teacher employs each behavior. Summing the items on the VIB instrument produces a total verbal immediacy score. From a student population of 387 college undergraduates, Gorham (1988) reported that the combination of verbal and nonverbal immediacy behavior accounted for 38.5% of the variance in affective learning and 19.3% of the variance in perceived cognitive learning. The researcher interpreted the data to indicate that "verbal and nonverbal behaviors

function together to generate immediacy and clearly are not functioning as orthogonal factors in the classroom"

(Gorham, 1988, p. 46).

Soon after Gorham's pivotal study, Jordan (1989) tested students' perceptions of teachers' verbal immediacy along with paralinguistic immediacy, which she defined as vocal expressiveness, intensity, timing, articulation, and accent. Participants consisted of 603 undergraduate communication students, who evaluated the verbal and paralinguistic communication behaviors of the teachers they had in the previous class. Results indicated that student cognitive learning was significantly affected both by the words teachers say and the manner in which they say them. The combination of verbal and paralinguistic immediacy accounted for 39% of the variance in predicting four levels of self-perceived cognitive learning (Jordan, 1989).

Not only were Jordan's results significant, but her method of measuring verbal immediacy addressed what she considered to be weaknesses in the validity of Gorham's (1988) Verbal Immediacy Behaviors instrument. Jordan developed the Perceived Verbal Immediacy (PVI) scale, a 32-item instrument which included items derived from scholarly research as well as some of the student-generated items

from Gorham's VIB instrument. Refining the PVI scale to 21 items produced an internal reliability of .92, compared to an overall reliability of .83 to .94 for Gorham's VIB instrument (Kearney, 1994). Jordan's concerns over the validity of Gorham's VIB were echoed later by Robinson and Richmond (1995), who acknowledged the value of the scale but saw it as a probable measure of teacher effectiveness, not teacher immediacy. After thorough statistical analysis, Robinson and Richmond (1995) posited that Gorham's VIB instrument lacked both face and construct validity, concluding that "it should not be used until such time as a far stronger case for its validity can be established" (p. 84). Despite these and other concerns over its validity, the Verbal Immediacy Behaviors instrument continues to be used extensively in communication research.

Following Gorham's (1988) pivotal study, many communication researchers have included both verbal and nonverbal immediacy behaviors in their immediacy research. In an examination of teachers' use of humor in the classroom, Gorham and Christophel (1990) found that "the total number of humorous incidents recorded for each teacher was positively correlated with the frequency of his/her use of other verbal and nonverbal immediacy

behaviors" (p. 58). Immediacy, in turn, was highly correlated with learning outcomes. Christophel (1990) measured both verbal and nonverbal immediacy to determine the effects of teacher immediacy and student motivation on learning, concluding that "immediacy appears to modify motivation which leads to increased learning" (p. 323). Several cross-cultural studies have obtained immediacy scores from combined verbal and nonverbal immediacy measures (e.g., Neuliep, 1995; Sanders & Wiseman, 1990), concluding that, although persons of different cultures have differing perceptions and expectancies of teachers, immediacy behaviors are broadly considered as positive teacher behaviors that enhance student learning. In a study of gender, immediacy, and learning, Menzel and Carrell (1999) found that verbal immediacy played a more significant role in perceived learning than did nonverbal immediacy, and that verbal immediacy mediated certain effects of perceived learning and gender differences between students and teachers. Moore, Masterson, Christophel, and Shea (1996) combined verbal and nonverbal immediacy data to conclude that a significant positive correlation exists between teacher immediacy and student ratings of instruction. Similarly, Christophel and Gorham

(1995) combined immediacy data in their study of the motivational effects of teacher immediacy.

Since the construct of teacher immediacy was expanded to include verbal behaviors (Gorham, 1988), the majority of researchers have operationalized immediacy as the summed scores on the 20-item VIB instrument (Gorham, 1988) and the 14-item NIB scale (Richmond, Gorham, & McCroskey, 1987). Nevertheless, some recent communication studies have maintained a single focus on the effects of nonverbal immediacy (e.g., McCroskey, Sallinen, Fayer, Richmond, & Barraclough, 1996; Rodriguez, Plax, & Kearney, 1996), particularly in view of questions raised about the validity of the Verbal Immediacy scale (Jordan, 1989; Robinson & Richmond, 1995).

In summary, classroom research has clearly established that students of verbally and nonverbally immediate teachers "believe they learn more and like what they're learning" (McCroskey & Richmond, 1992, p. 82). An important outcome of this body of research is the knowledge that classroom teachers who wish to enhance student learning may employ immediate communication behaviors as effective instructional strategies. Therefore, future immediacy research has potential value to educators and communication

professionals alike, as scholars broaden the scope of immediacy to include new instructional contexts such as distance learning.

Teacher Immediacy in Video Instruction

Teacher immediacy, both verbal and nonverbal, has been shown to be an effective instructional strategy in the distance learning context, where "reducing the distance" becomes a primary communication goal. New communication technologies and changing social patterns combine to make distance learning increasingly attractive in American higher education today. Numerous studies have compared the effects of instruction to distant and proximate students, with the frequent conclusion that there is little or no significant difference in learning between modalities. For example, Whittington (1987) studied over a hundred distance education lessons transmitted through a variety of media and found no significant difference in the final course grades of distant and proximate students. Silvernail and Johnson (1992) found that student evaluations of teacher effectiveness were similar from distant and proximate learners. The effectiveness of distance education as a means of learning is no longer in question, for "hundreds of media comparison studies [have] indicated,

unequivocally, that there is no inherent significant difference in the educational effectiveness of media" (Schlosser & Anderson, 1994, p. 23). These findings may appear unequivocal in educational research literature, but some communication scholars remain convinced that instructional communication behaviors operate differently across divergent delivery systems. "Although student outcomes may be similar, we believe that there are some fundamental differences in face-to-face and televised instruction" (Hackman & Walker, 1990, p. 197). Citing research in the social psychology of telecommunications, Walker and Hackman (1991, p. 2) attest to "dramatic differences" between traditional instruction and telecourses, and remain convinced that "certain technologies and techniques are more effective in extending information than others" (p. 11).

Moving into the distance learning environment of conflicting theories and inconclusive findings, instructional communication scholars have begun to examine human communication processes such as verbal and nonverbal immediacy (Comeaux, 1995; Freitas, Myers, & Avtgis, 1998; Guerrero & Miller, 1998; Hackman & Walker, 1990; Murphy & Farr, 1993; Walker & Hackman, 1991). Early results indicate

that, in video instruction just as in traditional classroom delivery, teacher nonverbal communication behaviors contribute positively to a sense of warmth, closeness, and social presence. Walker and Hackman (1991) observed that "one set of behaviors which convey social presence in the televised classroom are immediacy behaviors of the instructor" (p. 5). Other researchers agree that verbal and nonverbal immediacy are important in distance learning, suggesting that "it is particularly important for distance instructors to incorporate behaviors in their teaching that will reduce the learners' sense of physical and psychological distance. One way to reduce this sense of distance is for the instructors to use immediacy behaviors" (Murphy & Farr, 1993, p.2).

Focusing on teacher verbal and nonverbal immediacy in video instruction, Hackman and Walker (1990) studied 102 students engaged in 35 courses via one-way video, two-way audio transmission. System design factors such as audio/video quality and ease of interaction were evaluated, and social presence (teacher immediacy) was measured through the Nonverbal Immediacy Behaviors instrument (Richmond, Gorham, & McCroskey, 1987) and the Verbal Immediacy Behaviors instrument (Gorham, 1988). Findings

indicated that both conveyance system design and social presence (teacher immediacy) strongly impacted perceived student learning and student satisfaction with the distance education experience. Furthermore, Hackman and Walker (1990) observed that "instructors who engage in behaviors which minimize the psychological distance between themselves and their distant students are rated as most fair and effective" (p. 205). These results resemble data collected in studies of interaction and teacher immediacy in the traditional classroom, where student perceptions of learning and teacher effectiveness show a positive correlation with teacher nonverbal immediacy (e.g., McCroskey et al., 1995). A further study (Walker & Hackman, 1991) of 164 students in 40 courses identified three variables that predicted student learning and satisfaction with the course: information transfer (course content), instructor nonverbal behaviors, and audio/video transmission. Together, these factors contributed 53% of the variance in perceived learning, and nonverbal immediacy was the greatest predictor of students' desire to take another course from the same instructor. Of significance is the observation that "immediate nonverbal behaviors are communicated across television," and that "these behaviors

function much as they would in face-to-face interactions" to impact student affect for the instructor (Walker & Hackman, 1991, p. 10).

Taken together, these studies demonstrate that distance instructors may employ verbally and nonverbally immediate behaviors with the assurance that those behaviors can be effectively transmitted to distant learners. In a study of 206 proximate and 73 distant students, Hackman & Walker (1994) found that "perceptions of learning, satisfaction, information transfer and immediate and present instructor behavior are not different in the two modalities" (p. 8).

A qualitative study conducted by Comeaux (1995) examined the attitudes and perceptions of students from four campuses enrolled in eight distance learning courses. The researcher examined communication and learning processes in the technological environment of two-way audio, two-way video delivery. Comeaux concluded from observations and interviews that "what we already know and value about effective teaching was perceived to work quite well in the distance learning classroom" (Comeaux, 1995, p. 358). Furthermore, Comeaux noted that distance instructors

might rely more heavily on verbal strategies in an attempt to bridge the distance to remote-site learners.

Teacher immediacy in distance learning was further explored by Freitas, Myers, and Avtgis (1998), who compared perceptions of distant students with those of proximate students enrolled in the same course and receiving identical (though not simultaneous) instruction from the same teacher. Using the Verbal Immediacy Behaviors instrument (Gorham, 1988) and the Nonverbal Immediacy Behaviors instrument (Richmond, Gorham, & McCroskey, 1987), distant students reported lower perceptions of teacher nonverbal immediacy than did proximate students. Specifically, they observed less gesturing, eye contact, and movement. However, both groups of students reported similar perceptions of teacher verbal immediacy, suggesting that instructors' verbal immediacy strategies function as an effective means of bridging the distance to remote-site students, a theory previously posited by Comeaux (1995).

Inherent in distance learning is the goal of "reducing the distance" perceived by students, an instructional outcome that is specifically linked to teacher verbal and nonverbal communication behaviors. Guerrero and Miller

(1998) succinctly stated both the problem and potential for teacher immediacy in video instruction:

"Within the context of video-taped instruction, many nonverbal behaviors, such as close proxemic distancing and touch, are absent. Thus, it stands to reason that instructors teaching via videotape need to be particularly cognizant of other nonverbal behaviors that can be utilized within the distance education context. For example, distance education instructors who are animated, fluent, composed, and warm are like to convey enthusiasm and immediacy despite the geographical separation between them and their students" (pp. 30-31).

To investigate these communication variables and their effects on student perceptions of teacher competence and course content, Guerrero and Miller (1998) compared student responses ($N = 180$) to one of four 10-minute video segments of video-taped instruction containing a variety of nonverbal cues. One of the five nonverbal variables investigated in this study was teacher nonverbal immediacy, which researchers measured through selected items from Burgoon and Hale's (1984, 1987) Relational Communication Scale and Spitzberg and Hurt's (1987) Conversational Skills Rating Scale. Selected items measured "gaze, smiling, fluency, vocal warmth, vocal and facial expressiveness, lack of adaptors or random movement, fluency, and articulation/clarity" (Guerrero & Miller, 1998, p. 33). Resulting data loaded into five factors labeled as the

instructor's involvement/enthusiasm, expressiveness/warmth, fluency/composure, articulation/clarity, and eye contact. Researchers concluded that "even in noninteractive environments, the more warm and involved a student perceives an instructor to be, the more likely the student is to perceive the instructor as competent and liable and to see the course content as valuable and enjoyable" (Guerrero & Miller, 1998, p. 38). Thus, in video-taped instruction as in the traditional classroom and the interactive two-way video environment, nonverbal immediacy correlates positively with affective learning.

To summarize this large body of research from the classroom and distance learning environments, a positive association has been established between teacher immediacy, both verbal and nonverbal, and student learning, both affective and cognitive. With confidence, then, educators and communication professionals may agree with Christophel and Gorham (1995), who succinctly conclude that "teacher immediacy is 'a good thing'" (p. 292). Verbal and nonverbal immediacy behaviors contribute to a positive learning environment where increased student learning occurs. Therefore, teachers should employ these communication strategies frequently and appropriately. Distance educators

particularly should use immediacy behaviors in order to reduce perceptions of distance between teacher and students.

Explaining the Effects of Teacher Immediacy

Despite these conclusive results, important questions remain concerning how and why immediacy affects learning. Are verbal immediacy and nonverbal immediacy two different constructs, as suggested by Robinson and Richmond (1995), or two dimensions of the same construct, as claimed by Gorham (1988)? Should they be studied in isolation or in combination? Does teacher immediacy directly affect cognitive learning, or are the effects of immediacy mediated by student state motivation? The resolution of this ambiguity lies in future research, and some scholars believe the keys to resolution may be found in interpersonal attraction theory.

Interpersonal Attraction and Immediacy Behaviors

Individuals who engage in immediacy behaviors reduce physical and/or psychological distance between themselves and another person (Mehrabian, 1969). A desire to approach another may emanate from a feeling of approval or liking for that individual (Mehrabian, 1981). Simply stated, "people approach what they like and avoid what they don't

like; that is, there is a positive correlation between various approach behaviors and level of liking" (Mehrabian, 1981, p. 22). One's liking for another may be accompanied by a desire to become physically or psychologically closer to the other person, prompting the use of immediacy behaviors which reduce interpersonal distance. For example, research has indicated that individuals assume closer positions and engage in more eye contact with people whom they like (Mehrabian, 1981).

When an individual approaches another out of liking or affinity, one ordinarily expects a pleasant, rewarding experience. Berscheid and Walster (1978) observe that "rewarding stimuli arouse positive feelings while punishing stimuli arouse negative feelings" (p. 23), and further that "we like people who reward us and we dislike people who punish us" (p. 23). While immediate behaviors may bring reward, it follows that nonimmediacy may not be rewarding at all, and may even be perceived as punishing.

Furthermore, prior attitudes regarding immediate behaviors may affect one's response to the approach of others. For example, a person with communication apprehension or a strong preference to remain distant from others may or may not respond positively to immediate approach behaviors.

Some apprehensive communicators might respond positively to expressions of personal warmth and immediacy, but others may be uncomfortable with physical or psychological closeness and therefore interpret immediacy as a distancing behavior rather than an approach behavior. In general, however, immediacy behaviors may be understood as rewarding actions that express or engender interpersonal attraction, while nonimmediate behaviors may be perceived as punishing.

In addition to nonverbal and paralinguistic elements, the general immediacy construct may be said to encompass verbal immediacy behaviors. Psychological distance may be reduced through such verbal behaviors as inclusive references, self-disclosure, and present verb tense (Gorham, 1988; Jordan, 1989; Mehrabian, 1969, 1981; Wiener & Mehrabian, 1968). Like nonverbal immediacy behaviors, verbally immediate communication conveys like-dislike and approach-avoidance expressions. "Teachers who feel close to their students will use immediate pronouns like 'our,' 'we,' and 'us.'" In this way teachers verbally show that they feel a part of their students and imply that they are working together toward a common goal" (Jordan, 1989, p. 1). Similarly, students perceive reduced distance (interpersonal approach) when teachers call students by

name, engage in individual conversation with students before or after class, and encourage students to express their opinions (Gorham, 1988). Another characteristic of verbally immediate behavior is the use of self-disclosure (Mehrabian, 1969), which may be understood as an instructor's willingness to reveal personal information in order to be perceived as transparent, authentic, and psychologically close. For example, Sorenson (1980) manipulated teacher self-disclosure statements in a lab experiment designed to study students' perceptions of teacher immediacy. Results indicated that teacher self disclosure accounted for 28% of the variance in students' perceptions of teacher immediacy.

Immediacy, then, is predominately a relational dynamic that may be enhanced by certain interpersonal communication behaviors. Those who wish to increase the intimacy or closeness of a relationship might employ verbally or nonverbally immediate communication strategies to signal their interest in deepening the relationship. Like other relational factors, immediacy is a high-inference quality that researchers sometimes measure with low-inference data (Gorham & Christophel, 1990). Immediacy, like some other relational communication factors, was originally

conceptualized as a nonverbal variable, the highly contextualized component of interpersonal communication that carries the affective or relational message (Watzlawick, Beavin, & Jackson, 1967). Although verbal immediacy may be more objectively measured through content analysis and verbal behavior identification, all communication—especially relational communication—takes place in a relationship context and should be analyzed and interpreted wholistically. Thus, in its fullest sense, immediacy may be expressed verbally, nonverbally, or in combination to communicate interpersonal liking and the desire to approach another in the context of a deepening relationship.

Teacher Immediacy and Student Motivation

Because immediacy occurs in the context of an interpersonal relationship, it is important to examine the roles of both individuals involved in the interaction. Therefore, to understand the effects of teacher immediacy in the classroom, the behaviors and communication traits of students should also be considered. Student factors such as level of interest and attention, affect for teacher and course, and level of state motivation may play a role in the effects of teacher immediacy on learning. Kelley and

Gorham (1988) suggested that teacher immediacy arouses students' interest and attention, which in turn increases learning. A contrasting theory holds that teacher immediacy leads to greater affinity between students and teacher, which in turn leads to increased learning (McCroskey and Richmond, 1992; Rodriguez, Plax, & Kearney, 1996).

Furthermore, Christophel (1990) and Richmond (1990) reported a relationship between student motivation and teacher immediacy, initially suggesting that motivation may serve as a mediator between immediacy and learning.

Scholars are becoming convinced that teacher immediacy and student motivation are related, but the nature of the relationship and its effects on cognitive learning are yet to be determined. Seeking to explain how and why teacher immediacy affects learning, Frymier (1994) tested two models of immediacy and learning. The "Learning Model" represented a direct causal relationship between immediacy and learning, while the "Motivation Model" characterized immediacy's impact on learning as mediated by student motivation (Christophel, 1990; Richmond, 1990). Path analysis indicated statistical support for the indirect model, leading Frymier to conclude that "teacher immediacy has a positive impact on student motivation to study, and

in turn motivation has a positive impact on students' learning" (Frymier, 1994, p. 134). Further support for the motivational model was demonstrated by Christophel and Gorham (1995) and Frymier and Schulman (1995). Frymier acknowledged the validity of Kelley and Gorham's (1988) arousal theory "with a small modification: immediacy arouses students, gets their attention, which enhances motivation, which in turn increases learning" (Frymier, 1994, p. 141). Alluding to Keller's (1987) theoretical model of student motivation, Frymier observed that, not only does teacher immediacy function in the classroom as an attention-getter, but it also "serves to build positive expectations in students and increase students' satisfaction with the class, resulting in more motivated students" (Frymier, 1994, p. 142) who ultimately learn more than they would have learned in the absence of teacher immediacy.

A number of other studies have examined the relationship between teacher verbal and nonverbal immediacy and student motivation. Frymier (1993) found that students responded differently to teacher immediacy depending upon their level of state and trait motivation. In her study of 178 undergraduate students, teacher verbal and nonverbal

immediacy had the greatest effect on the motivation levels of low to moderately motivated students and the least effect on highly motivated students (Frymier, 1993). In a longitudinal study that measured immediacy and motivation throughout the duration of a semester, Christophel and Gorham (1995) collected data from 319 undergraduate students on two different campuses. Results indicated "a causal relationship between teacher immediacy and state motivation" (Christophel & Gorham, 1995, p. 292), which supported earlier findings by Christophel (1990) and Richmond (1990) that "state motivation levels are modifiable by teacher behavior within the classroom environment" (Christophel & Gorham, 1995, p. 301). The relationship between immediacy and motivation was further supported by Frymier and Schulman (1995), who found that teacher verbal and nonverbal immediacy, along with relevant course content, accounted for 19% of the variance in student state motivation among 470 undergraduate students.

Thus, immediacy and motivation should be studied further in order to determine how teacher immediacy affects cognitive learning in relation to student motivation. Does immediacy operate in conjunction with motivation in some way that increases cognitive learning? Or do varying

motivation levels serve to confound the direct effects of immediacy? The present study explored this research problem in the context of video instruction.

Hypotheses and Research Question

To expand and further clarify the understanding of teacher immediacy and its effects on student learning, this study investigated two research problems that have produced inconclusive results in the current immediacy literature. The first concerned how verbal immediacy and nonverbal immediacy function together and/or separately to enhance learning, and the second concerned how immediacy affects cognitive learning in relation to student motivation. These questions were examined in the context of video instruction, both to provide new insight into distance learning processes and to ensure maximum control over the manipulation of communication variables.

The majority of immediacy research conducted to date has relied upon data collected through student reports of perceived immediacy and perceived learning, a methodology which many view as reliable and valid (Frymier & Thompson, 1995). However, the findings of immediacy research would be strengthened if corroborated by experimental research in which immediacy variables are manipulated in controlled

settings. This study was conducted as an experiment involving the manipulation of both verbal immediacy and nonverbal immediacy variables in video instruction. The first focus of the experimental study was the relationship between teacher immediacy, both verbal and nonverbal, and cognitive learning. Unlike most previous immediacy research, which relied upon student self-reports of cognitive learning, this study employed direct measurement of cognitive learning through a test of immediate recall of instructional content.

Recall that collective research has found teacher immediacy, both verbal and nonverbal, to be an effective instructional strategy that enhances cognitive learning (e.g., Kelley & Gorham, 1988; Menzel & Carrell, 1999; Richmond, Gorham, & McCroskey, 1987). Both in the classroom and in distance learning, when teachers employ verbal and nonverbal immediacy strategies, students indicate increased perceptions of having learned from the course (e.g., Hackman & Walker, 1990). However, reliance upon student surveys alone for the majority of research data has not allowed for detailed and conclusive measurement of cognitive learning. One noteworthy exception was Kelley and Gorham's (1988) experimental study of certain nonverbal

immediacy cues and student recall. In order to strengthen the findings of immediacy research, the proposed study employed experimental manipulation of teacher verbal immediacy and teacher nonverbal immediacy, and assessment of cognitive learning using a modified cloze procedure (Taylor, 1954). The following hypotheses guided this part of the investigation:

H₁: Cognitive learning is higher for higher teacher verbal immediacy than for lower teacher verbal immediacy.

H₂: Cognitive learning is higher for higher teacher nonverbal immediacy than for lower teacher nonverbal immediacy.

The separate and combined effects of verbal and nonverbal immediacy on cognitive learning have not been carefully studied in a controlled setting. Some studies have focused on nonverbal immediacy only (e.g., Rodriguez, Plax, & Kearney, 1996), others have combined verbal and nonverbal data into a single construct (e.g., Gorham, 1988), and still others have not clearly separated the two in reporting conclusions about immediacy (e.g., Hackman & Walker, 1990). This study examined each variable separately and together. Given that higher verbal immediacy and higher

nonverbal immediacy have been found separately to increase cognitive learning, a cumulative effect was expected. That is, if higher verbal and higher nonverbal immediacy were associated with greater learning, then it stands to reason that a combination of both higher verbal and nonverbal immediacy would further increase learning. Conversely, if both verbal and nonverbal immediacy were lower, then a decrease in learning would be expected. Therefore, two-way analysis of variance was used to test the following hypothesis:

H₃: Higher and lower categories of teacher verbal immediacy and teacher nonverbal immediacy will interact such that cognitive learning will be greatest when both categories of teacher immediacy are higher than when either category is higher, and lowest when both categories of teacher immediacy are lower.

The second research problem addressed in this study was how teacher immediacy affects cognitive learning in relation to student motivation. Most communication scholars have assumed that immediacy directly increases learning (Andersen, 1979; Hackman & Walker, 1990; Plax, Kearney, McCroskey, & Richmond, 1986), but some recent studies

suggest that immediacy contributes to motivation, and motivation contributes to learning (Christophel, 1990; Christophel & Gorham, 1995; Frymier, 1994; Frymier & Schulman, 1995; Richmond, 1990).

When controlling teacher verbal immediacy and teacher nonverbal immediacy, it may be that different levels of motivation contribute little further to cognitive learning beyond what immediacy contributes. If this is true, then motivation becomes a source of error in assessing the direct effects of different levels of teacher verbal and nonverbal immediacy on cognitive learning. In this case, it would be appropriate to use a measure of the students' motivational states as a covariate in reducing error in the preceding hypotheses. Therefore, the first three hypotheses were retested using analysis of covariance to control for the possible effects of student state motivation. A fourth hypothesis guided this part of the investigation:

H₄: When student motivation is covaried, the previously hypothesized effects of teacher verbal immediacy and teacher nonverbal immediacy on cognitive learning are greater.

Rather than as a source of statistical error that can be controlled through analysis of covariance, student

motivation may function in combination with teacher verbal or nonverbal immediacy to produce a combined effect or an interaction effect on cognitive learning. As suggested by Frymier (1993), the effects of teacher immediacy may not be the same across differing levels of student motivation. For example, teacher verbal and/or nonverbal immediacy behaviors may have less of an effect on the cognitive learning of highly motivated students than for those students with lower levels of state motivation. Because the exact effects of student motivation and immediacy are yet to be determined, a 3-way analysis of variance (ANOVA) was used to investigate the main effects and interaction effects of these three variables on cognitive learning: teacher verbal immediacy, teacher nonverbal immediacy, and student state motivation. This part of the study was guided by the following research question:

RQ: How does cognitive learning differ due to the interaction of higher and lower teacher verbal immediacy, higher and lower teacher nonverbal immediacy, and higher and lower student state motivation?

The testing of these hypotheses and the exploration of this research question provided new information about how

teacher verbal immediacy, teacher nonverbal immediacy, and student state motivation function to enhance student learning outcomes. Thus, the present study furthered our understanding of these important instructional communication strategies and contributed important information for teachers and distance educators alike.

Summary

This chapter presented a review of literature relating to teacher nonverbal and verbal immediacy in the traditional classroom and in video instruction. The theoretical basis for teacher immediacy was discussed, along with the impact of teacher immediacy and student motivation on cognitive learning. Finally, the proposed hypotheses and research question were identified. Chapter 3 will describe the procedures that were employed to obtain the sample, the measurements that were utilized to gather data, and the methods that were used to perform statistical analysis required to test each hypothesis and research question.

CHAPTER 3

METHODOLOGY

Introduction

The previous chapter provided a review of the literature relating to teacher immediacy in the traditional classroom and in video instruction. Student state motivation was also discussed, and hypotheses and a research question were presented. This chapter will discuss the procedure that was used to obtain the sample, the measures that were used to collect the necessary data, and the statistical methods that were employed in analyzing the data and testing hypotheses.

Sample

Participants in this study were drawn from 735 University of North Texas students enrolled in COMM 1010: Introduction to Human Communication during the fall semester 1999. The course instructor read a short invitation during lecture periods one and two weeks previous to the experiment (see Appendix A), and the recitation leaders handed out written invitations during the small sections one week previous to the experiment (see Appendix B). The course instructor and recitation leaders

had met with the researcher for a training session and received identical instructions on how to present the video session and how to respond to students' questions regarding content and possible impact on grades (see Appendix C). Students were told that they would receive points for attending the special video lecture, but that participation in the study would be voluntary and have no impact on course grades. Care was taken not to indicate that a test would follow the video instruction, so as to avoid any expectancy effect that might affect students' usual listening habits and skew results of the recall measure.

From the 735 students enrolled in the course, 534 (73%) were randomly assigned to experimental groups in this study, 399 (54%) attended the video sessions, and 388 (53%) completed response packets. The 11 students who attended but elected not to participate remained in the classroom to receive the video instruction and earn points for attending the video session. Of the response packets turned in by the 388 participants, 41 were not included in the analysis: 9 because the post-video learning measure was left blank, 5 because the motivation scale was used incorrectly, 8 because they knew the video instructor, and all 19 from a group in which experimental conditions in the classroom

were not maintained by the student monitor. In this group that was eliminated from analysis, the monitor conversed aloud with participants during the video session and commented about her perception of the video lecture. All remaining response packets ($N = 347$) were included in the analysis.

The 347 participants in the sample included 64 first-year students, 123 sophomores, 85 juniors, 74 seniors, and 1 graduate student. Because COMM 1010 fulfills a communication requirement for a number of bachelor's degrees, participants represented a diverse student population pursuing 43 different majors across this metropolitan research university, including the humanities, sciences, business, social sciences, and professions (see Appendix D). The sample included 154 males, 192 females, and 1 whose sex was not indicated; participants' ages ranged from 17 to 53, with 1 whose age was not indicated; the mean age of participants was 21 years. Approval for the use of human subjects was secured from the University of North Texas Institutional Review Board (see Appendix E).

Experimental Procedures

Assignment to Experimental Groups

Students in COMM 1010 met once weekly in a large lecture hall and twice weekly in small recitation groups led by graduate teaching assistants. This experiment was conducted in the small class setting, but students were randomly assigned to rooms and groups different from their usual class. Permission was received from the UNT registrar to use classrooms in Wooten Hall, one of the primary academic buildings on the campus.

Systematic randomization was used to assign each student to one of the 8 classrooms during his or her usual COMM 1010 lecture period. Groups 1-8 consisted of 20-21 students each who reported to their assigned classrooms in Wooten Hall during the first COMM 1010 lecture hour (Thursday, 2:00-2:50 p.m.). Groups 9-16 consisted of 23 students each who reported to their assigned classrooms in Wooten Hall during the second COMM 1010 lecture hour (Friday, 10:00-10:50 p.m.). Groups 17-24 consisted of 23-24 students each who met in their assigned classrooms in Wooten Hall during the third COMM 1010 lecture hour (Friday, 11:00-11:50 p.m.).

Systematic randomization was used to assign student monitors (1 through 8) to classrooms, and videotapes to classrooms (tapes 1 through 4, each tape to 2 groups). Experimental conditions were strictly maintained across all the classrooms during the 3 hours, including classroom environments, video equipment, monitors' instructions, timing and pacing. Participants were instructed not to discuss the video session with their classmates until the three sessions were complete.

Laboratory Testing Procedures

In order to preserve the authenticity of the classroom setting and minimize the impression of a contrived laboratory experiment, students were told that they were about to receive a portion of the COMM 1010 course content through a short videotaped lecture by a guest instructor, and that afterwards they would be asked to respond to questions about their thoughts about the videotape. Before viewing the video, students were asked to complete the first part of the Participant Response Packet (see Appendix F), including basic demographic information regarding their major, class standing, age, and gender. Participants then completed the 12-item Student Motivation Scale (Christophel, 1990) indicating "your feelings about

receiving this part of COMM 1010 content by videotaped instruction." Response packets were sealed to prevent students from looking ahead, and monitors observed students closely to maintain experimental conditions.

Each group of participants then viewed one of four versions of a 15-minute video instruction unit entitled "The Power to Persuade." The four versions of the video coincided with the four cells of the study's 2x2 design. This design allowed for controlled manipulation of higher and lower levels of the two independent variables of teacher verbal immediacy and teacher nonverbal immediacy. Each version of the videotape was viewed by 6 different participant groups across the 3 hours of the study.

After viewing one of the videotapes, students were asked to complete the remainder of the Participant Response Packet, consisting of a cognitive learning measure to test their recall of content presented during the video instruction. Following the guidelines of established educational research, the recall measure tested specific, objective data directly presented in the video instruction, such that student responses could be objectively scored as right or wrong. For each item, responses were counted correct if students wrote in the exact word used in the

video, a word from the same word stem as that used in the video, or a synonym clearly identifying the target answer. Cognitive learning was measured by the number of items students recalled correctly from the video instruction they had just received.

Production Procedures for Experimental Conditions

The videotapes included presentations of identical instructional content, but with varying degrees and combinations of verbal immediacy and nonverbal immediacy.

Tape One: Higher Verbal, Higher Nonverbal

Tape Two: Higher Verbal, Lower Nonverbal

Tape Three: Lower Verbal, Higher Nonverbal

Tape Four: Lower Verbal, Lower Nonverbal

A description of script development and video production procedures follows.

Verbal Video Content. Production of the videotapes was carefully carried out to ensure controlled manipulation of the independent variables. First, a basic script was generated containing a 15-minute lecture on the means of persuasion in public speaking. Content was based on the course textbook, but from a later chapter that had not yet been assigned for students to read. As indicated to

participants before the study, this material presented a normal part of COMM 1010 content.

No sentence was modified in any way if it was to be included in the recall measure after the video. Rather, key words were selected from the script and identified as items to include in the test for recall. Sentences containing these words were highlighted and left intact in all subsequent modifications of the script. This identification was done so that all participants would receive identical information on all tested items, regardless of the version of the videotape they viewed.

Next, portions of the basic script (other than the tested items) were modified to create two versions of the lecture, one containing a higher level of verbal immediacy and the other a lower level of verbal immediacy. This manipulation was accomplished through the systematic use of a taxonomy of verbal immediacy cues (see Appendix G) compiled from cumulative research and theory development (Gorham, 1988; Jordan, 1989; Mehrabian, 1968; Wiener & Mehrabian, 1968). Several different components of the verbal immediacy construct were applied to the scripts, including distance, time, probability, participation, concern, openness, inclusiveness, and others. Both the

number and intensity of verbal immediacy cues were carefully controlled to ensure that the resulting conditions of higher and lower immediacy were realistic and not extreme, yet distinctively higher and lower levels. Numerous drafts of the scripts were developed by the researcher, evaluated by communication students and faculty, and subsequently revised. The final version of the higher verbal immediacy script (see Appendix H; combined with higher nonverbal cues for experimental condition 1) consisted of 2327 words, including 377 words containing 170 immediate cues, 50 neutral or moderately immediate cues, and 2 non-immediate cues based on the taxonomy of verbal immediacy cues (see Appendix G). The final version of the lower verbal immediacy script (see Appendix I; combined with lower nonverbal cues for experimental condition 4) consisted of 2261 words, including 311 words containing 2 immediate cues, 28 neutral or moderately immediate cues, and 170 non-immediate cues based on the taxonomy of verbal immediacy cues (see Appendix G). The sentences containing items to be tested for recall consisted of 1950 words of identical text in both the higher and lower verbal immediacy scripts (see Table 1).

Nonverbal Video Content. The next phase of script development involved the use of nonverbal immediacy cues to create conditions of higher and lower levels of nonverbal immediacy. A taxonomy of nonverbal immediacy cues (see Appendix J) was developed from cumulative research and theory relating to the nonverbal immediacy construct (Andersen, 1979; Mehrabian, 1967, 1981; Richmond, Gorham, & McCroskey, 1987). Specific cues were written among the

Table 1
Comparisons between Higher and Lower Verbal Immediacy Scripts

	<u>Level of Verbal Immediacy</u>	
	Higher	Lower
Number of Words of Identical Text	1950	1950
Number of Words Contained in Verbal Manipulations	377	311
Total Number of Words in Script	2327	2261
Number of Verbal Immediacy Cues	170	2
Number of Neutral or Moderate Verbal Immediacy Cues	50	28
Number of Non-immediate Verbal Cues	2	170

words of the verbal scripts so that nonverbal behavior would coincide with verbal delivery. Care was taken to choreograph only natural and realistic occurrences of nonverbal cues such as posture, gestures, movement, facial expressions, and vocal variety, so that the resulting conditions of higher and lower nonverbal immediacy would be realistic and not extreme. Again, numerous drafts of the scripts were developed by the researcher, evaluated by others, and subsequently revised. The final version of the higher nonverbal immediacy script (see Appendix K; combined with lower verbal cues for experimental condition 3) contained 74 immediate nonverbal cues and no non-immediate cues based on the taxonomy of nonverbal immediacy cues (see Appendix J). The final version of the lower nonverbal immediacy script (see Appendix L; combined with higher verbal cues for experimental condition 2) contained 36 non-immediate nonverbal cues and 4 immediate nonverbal cues based on the taxonomy of nonverbal immediacy cues (see Appendix J). Sentences containing items to be tested for recall contained no special nonverbal manipulations but maintained the nonverbal cues of the surrounding passages.

The higher and lower verbal immediacy scripts were then merged with the higher and lower nonverbal immediacy

scripts to produce the four experimental conditions described above. Higher nonverbal cues were combined with the higher verbal script to produce experimental condition 1 (see Appendix H); lower nonverbal cues were combined with the higher verbal script to produce experimental condition 2 (see Appendix L); higher nonverbal cues were combined with the lower verbal script to produce experimental condition 3 (see Appendix K); lower nonverbal cues were combined with the lower verbal script to produce experimental condition 4 (see Appendix I). After the videos were produced, a panel of trained raters confirmed the manipulation of verbal and nonverbal immediacy in the 4 videotaped lectures (see Rater Procedures below).

Video Production Methods. After the four scripts had been prepared, the researcher met with the on-camera instructor, an associate professor of communication not otherwise involved with the study. This instructor was a trained professional in performance techniques and had some experience in video production. Because he was a faculty member at the same university where the study was conducted, analyses excluded data from participants who indicated on the questionnaire that they were acquainted with him or had ever received instruction from him.

Prior to video production, the researcher and video instructor met to discuss and rehearse the nuances of verbal and nonverbal immediacy cues. Because of the importance of adhering to precise wording in the higher and lower verbal immediacy scripts, it was decided to employ a teleprompter for use during video production. Because of the importance of naturally occurring nonverbal cues in both the higher and lower nonverbal immediacy scripts, it was decided to include general nonverbal cues on the teleprompter but to allow the video instructor to employ subtle spontaneous nonverbal cues to supplement the general cues from the teleprompter. The researcher would monitor both verbal and nonverbal delivery during production and call for retakes if experimental conditions were not maintained.

Production of the videos took place in a typical college classroom with a teacher's table and chair placed before a blackboard. A professional quality video camera was operated by a trained technician, and a studio quality teleprompter was operated by a professional technician. The overall quality of the videos was comparable to those produced in a college communication department, but less polished than professionally produced distance learning

programs. Although there was some static from the microphone on two of the videos, later feedback from participants confirmed that audio/video quality did not distract their attention during the experiment.

Rating Procedures for Manipulation Checks

After the four videotapes were recorded, manipulation checks were conducted to confirm that the four experimental conditions had been accurately produced. A panel of eight experts was trained and coached in the identification of specific verbal and nonverbal immediacy cues, as listed in a verbal immediacy measure (see Appendix M) based on the taxonomy of verbal immediacy cues (see Appendix G), and a nonverbal immediacy measure (see Appendix N) based on the taxonomy of nonverbal immediacy cues (see Appendix J).

All eight raters were graduate students in Communication Studies and received immediacy identification training prior to participating in the manipulation checks. After reviewing the verbal immediacy measure (see Appendix M) with the researcher, each rater viewed one of the videotapes in its entirety and completed the verbal immediacy measure. After reviewing the nonverbal immediacy measure (see Appendix N) with the researcher, each rater

viewed one of the videotapes in its entirety and completed the nonverbal immediacy measure.

Raters were randomly assigned to two versions of the tapes representing two of the four experimental conditions. Using the verbal immediacy measure, each rater evaluated verbal immediacy on one tape; using the nonverbal immediacy measure, each rater evaluated nonverbal immediacy on a different tape. Some raters completed the verbal measure first; others completed the nonverbal measure first. Seven of the raters completed the evaluations under the auspices of the researcher; one received the training and viewed the tapes at home within 48 hours. Immediacy levels for each of the four experimental conditions were, therefore, rated on the respective measures by two experts for verbal immediacy and two different experts for nonverbal immediacy.

Raters' responses on these two immediacy measures provided data from which inter-rater reliability was determined on both a single classification item and the mean scores of the remaining multiple-items. A Pearson product-moment correlation coefficient was computed as an index of the association between the single-item and multiple-item scores of the raters.

Summary of Experimental Manipulations

In summary, two independent variables in a 2x2 design were manipulated during this experimental study, teacher verbal immediacy and teacher nonverbal immediacy. Manipulations of both types of teacher immediacy were controlled through the use of written scripts containing specific verbal cues and nonverbal cues that were closely followed during video production. Sentences containing word substitutions for the recall measure were identical across all four scripts. The video instructor performed each of the four scripts representing the four experimental conditions described above. A panel of trained experts rated the levels of verbal immediacy and nonverbal immediacy as manipulation checks on each of the four videotapes.

Measurements

Students' Motivation

Student state motivation was measured using Christophel's (1990) 12-item Student Motivation Scale, developed from earlier measures of student motivation (Beatty, Behnke, & Froelich, 1980; Beatty, Forst, & Stewart, 1986; Beatty & Payne, 1985). This instrument contained 12 sets of bipolar, semantic differential-type

items assessing student attitudes toward instruction. Students responded on a scale of 1 to 7 to items such as interested/uninterested, involved/uninvolved, don't want to study/want to study, and not stimulated/stimulated. Half the items were reverse coded. Christophel (1990) reported reliability coefficients ranging from .95 to .96 for the 12-item Student Motivation Scale, and shorter versions of the scale have produced alpha coefficients of .79 to .96 (Beatty & Payne, 1985; Beatty et al., 1986). Alpha reliabilities (Cronbach, 1951) obtained in this study were .92 on the 12-item scale. For the research question, higher and lower categories of student state motivation were created using a mean split.

Students' Cognitive Learning

Immediate recall was measured as an index of cognitive learning using a modified cloze procedure (Taylor, 1954). This fill-in procedure consisted of providing students with significant content portions of text actually spoken by the video instructor, and having them fill in blanks scattered throughout the transcript with specific words they recalled from the videotaped lecture. Instead of the usual random deletions, the cloze procedure for this study was modified so that only key words were selected for deletion, thus

measuring recall of specific words relating to important concepts, definitions, or examples. Typical items selected for recall testing included a date, key words in a definition, a key word from the title of the lecture, and other specific individual words that could be recalled and written into blanks to complete exact sentences excerpted from the script. These key words were chosen early in the experiment, and care was taken in the script that verbal immediacy manipulations would not affect the presentation of the key words on any versions of the videotape. Exact word replacements, word stems, and synonyms determined in advance were accepted as correct.

Various levels of difficulty and detail were included in the word omissions. Item analysis on the 31 recall items identified 7 items that had a point biserial correlation coefficient of less than .35. These 7 items were subsequently deleted from the measure, and the remaining 24 items constituted the recall measure for the study (see Table 2).

The cloze procedure has been frequently used to measure recall and comprehension of linguistic content (Jongsma, 1980). Use of portions of the actual transcript assured validity. Typical reliabilities for the cloze

procedure have been reported in the range of .80 (Wheless, 1971). The KR-20 reliability coefficient (Kuder &

Table 2
Descriptive Statistics on Cognitive Learning Measure

MOMENTS

Number of Items	24
Number of Participants	347
Minimum Score	0
Maximum Score	24
Mode of Scores	14
Mean Score	10.931
Variance	31.724
Standard Deviation	5.632
Skewness	-0.023
Kurtosis	-0.898

RELIABILITY

Kuder-Richardson 20	0.878
Standard Error	1.971

QUANTILES

100%	24-16
75%	15-12
50%	11- 8
25%	7- 0

Richardson, 1937) obtained in this study was .88. The measure distributed itself normally and had normative characteristics for a test of cognitive learning (see Table 2).

Raters' Verbal Immediacy Scale

Verbal immediacy was measured by raters using a 10-item scale (see Appendix M) developed for this study. The instrument was based on the taxonomy of verbal immediacy cues (see Appendix G) drawn from established research and theory (Gorham, 1988; Jordan, 1989; Mehrabian, 1968; Wiener & Mehrabian, 1968), and was used by raters to indicate categories of verbal immediacy in each of the experimental conditions. Raters responded on a 6-point scale to a single-item classification ("the teacher's overall verbal immediacy") of lower (1-2), moderate (3-4), or higher (5-6) verbal immediacy on the tape. Identical 6-point scales were then used to elicit responses to 9 items of verbal immediacy/non-immediacy based on the verbal immediacy taxonomy, including openness, inclusiveness, concern, nearness, and other components of the verbal immediacy construct. Alpha reliabilities (Cronbach, 1951) obtained in this study were .99 for the 9 multiple items on the verbal immediacy instrument.

Raters' Nonverbal Immediacy Scale

Nonverbal immediacy was measured by raters using an 11-item scale (see Appendix N) developed for this study. The instrument was based on the taxonomy of nonverbal

immediacy cues (see Appendix J) drawn from established research and theory (Andersen, 1979; Mehrabian, 1967, 1982; Richmond, Gorham, & McCroskey, 1987), and was used by raters to indicate categories of nonverbal immediacy in each of the experimental conditions. Raters responded on a 6-point scale to a single-item classification ("the teacher's overall nonverbal immediacy") of lower (1-2), moderate (3-4), or higher (5-6) nonverbal immediacy on the tape. Identical 6-point scales were then used to elicit responses to 10 items of nonverbal immediacy/non-immediacy based on the nonverbal immediacy taxonomy, including eye contact, body position, movement, gestures, smiles, and other components of the nonverbal immediacy construct. Alpha reliabilities (Cronbach, 1951) obtained in this study were .99 for the 10 multiple items on the nonverbal immediacy instrument.

Design and Method of Analysis

Data were analyzed through the use of appropriate statistical methods, and hypotheses were tested at a .05 level of significance. Statistical tests and assessments were as follows:

The first hypothesis was to be tested using a 1-tailed t-test of the hypothesized difference between higher

teacher verbal immediacy and lower teacher verbal immediacy on cognitive learning, using the error term derived from the two-way ANOVA testing the third hypothesis. The second hypothesis was to be tested using a 1-tailed t-test of the hypothesized difference between higher teacher nonverbal immediacy and lower teacher nonverbal immediacy on cognitive learning, using the error term derived from the two-way ANOVA testing the third hypothesis.

The third hypothesis was to be analyzed with two-way analysis of variance (2x2) reflecting main effects and interaction effects among levels of teacher verbal immediacy (higher, lower) and teacher nonverbal immediacy (higher, lower) on cognitive learning. Directional t-tests using the error term derived from the two-way ANOVA were to be used to test the hypothesized cell comparisons.

The fourth hypothesis was to be analyzed with 2x2 analysis of covariance (ANCOVA) to control for student state motivation, the covariate, in the retesting of the first three hypotheses. The eta coefficients from both analyses were then to be compared with t-tests to test for differences in the coefficients when student state motivation is covaried.

The research question was to be examined using 3-way analysis of variance (2x2x2) reflecting main effects and interactions effects among levels of teacher verbal immediacy (higher, lower), levels of teacher nonverbal immediacy (higher, lower), and levels of student motivation (higher, lower). For this analysis, higher and lower categories of student motivation were created through the use of a mean split. Appropriate non-directional t -tests of cell comparisons were to be used to test main effects and cells in interaction effects among levels of teacher verbal immediacy, levels of teacher nonverbal immediacy, and levels of student state motivation on cognitive learning.

Summary

This chapter has described the sample and the procedure used to obtain the data for the study. The measurements employed and the method of analysis were also explained. The next chapter will report the results obtained from the analysis of each hypothesis and each research question.

CHAPTER 4

RESULTS

Introduction

The previous chapter described the sample and the procedure used to obtain the data for the study. The measurements employed and the methods of analysis were also explained. This chapter will report the results obtained from analysis of experimental manipulation of variables and analysis of each hypothesis and research question.

Results for Manipulation Checks

For the single-item ratings, the eight experts achieved 100% agreement in their categorization of higher, moderate, or lower levels of verbal and nonverbal immediacy in the four experimental conditions (see Table 3). Furthermore, mean scores on the multiple-item measures tended to be in the same direction as the single-item ratings (and resulting classifications). To further verify the reliability of ratings, a Pearson product-moment correlation coefficient of .99 was obtained between the single-item measures and multiple-item measures.

Table 3
Ratings of Immediacy Levels as Manipulation Check

<u>Condition</u>	<u>Single Item</u>			<u>Multiple</u>
	Low (1-2)	Medium (3-4)	High (5-6)	<u>Item</u> Mean
Higher Verbal Immediacy				
Rater 1 - Tape 2			6	5.78
Rater 2 - Tape 2			6	5.67
Rater 3 - Tape 1			6	5.78
Rater 4 - Tape 1			6	6.00
Lower Verbal Immediacy				
Rater 1 - Tape 4	1			1.22
Rater 2 - Tape 4	1			1.22
Rater 3 - Tape 3	2			2.44
Rater 4 - Tape 3	1			1.33
Higher Nonverbal Immediacy				
Rater 1 - Tape 3			6	6.00
Rater 2 - Tape 3			5	4.50
Rater 3 - Tape 1			6	5.70
Rater 4 - Tape 1			6	5.80
Lower Nonverbal Immediacy				
Rater 1 - Tape 2	1			1.40
Rater 2 - Tape 2	1			1.10
Rater 3 - Tape 4	1			1.30
Rater 4 - Tape 4	1			2.10

Note. r between single item ratings and mean of multiple-item ratings = .99

The manipulation check performed by the panel of experts confirmed, therefore, that the four versions of the

videotaped lecture did present the four experimental conditions as follows:

Tape One:	Higher Verbal, Higher Nonverbal
Tape Two:	Higher Verbal, Lower Nonverbal
Tape Three:	Lower Verbal, Higher Nonverbal
Tape Four:	Lower Verbal, Lower Nonverbal

Results for Hypotheses and Research Question

The first hypothesis predicted greater cognitive learning for higher teacher verbal immediacy than for lower teacher verbal immediacy. Results from the 2-way ANOVA (2x2) of higher and lower verbal immediacy and higher and lower nonverbal immediacy on recall failed to support the first hypothesis. Although a significant main effect for higher and lower verbal immediacy was obtained ($F(1, 343) = 5.00, p = .0260, 2\text{-tailed}$) the means on recall were opposite of the direction predicted (lower verbal immediacy, $M = 11.46$ vs. higher verbal immediacy, $M = 10.35$). A post hoc comparison using Scheffé's t-test (Scheffé, 1953), which required a minimum difference of 1.17 at the critical value of $F(1, 342) = 3.87, p = .05$, produced no significant difference in cognitive learning (recall) means for higher and lower verbal immediacy (see Table 4).

The second hypothesis predicted greater cognitive learning for higher teacher nonverbal immediacy than for lower teacher nonverbal immediacy. Results from the 2-way

Table 4
Means on Recall for Main Effects of 2-way Analysis

Variables	<u>n</u>	<u>M</u>	<u>M_{adj}</u>
Verbal Immediacy			
Higher	165	10.35	10.06
Lower	182	11.46	11.42
Nonverbal Immediacy			
Higher	197	11.74 _a	11.73 _b
Lower	150	9.87 _a	9.76 _b

Note. N = 347. Means with same subscripts are significantly different, p ≤ .05.

ANOVA (2x2) of higher and lower verbal immediacy and higher and lower nonverbal immediacy on recall supported the second hypothesis. A significant main effect for higher and lower nonverbal immediacy was obtained (F (1, 343) = 11.07, p = .0005, 1-tailed). Recall was greater (t (345) = 3.33, p = .0005) for higher nonverbal immediacy (M = 11.74, n = 197) than for lower nonverbal immediacy (M = 9.87, n = 150; see Table 4). Higher and lower teacher nonverbal immediacy accounted for 3.09% of the variance in cognitive learning.

The third hypothesis predicted an interaction effect between verbal immediacy and nonverbal immediacy such that cognitive learning is greatest when both categories of teacher immediacy are higher than when either category is higher, and lowest when both categories of teacher immediacy are lower. Results from the 2-way ANOVA (2x2) of higher and lower verbal immediacy and higher and lower nonverbal immediacy on recall failed to support the third hypothesis. No significant interaction effect (2x2) for levels of verbal immediacy and nonverbal immediacy was observed on recall ($F(1, 343) = 1.64, p = .2017$). However, significant main effects were obtained as reported above in the results for the first two hypotheses.

The fourth hypothesis predicted that when student motivation is covaried, the previously hypothesized effects of teacher verbal immediacy and teacher nonverbal immediacy on cognitive learning are greater. In the ANCOVA testing the fourth hypothesis, student motivation was a significant covariate ($F(1, 342) = 7.05, p = .0083$). However, when motivation scores were covaried, no significant 2-way interaction effect for levels of verbal immediacy and nonverbal immediacy was observed on recall ($F(1, 342) = 1.50, p = .2222$). Since no significant interaction effect

was obtained in the ANOVA testing the third hypothesis or in this ANCOVA, testing of the fourth hypothesis (t-ratio between eta coefficients) was impossible. Although a significant main effect for higher and lower verbal immediacy was obtained ($F(1, 342) = 5.18, p = .0234$, 2-tailed), the adjusted means on recall were opposite of the direction predicted (lower verbal immediacy, $M_{adj} = 11.42$ vs. higher verbal immediacy, $M_{adj} = 10.06$; see Table 4). A post hoc comparison using Scheffé's t-test (Scheffé, 1953), which required a minimum difference of 1.16 between Scheffé's means (11.46 - 10.35) at the critical value of $F(1, 342) = 3.87, p = .05$, produced no significant difference between these means. A significant main effect for higher and lower nonverbal immediacy was obtained ($F(1, 342) = 10.93, p = .0005$, 1-tailed). Recall was greater ($t(345) = 3.31, p = .0005$, 1-tailed) on adjusted means for higher nonverbal immediacy ($M_{adj} = 11.73, n = 197$) than for lower nonverbal immediacy ($M_{adj} = 9.76, n = 150$; see Table 4). Higher and lower teacher nonverbal immediacy accounted for 2.99% of the variance on cognitive learning (recall).

The research question asked how cognitive learning differs due to the interaction of higher and lower teacher verbal immediacy, higher and lower teacher nonverbal

immediacy, and higher and lower student state motivation. No significant 3-way interaction effect (2x2x2) for levels of verbal immediacy (higher, lower), nonverbal immediacy (higher, lower), and student motivation (higher, lower) was observed on recall ($F(2, 339) = 0.92, p = .3392$). Likewise, no significant 2-way interaction effect (2x2) was observed on recall for levels of verbal immediacy and nonverbal immediacy ($F(1, 339) = 1.17, p = .2800$), for levels of verbal immediacy and motivation ($F(1, 339) = .02, p = .8840$), or for levels of nonverbal immediacy and motivation ($F(1, 339) = .01, p = .9077$). However, significant main effects on recall for verbal immediacy levels ($F(1, 339) = 4.42, p = .0362$), nonverbal immediacy levels ($F(1, 339) = 9.50, p = .0022$), and motivation levels ($F(1, 339) = 9.08, p = .0028$) were obtained (see Table 5). Recall was less ($t(345) = 2.10, p = .0362$) for higher verbal immediacy ($M = 10.26, n = 165$) than for lower verbal immediacy ($M = 11.54, n = 182$). Higher and lower verbal immediacy accounted for 1.21% of the variance on cognitive learning (recall). Recall was greater ($t(345) = 3.08, p = .0022$) for higher nonverbal immediacy ($M = 11.84, n = 197$) than lower nonverbal immediacy ($M = 9.96, n = 150$). Higher and lower nonverbal immediacy accounted for

2.60% of the variance on cognitive learning (recall). Recall was less ($t(345) = 3.01, p = .0028$) for higher student motivation ($M = 9.98, n = 201$) than for lower student motivation ($M = 11.81, n = 146$). Higher and lower student motivation accounted for 2.49% of the variance on cognitive learning (recall).

Table 5
Means on Recall for Main Effects of 3-way Analysis

Variables	<u>n</u>	<u>M</u>
Verbal Immediacy		
Higher	165	10.26 _a
Lower	182	11.54 _a
Nonverbal Immediacy		
Higher	197	11.84 _b
Lower	150	9.96 _b
Student Motivation		
Higher	201	9.98 _c
Lower	146	11.81 _c

Note. N = 347. Means with same subscripts are significantly different, $p \leq .05$.

Summary

This chapter reported the results obtained from the analysis of manipulation of variables and analysis of each

hypothesis and research question. The next chapter will summarize and further interpret these findings.

CHAPTER 5

DISCUSSION

Introduction

The previous chapter reported the results of the testing of hypotheses and the examination of the research question. This chapter contains a summary of the entire study and presents interpretations of the results. Implications for teachers and implications for future research are presented, along with limitations of the study.

Summary of the Study

This experimental study sought to extend the findings of communication and education research concerning the effects of teachers' verbal and nonverbal immediacy behaviors on students' cognitive learning. Recall that immediacy behaviors express liking or interpersonal approach and reduce physical or psychological distance between interactants (Mehrabian, 1969, 1981; Wiener & Mehrabian, 1968). Teachers typically express immediacy through such verbal cues as inclusive references, self disclosure, humor, and concern for students (Jordan, 1989), and through such nonverbal cues as smiles, gestures, open

body positions, and vocal variety (Andersen, 1979). Collective research has found teacher immediacy, both verbal and nonverbal, to be an effective instructional strategy that enhances cognitive and affective learning (e.g., Kelley & Gorham, 1988; Menzel & Carrell, 1999; Richmond, Gorham, & McCroskey, 1987). Both in the classroom and in televised instruction, when teachers employ verbal and nonverbal immediacy cues, students indicate increased perceptions of having learned from the course (e.g., Hackman & Walker, 1990). However, reliance upon student surveys alone for the majority of research data has not allowed for conclusive assessment of cognitive learning. Moreover, researchers have not thoroughly examined the ways in which verbal immediacy and nonverbal immediacy function together and/or separately to enhance learning. Likewise, the respective roles of teacher immediacy and student motivation are also yet to be conclusively determined.

Through experimental design and manipulation of combinations of higher and lower levels of teacher verbal and nonverbal immediacy, this study explored teacher immediacy in relation to student motivation and cognitive learning in the context of college-level video instruction. Two research problems were addressed: first, how verbal

immediacy and nonverbal immediacy function together and/or separately to enhance learning; and second, how immediacy affects cognitive learning in relation to student motivation. These questions were examined in the context of video instruction to provide new insight into distance learning processes and to ensure maximum control of the manipulation of communication variables. Unlike most previous immediacy research, which has relied upon student self-reports of cognitive learning, this study employed direct measurement of cognitive learning through the assessment of students' immediate recall of lecture content.

The investigation was guided by four hypotheses and one research question. Specific predictions hypothesized that higher levels of teacher verbal and nonverbal immediacy would function together and separately to enhance students' cognitive learning, as measured by immediate recall of instructional content. It was further predicted that the magnitude of these effects would increase when the effects of student motivation were statistically removed, suggesting that accurate measurement of immediacy's effects may be influenced by student motivation. A research

question further explored the relationships among these variables.

To collect data for the study, 534 University of North Texas students in a basic undergraduate communication course were randomly assigned to one of 24 groups in order to receive part of the regular course content by way of videotaped instruction. After completing the 12-item Student Motivation Scale (Christophel, 1990) to indicate their level of interest, anticipation, and motivation to receive the video instruction, students viewed a 15-minute video lecture entitled "The Power to Persuade." Participants were unaware that the video instructor was actually performing one of four scripted manipulations reflecting specific verbal and nonverbal cues (see below).

Immediately after the video lecture, students completed a 31-item recall measure, consisting of significant content portions of the text actually spoken by the video instructor, in which key words had been omitted and replaced with blanks. Participants were asked to fill in the blanks with exact words they recalled from the videotape; word stems and synonyms were counted as correct responses. Key words had been chosen early in the experiment, and each version of the videotape contained

exactly the same words in the sentences selected for recall testing.

Four different versions of the video lecture had been produced, containing levels of teacher immediacy that had been manipulated to create the four experimental conditions of the 2x2 design:

Tape One: Higher Verbal, Higher Nonverbal

Tape Two: Higher Verbal, Lower Nonverbal

Tape Three: Lower Verbal, Higher Nonverbal

Tape Four: Lower Verbal, Lower Nonverbal

The four conditions were created by first writing a basic script for the lecture, then systematically increasing or decreasing specific verbal immediacy cues and nonverbal immediacy cues to create higher and lower immediacy combinations corresponding to the four experimental conditions (see Appendices H, I, K, and L). Each version of the tape contained identical wording in the sentences that would be included in the recall measure. The video instructor delivered the four versions of the lecture under carefully controlled conditions. A panel of eight trained raters performed manipulation checks and validated the four tapes as accurate representations of the four experimental conditions listed above.

From the 534 students randomly assigned to experimental groups in this study, 347 attended and participated completely. The sample was broad and diverse in terms of gender, age, classification, and major. Using the data obtained from this sample, various statistical analyses were performed to test the hypotheses and research question.

Interpretation of Results

Effects of Verbal and Nonverbal Immediacy on Recall

The first three hypotheses made predictions about the combined and separate effects of verbal and nonverbal immediacy on immediate recall. Although it appeared logical from previous research to expect combinations of higher and lower verbal and nonverbal immediacy to work together to produce a magnitude interaction effect, no such effect was obtained. The two immediacy variables did function together in this experiment, but with different results from those expected (see Figure 1).

An interaction effect between verbal immediacy and nonverbal immediacy was predicted in the third hypothesis, such that cognitive learning would be greatest when both categories of teacher immediacy were higher than when either category was higher, and lowest when both categories

of teacher immediacy were lower. The hypothesis was not supported. For the type of cognitive learning measured in this study, recall scores were not highest in the presence of higher nonverbal and higher verbal immediacy (experimental condition 1), nor were recall scores lowest in the presence of lower nonverbal and lower verbal immediacy (experimental condition 4).

In the higher nonverbal context in this study (cells 1

Figure 1
Means on Recall for Experimental Groups

		NONVERBAL IMMEDIACY	
		Higher	Lower
VERBAL IMMEDIACY	Higher	<u>Cell 1</u> <u>M</u> = 11.45 <u>n</u> = 99	<u>Cell 2</u> <u>M</u> = 8.68 <u>n</u> = 66
	Lower	<u>Cell 3</u> <u>M</u> = 12.03 <u>n</u> = 98	<u>Cell 4</u> <u>M</u> = 10.80 <u>n</u> = 84

and 3), the presence or absence of verbal immediacy had no significant detectable effect on recall (see Figure 1). Apparently, as long as the nonverbal immediacy level was relatively high, variations in verbal immediacy did not produce significant changes in cognitive learning of the type measured in this study. As long as the video teacher was smiling, gesturing, moving around, and using variety in vocal delivery, the level of immediate verbal cues apparently had little effect on students' recall. These findings illustrate the predominance of nonverbal immediacy over verbal immediacy, a result reminiscent of previous studies of immediacy and affective learning (McCroskey & Richmond, 1992; Plax, Kearney, McCroskey, & Richmond, 1986). These researchers concluded that students' affect is less influenced by teachers' verbal cues than by overriding nonverbal cues. The results of this present study extend these conclusions to the domain of cognitive learning. In the higher nonverbal immediacy context in this study, the presence or absence of verbal immediacy had no detectable effect on recall. Apparently, because the effects of verbal immediacy were mediated by nonverbal immediacy, the predicted interaction effect of higher verbal and higher nonverbal immediacy was not obtained in this experiment.

Hypothesis three also predicted that cognitive learning would be lowest in cell 4, in the presence of lower verbal and lower nonverbal immediacy. Not only was the predicted magnitude effect not obtained, but no significant difference was found in the recall mean of cell 4 as compared with recall means from cells 1 and 3, both containing higher nonverbal immediacy (see Table 6). Recall scores from cells 1, 3, and 4 varied by little more than one point (see Figure 1), and were not found to be significantly different in post hoc cell comparisons (see Table 6).

Students who viewed tape 4 were exposed to a video teacher whose words, voice, actions, and facial expressions were consistently non-immediate. Validation of this experimental condition was achieved through manipulation checks with trained raters. Even though both immediacy levels in this experimental condition were lower, students in cell 4 did receive the same instructional content as the other groups and correctly recalled a similar number of items as students who viewed the more immediate tapes 1 and 3. Perhaps the explanation for these unexpected results lies in this study's measurement of cognitive learning compared with learning measures in previous research.

Table 6
Post hoc Comparisons between Means on Recall for
Experimental Groups

Cell Comparisons	Mean Difference	Critical \underline{k}	>	\underline{t}
Cell 2 - Cell 1	2.77*	2.79	<	3.13
Cell 2 - Cell 3	3.35*	2.79	<	3.78
Cell 2 - Cell 4	2.12	2.79	>	2.32
Cell 3 - Cell 1	0.58	2.79	>	0.73
Cell 3 - Cell 4	1.23	2.79	>	1.49
Cell 4 - Cell 1	0.65	2.79	>	0.79

Note. *Significantly different, $p \leq .05$

The use of direct testing of recall apparently produced quite different data from those obtained in other studies that used student questionnaires about cognitive and affective learning. The findings of most previous immediacy studies are based upon self-reports from students indicating how much they felt they learned (e.g., Christophel, 1990; Menzel & Carrell, 1999), and those findings may be subject to review in light of these data obtained from a more direct and valid cognitive learning

assessment. Learning measures such as "How much you think you learned in this class?" versus "How much would you have learned from the ideal instructor?" (Richmond, Gorham, & McCroskey, 1987) may provide affective data rather than cognitive data. Perhaps students feel as though they learned little from a non-immediate teacher, when in reality they learned as much cognitively as they would have learned from a more immediate teacher. Even if students do not like a teacher's communicating style (low affect), they may score as highly on cognitive learning tests as they would under a more immediate teacher. Perhaps students' feelings (affect) about an instructor's delivery confound their objectivity to evaluate the actual learning that occurred.

Although students generally believe that they learn more from more nonverbally immediate teachers, results from this study indicate that significant cognitive learning may nevertheless occur in conditions of lower nonverbal immediacy. Since the experimental condition having lower verbal and lower nonverbal immediacy was verified, and since the learning data were collected through a recall test, there is little apparent reason to doubt the obtained results. The apparent contrast between these findings and

those of some previous studies suggests that the effects of lower verbal and lower nonverbal immediacy on cognitive learning may not have been fully assessed in previous research. Because no interaction effect was obtained to clarify this result, interpretations are tentative and call for further research in controlled conditions and using sound learning measures.

In contrast to the prediction of the third hypothesis that the lowest learning scores would come from experimental condition 4 (lower verbal, lower nonverbal), students in cell 2 (lower nonverbal, higher verbal) scored significantly lower on recall than students in cell 1 and cell 3 (see Table 6). Thus, the combination of higher verbal immediacy and lower nonverbal immediacy had a measurable effect on cognitive learning. Although recall means from cell 2 appeared to be considerably lower than recall means from cell 4 (lower verbal, lower nonverbal), post hoc comparisons using Scheffé's t-test (1953) indicated no significant difference between the mean recall scores from these two cells (see Table 6). Again, because no interaction effect was obtained in this study, interpretation of the results from cell 2 is only tentative.

A plausible reason that recall scores were lower in cell 2 was the apparent incongruity between the levels of nonverbal and verbal immediacy. The teacher in cell 2 was consistently low in nonverbal immediacy, as validated by the panel of experts. Yet, the nonverbally non-immediate teacher spoke such immediate words as "I really want you to do well on this speech" and "I know we all agree." Immediate expressions such as these are usually interpreted as expressions of liking or interpersonal approach, and typically they serve to reduce the distance between interactants (Mehrabian, 1969). However, in the case of experimental condition 2, most students probably perceived conflicting signals. The instructor's words indicated that he cared about the students, but his nonverbal cues sent messages of interpersonal distance and aloofness. A common axiom in communication studies holds that, when verbal and nonverbal signals send conflicting messages, we usually believe the nonverbal (Leathers, 1997; Richmond & McCroskey, 1995).

When students heard the video teacher say endearing words, but at the same time observed a distant and non-immediate demeanor, they may have perceived a sarcastic teacher who did not mean what he said, or a deceptive

teacher who could not be trusted. Immediate words spoken in a non-immediate nonverbal context may well have produced cognitive conflict, causing students to question the integrity or credibility of the instructor and his message. Apparently this confusion either distracted their attention from the lecture, or else they discounted the credibility of the instructor and his message, because their recall mean was significantly lower than students who received the same lecture in experimental groups 1 and 3. In discussions with participants the week following the experiment, a student from condition 2 indicated that she could listen to the instructor and learn, but not watch him and learn (see Appendix P). Some students may have interpreted the unexpected contrast between verbal and nonverbal immediacy levels as condescension or an extremely ingratiating demeanor, causing them not to take the teacher's instruction seriously.

Low recall means obtained in cell 2 can be further explained in view of nonverbal expectancy. Interpersonal interactions, including those between video instructor and students, are influenced by certain expectations about the nonverbal cues that will be used. Many nonverbal cues are culturally or contextually defined, such as students who

raise their hand to ask the classroom teacher a question, or instructors who smile and give direct eye contact to students when addressing them. Nonverbal expectancy violations theory (Burgoon, 1978) holds that departures from the normal, expected nonverbal cues potentially have either a positive or negative effect on the interaction. Positive expectancy violations may serve to provide listeners with a pleasant surprise, capturing their attention and thereby enhancing the effectiveness of the interaction. Negative expectancy violations, on the other hand, are more likely to cause an uncomfortable or unpleasant distraction that reduces the effectiveness of the interaction. Students who viewed tape 2 heard pleasant and positive words spoken, but the accompanying nonverbal cues may have violated their expectations of an immediate teacher. The result of the nonverbal expectancy violations were apparently negative, as indicated by lower recall scores in experimental condition 2.

It should be noted that experimental condition 3 (lower verbal, higher nonverbal) also contained contrasting levels of verbal and nonverbal immediacy, but with no apparent reduction in learning. The higher level of nonverbal immediacy in cell 3 created a communication

context that attracted and held the attention of students, with the result that learning was not negatively affected even in the presence of lower verbal immediacy. Recall from previous discussion that the nonverbal immediacy context apparently overrides or dominates verbally immediate language. In tape 3, the instructor's eye contact, facial expressions, movement, and vocal variety were no doubt more appealing to students than such non-immediate words as "you people better do this." Thus, as long as the nonverbal immediacy level was relatively high, the video teacher's use of non-immediate words had no measurable effect on recall.

In summary, although hypothesis three was not supported and no interaction effect was observed between higher and lower levels of verbal and nonverbal immediacy, this study provided important findings about the combination of higher and lower levels of verbal and nonverbal immediacy. In the context of lower nonverbal immediacy, higher levels of verbal immediacy produced unexpectedly low recall scores. Therefore, the general level of teacher verbal immediacy should probably not exceed the accompanying level of nonverbal immediacy, otherwise learning outcomes may be hindered. However,

because no interaction effect was obtained to clarify these results, these interpretations remain tentative and await replication in future research.

Effects of Teacher Nonverbal Immediacy on Student Recall

Since no interaction effect was observed between higher and lower levels of verbal and nonverbal immediacy, analyses were conducted to test for main effects as predicted in hypothesis one and two. The second hypothesis predicted greater cognitive learning for higher teacher nonverbal immediacy than for lower teacher nonverbal immediacy. This hypothesis was supported. Participants in this experiment recalled more specific lecture content when it was delivered with higher teacher nonverbal immediacy than with lower teacher nonverbal immediacy (see Table 4).

These results confirmed previous research that has consistently found teacher nonverbal immediacy to be a positive communication trait and an effective instructional strategy (e.g., Andersen, 1979). Lower recall scores from cell 2 (lower nonverbal, higher verbal) contributed to the nonverbal immediacy main effect. Therefore, despite the unexpectedly high scores from cell 4 (lower nonverbal, lower verbal), the main effect for nonverbal immediacy was significant (see Figure 1).

When students viewed the tapes of the instructor using higher nonverbal immediacy cues, they correctly recalled more of the information he conveyed. It is important to note that the specific items of information were communicated by the teacher orally through words (lecture scripts), and the cognitive learning instrument measured the recall of those specific words. Yet when the video instructor used higher and lower levels of nonverbal immediacy (in the presence of higher and lower verbal immediacy), students' ability to correctly recall those words was significantly affected.

Results obtained in this experiment extended and strengthened previous research findings. Recall that those findings were largely based on survey questionnaire data in which students assessed their perceptions of their own affective and/or cognitive learning. The direct test of recall used in this study provided more valid and reliable cognitive learning data than student surveys. Despite relatively high recall scores from cell 4 (lower nonverbal, lower verbal), higher teacher nonverbal immediacy, as contrasted with lower, enhanced cognitive learning outcomes for most of the participants in this study.

Effects of Teacher Verbal Immediacy on Student Recall

The first hypothesis predicted greater cognitive learning for higher teacher verbal immediacy than for lower teacher verbal immediacy. This hypothesis was not supported. Higher or lower verbal cues by the video instructor produced no significant difference in recall of the type measured in this study.

If verbal immediacy is a positive communication trait that reduces psychological distance between teachers and students (Mehrabian, 1969, 1981; Gorham, 1988), it stands to reason that students would be drawn to verbally immediate teachers, pay closer attention to their instruction, and retain more of the information (Kelley & Gorham, 1988). Contrary to hypothesized results, however, students in this study who viewed the higher verbal immediacy tapes did not recall more key words from the video lecture than students who viewed the tapes containing lower verbal immediacy cues. Means of recall appeared to vary slightly in the opposite direction from that predicted (see Table 4), but post hoc analysis indicated no significant difference in the recall of the two groups.

Recall that earlier researchers found nonverbal immediacy to mediate the effects of teachers' verbal

messages in terms of questionnaires reflecting student affect and perceived learning (McCroskey & Richmond, 1992; Plax, Kearney, McCroskey, & Richmond, 1986). These findings led to the conclusion that "nonverbal cues typically provide the framework from understanding verbal messages" (Plax et al., 1986, p. 53). These results illustrate how difficult it is to isolate the words we speak from the context in which they are spoken. A common axiom in communication studies holds that verbal cues carry the content of a message, but nonverbal cues carry the relational portion of the message (Watzlawick, Beavin, & Jackson, 1967). It is relatively easy for instructors to increase the frequency and intensity of verbal immediacy cues -- to "say the right words" that would seemingly endear them to their students, capture their attention, and thereby enhance learning. However, increasing verbal immediacy cues without considering the overriding nonverbal immediacy behaviors and relational context does not appear to enhance cognitive learning.

Recall that the manipulation of verbal immediacy in this experiment was validated by a panel of trained raters. After these ratings were completed and turned in, each rater was interviewed by the researcher, who then revealed

the desired level of verbal immediacy on each of the tapes the raters had watched. When asked whether the tape they had viewed was a natural and realistic representation of that verbal immediacy level, each of the eight raters replied affirmatively. One went on to comment, "I really had to concentrate to focus my attention on the verbal cues alone, because it is hard to separate the verbal and the nonverbal" (see Appendix O).

This rater's observation alludes to the potential overriding effects of nonverbal cues over verbal messages. In this study, the teacher's instruction was delivered orally in a video communication context containing both verbal and nonverbal cues. This methodology is consistent with previous immediacy investigations, in which verbal and nonverbal cues have been communicated simultaneously in customary classroom interactions or televised instruction. In such typical classroom settings, teachers usually exhibit similar levels of verbal and nonverbal immediacy in their communication with students. In other words, teachers typically use higher (or lower) verbal and nonverbal cues in their classroom communication. This study, however, called for the combination of contrasting levels of verbal and nonverbal immediacy, such that higher verbal and lower

nonverbal cues were combined in a single effect, as were lower verbal and higher nonverbal cues. The violation of nonverbal expectancies created by the juxtaposition of higher and lower immediacy levels may help explain the obtained result of lower learning in the presence of higher verbal immediacy.

Had the experiment been designed to isolate verbal immediacy by testing the effects of written text messages (verbal content with virtually no nonverbal context) rather than spoken words, perhaps higher verbal immediacy would have enhanced cognitive learning as predicted in the first hypothesis. For example, in the context of computer-mediated instruction, textbooks, and other text-based instructional contexts, verbal immediacy may produce the hypothesized learning effects. In such learning environments, the absence of most nonverbal cues may place greater emphasis on the words themselves to carry the nuances of meaning and affect.

In this study, however, the words spoken by the video instructor were not separated from the nonverbal behavioral cues that accompanied them, and no effect on cognitive learning was observed for variations in the level of verbal immediacy. For the participants in this experiment, what

the video instructor said apparently had less effect on recall than how he said it.

Removing the Effects of Student Motivation

The fourth hypothesis predicted that when student motivation was covaried, the previously hypothesized effects of teacher verbal immediacy and teacher nonverbal immediacy on cognitive learning would be greater. The hypothesis was not supported. Student motivation was a significant covariate, but after motivation scores were covaried, recall of the type measured in the study was not found to be highest in the presence of both higher nonverbal and higher verbal immediacy, nor was recall found to be lowest in the presence of both lower nonverbal and lower verbal immediacy.

The rationale for this hypothesis suggested that immediacy's effects on learning may be suppressed by the effects of student motivation. Thus, it was predicted that error due to student motivation would be reduced through analysis of covariance, and that the hypothesized effects of immediacy on cognitive learning would be increased. Among participants in this study, student state motivation as measured by the Student Motivation Scale (Christophel, 1990) was indeed a significant covariate. Post hoc analysis

also revealed that there were no significant differences in motivation means across experimental groups, a result consistent with random assignment of participants to groups. However, results of the analysis of covariance showed no evidence of increased effects of immediacy on learning.

Since student motivation was not found to be a significant source of error, then analysis of the research question became relevant. Perhaps motivation would prove to be an interacting independent variable that contributed directly to participants' recall.

Interaction among Levels of Immediacy and Motivation

The research question asked how cognitive learning would differ due to the interaction of higher and lower teacher verbal immediacy, higher and lower teacher nonverbal immediacy, and higher and lower student state motivation. No significant 3-way interaction effect (2x2x2) was observed on recall for higher and lower levels of verbal immediacy, nonverbal immediacy, and student motivation. Likewise, no significant 2-way interaction effect (2x2) was observed on recall for levels of verbal immediacy and nonverbal immediacy, for levels of verbal immediacy and motivation, or for levels of nonverbal

immediacy and motivation. However, research question results indicated (2-tailed) that recall scores were significantly greater for lower verbal immediacy than for higher verbal immediacy; recall scores were significantly greater for higher nonverbal immediacy than for lower nonverbal immediacy; and recall scores were significantly greater for lower student motivation than for higher student motivation.

Lack of any interaction of motivation with verbal or nonverbal immediacy indicated that motivation acted independently of experimental manipulations of verbal and nonverbal immediacy levels on recall. Analysis of main effects indicated that student motivation levels did affect cognitive learning: recall scores of less motivated students were higher than those of more motivated students. This result should be considered in light of previous research indicating greater immediacy effects for less motivated students (Frymier, 1993). Recall that less motivated students may be more likely to respond to an immediate teacher's communicating style, to be drawn in to the learning environment (reduced distance), and to focus their attention on the information being presented. By contrast, teacher immediacy apparently has less of an

effect on learning for students whose higher motivation levels are presumably sufficient to maintain attention and thereby enhance learning.

In this experiment, however, less motivated students may have simply paid more attention to the televised lectures, including those tapes containing lower verbal and/or nonverbal immediacy, because they were engaged in something different from the usual classroom routine. Participants with lower motivation, then, might have paid closer attention to the videotapes than participants with higher initial motivation levels. The result could be higher means on recall for the less motivated students.

It is also possible that participants' responses to the motivation measure reflected a social desirability effect, in which most students reported higher levels of initial motivation than they actually perceived, believing that higher scores were preferred over lower scores. This type of effect could have produced inflated motivation scores and affected the classification of students into higher and lower motivation categories. Motivation scores were classified as higher or lower through a mean split ($\bar{M} = 4.51$, $n = 347$). Because the neutral or absolute mid-point on the 7-point Likert-type scale was 4, most participants

indicated a relatively high initial motivation level. Because no significant interaction effects were obtained to clarify the results, these interpretations are tenuous. Further research is needed to clarify the effects of student motivation on cognitive learning in the presence of higher and lower verbal and nonverbal immediacy.

Consistent with results obtained in the first hypothesis, the 3-way analysis of variance used to explore the research question also tended to indicate higher recall means for lower verbal immediacy than for higher verbal immediacy. This finding was probably the result of the incongruous immediacy levels in experimental condition 2 (higher verbal, lower nonverbal), which produced significantly lower recall scores due to negative nonverbal expectancy violations. When the video instructor used conflicting verbal and nonverbal cues, students were probably more influenced by the nonverbal, and cognitive learning was affected. Thus, in the presence of higher and lower student motivation, higher verbal immediacy appears to be an effective communication strategy only when used with comparable levels of nonverbal immediacy.

Finally, the research question called for the examination of the effects of nonverbal immediacy in the

presence of higher and lower verbal immediacy and higher and lower motivation. Consistent with results obtained in the second hypothesis, the 3-way analysis of variance used to explore the research question also indicated that, in the presence of higher and lower student motivation levels, recall was greater for higher nonverbal immediacy than for lower nonverbal immediacy. These findings support the results of previous research that associates teacher nonverbal immediacy with increased student learning (e.g., Andersen, 1979; Christophel & Gorham, 1995; Plax, Kearney, McCroskey, & Richmond, 1986). Because of the direct recall test used to measure cognitive learning in this study, previous findings associating nonverbal immediacy with learning outcomes are strengthened and extended to the domain of cognitive learning. Moreover, this investigation supported previous findings indicating that, in televised instruction, nonverbal immediacy cues enhance learning much as they do in the traditional classroom (Walker & Hackman, 1991; Guerrero & Miller, 1998).

In summary, this study used an experimental design and a direct test of recall to provide data about teacher immediacy cues and student learning in the context of televised instruction. Findings strengthened previous

research associating teacher nonverbal immediacy with enhanced cognitive learning outcomes. However, higher verbal immediacy, in the presence of higher and lower nonverbal immediacy, was not shown to produce greater learning among participants in this experiment. No interaction effects were found between higher and lower levels of verbal and nonverbal immediacy. Recall scores were comparatively low in the presence of higher verbal and lower nonverbal immediacy, suggesting that nonverbal expectancy violations (Burgoon, 1978) hindered cognitive learning. Student motivation was not found to be a significant source of error in measuring immediacy's effects, and no interaction effects were detected between levels of student motivation, teacher verbal immediacy, and teacher nonverbal immediacy.

Implications for Teachers and Distance Educators

The findings of this experiment are important for classroom teachers and distance educators alike. First, it seems clear that students learn more from teachers who use frequent nonverbal immediacy in their delivery. As long as a teacher maintains relatively high nonverbal immediacy, the use of higher or lower verbal immediacy cues appears to have little effect on cognitive learning. Even in the

context of pre-recorded college telecourses, in which students and teachers are separated by both time and distance, it is clear that smiles, gestures, eye contact, and vocal expressiveness have a positive impact on meaningful learning outcomes. Instructors who wish to improve their nonverbal immediacy can observe other highly immediate teachers, record and critique their own teaching performance, and practice their nonverbal communication skills. Although some teachers appear to have a natural gift for immediate delivery, most teachers can increase their nonverbal immediacy through intentional effort and practice. The probable outcome is that their students will learn more.

Second, although teacher nonverbal immediacy appears to function separately to enhance cognitive learning (Christophel 1990), the effects of teacher verbal immediacy might possibly depend upon the nonverbal context in which they are used. Higher levels of verbal immediacy may indeed enhance learning in text-only environments such as computer-mediated training, textbooks, and other written materials. Communication scholars have not yet examined verbal immediacy in isolation from usual nonverbal contexts. However, in face-to-face or televised visual

contexts, teachers should most likely seek to avoid projecting a higher verbal immediacy level than would be consistent with the accompanying nonverbal immediacy level. In these settings, higher verbal immediacy may possibly reduce cognitive learning if it is not accompanied by expected nonverbally immediate cues as well. Apparent incongruity between higher verbal and lower nonverbal immediacy may be interpreted by students as sustained sarcasm or deception and should probably be avoided in undergraduate instruction directed toward recall. Students may be distracted from lecture content or doubt the integrity of the instructor.

Finally, this study provided no conclusive results concerning the impact of student motivation on learning outcomes. Most teachers acknowledge that the inner motivation of students -- their desire to study, to learn, to succeed -- plays an important role in the teaching-learning process. Perhaps, as suggested by Frymier (1994), teachers can increase student motivation through the use of appropriate combinations of verbal and nonverbal immediacy, and thereby enhance learning outcomes. Perhaps Christophel (1990) and Richmond (1990) are correct in concluding that student motivation mediates the effects of teacher

immediacy on learning. Although the exact relationship of these complex variables is not yet clear, teachers should continue to incorporate appropriate levels of verbal and nonverbal immediacy into their instructional strategy, both in the traditional classroom and in distance learning delivery systems such as televised instruction.

Implications for Future Research

There are many questions yet to be pursued in this program of research on immediacy and motivation. First, in televised instruction and other distance learning delivery systems, there is a possible relationship between student motivation and student expectancies for nonverbal immediacy. If such a relationship were to be found, educators could maximize immediacy cues in the production of televised instruction, then highlight these features in promotional materials about the learning program. Possible effects might include increased enrollment, enhanced student motivation, and increased learning outcomes.

Second, this research could be moved out of the laboratory into a field setting such as a college telecourse. Control would be reduced, but the more authentic learning context might provide new insight into how motivation and immediacy affect learning outcomes for

students who willingly choose to enroll in mediated instruction.

A variation of this study could include procedural changes regarding the collection of motivation data. Perhaps a different measure of student motivation should be employed, and a sample of motivation levels should be taken just before and just after viewing the video lecture. Analysis of these data might provide insight into the effects of immediacy on motivation, motivation on immediacy, and motivation on learning.

Cognitive learning measures in future studies should include not only immediate recall and present motivation, but also delayed recall and motivation immediately after the instruction. Longitudinal studies of learning retention might also extend recall measures to the next class period, one week later, end of semester, etc. The effects of immediacy and motivation on long-term recall would provide an important contribution to current research findings.

In future research, different instructors should be used to deliver the video lecture. One cannot be sure that the obtained results do not apply only to the video instructor used in the manipulations for this study. More variability in instructors could potentially provide data

leading to different conclusions. For example, how would learning differ if the video lecture were delivered by an older black female, or a younger Hispanic male? Other cultural and ethnic variations would broaden our understanding of immediacy and motivation in different countries, at different educational levels, among students of different ethnic backgrounds, with different majors. Perhaps students of the humanities or social sciences respond more favorably to teacher immediacy than engineering or math students. These questions remain to be explored.

Future studies of immediacy in televised instruction should use a longer video lecture or multiple instructional units. This procedural change would expose students to more sustained teacher immediacy levels that might potentially affect recall. Controlled manipulation of communication variables over a longer instructional period may also help to minimize perceptions of scripting or choreography.

Furthermore, communication scholars should seek to clarify the effects of verbal immediacy outside of overriding nonverbal contexts. For example, how would results differ if this study were conducted with students reading the written scripts of the video lecture? Would

different results be obtained if the lecture were transmitted through web-based text files? In those circumstances, would higher verbal immediacy have the hypothesized effect of enhancing recall?

The 2x2 design of this present study could be expanded to a 3x3 design that would include higher, lower, and moderate levels of verbal immediacy and nonverbal immediacy. This advanced research design would allow more thorough examination of the effects of these variables on cognitive learning and could potentially indicate interaction effects not detected in the present 2x2 design.

Information scientists, as well as educators and communication professionals, would benefit from further study of instructional communication behaviors in distributed learning environments. Distance education may at times be primarily concerned with transferring information from the teacher to the student, but the affective and behavioral domains of learning are also important. If future research confirms that teacher immediacy influences cognitive learning, then information science professionals may seek ways to increase the effective transfer of information through the use of verbal and/or nonverbal communication cues.

Finally, the results of this study suggest that a direct test of recall provides different cognitive learning data from the student self-reports used in most previous immediacy studies. In light of these results, the findings of previous research should be reevaluated and, where possible, earlier studies should be replicated using direct cognitive learning measures, such as the modified cloze procedure used in this experiment.

Although a large body of research has already been conducted on the effects of verbal immediacy, nonverbal immediacy, and motivation, many important questions remain unanswered. Scholars should continue their investigations of these communication variables to provide further clarification of these important relationships.

Limitations of the Study

Several limitations of the study should be acknowledged. First, use of the 12-item Student Motivation Scale (Christophel, 1990) has not been thoroughly evaluated in the context of televised instruction. It was necessary to adapt the initial question to the video context of this study, and this may have affected the validity of the measure. Furthermore, some of the individual items in the Student Motivation Scale may have had limited value in this

study (e.g., aroused/not aroused, want to study/don't want to study).

Second, the experimental nature of this investigation required that participants be relatively uninformed as to what to expect from the video session. Consequently, despite efforts to minimize the impression of a laboratory environment, students might have perceived a somewhat unnatural setting that was too different from their usual classroom. These perceptions may have influenced participants' responses on the Student Motivation Scale and possibly affected performance on the recall measure.

A procedural problem developed when the monitor in one of the experimental groups engaged in conversation during the viewing of the videotape and voiced her opinions about the effectiveness of the video lecture. Because experimental conditions were violated, responses from all participants in that group were excluded from analysis. Other groups were not affected, however, since the experimental groups met in separate classrooms.

Another limitation of the study related to the use of video recording, as opposed to face-to-face instruction. Video was used to control the manipulation of immediacy variables and maintain experimental conditions across the

different groups. However, the use of a 15-minute video lecture in a course that customarily met in a lecture hall for a 50-minute, face-to-face lecture may have been viewed by participants as lacking authenticity. Participants' responses may have been influenced by perceptions of a learning environment that little resembled their usual class routine. For example, video production elements such as camera angle, framing, and overall video effect may have directly or indirectly affected students' responses.

Finally, immediate recall is only one dimension of cognitive learning, and the modified cloze procedure is only one method of measuring immediate recall. Other learning measures would no doubt provide different data that could lead to different conclusions regarding the hypothesized relationships in this study.

Summary

This chapter presented a summary of the entire study and interpretations of the results. The chapter also contained implications for teachers, implications for future research, and limitations of the study.

APPENDIX A
COURSE INSTRUCTOR'S SCRIPT

APPENDIX A

COURSE INSTRUCTOR'S SCRIPT

Thursday, Oct. 21 / Friday, Oct. 22 is a very important class day. Your attendance is required - in fact, you receive 15 bonus points just for being present. Our COMM 1010 lecture will be delivered that day on video by a guest instructor. Even though I am not delivering the lecture, I will be present, and you will be held responsible for the content of the video lecture, just the same as when I teach the class.

Listen carefully: Do not report to the lecture room on Oct. 21 / 22, but go directly to Wooten Hall (facing Matthews Hall near the Union). Your recitation leader will tell you the specific room number to go to. If you forget your room number, go to Wooten Hall and ask any T.A. to help you find your room.

Remember: BONUS POINTS will be awarded for all who attend the video session.

APPENDIX B

INVITATION TO VIDEO SESSION

APPENDIX B

INVITATION TO VIDEO SESSION

You will receive BONUS POINTS for attending the COMM 1010 Video Session on Thursday, Oct. 21 or Friday, Oct. 22.

Attendance is required, but you receive bonus points just for being there. The lecture will be delivered on video by a guest instructor. You will be held responsible for the content of the video lecture, just the same as with our regular lectures.

Do not report to the lecture room on that day, but go directly to Wooten Hall (facing Matthews Hall near the Union). Go to the room number listed below. Your class will include COMM 1010 students from other recitation sections, led by a different T.A. If you lose this sheet or have a problem that day, ask any T.A. in Wooten Hall to help you find your room.

During the video session, you will be invited to participate in a communication research study. Your participation is voluntary and does not affect your grade in any way. BONUS POINTS will be awarded for all who attend the video session.

Here is your room assignment in Wooten Hall. KEEP THIS SHEET.

APPENDIX C
MONITORS' INSTRUCTIONS

APPENDIX C

MONITORS' INSTRUCTIONS

COMM 1010 Video Session Important Guidelines for Assistants

OVERVIEW:

- Attendance required by Carol, bonus points for attending. Voluntary participation in "an exploration of the way we deliver COMM 1010 lecture content."
- Random assignment of students to rooms to watch a 15-minute videotape and give their feedback.
- Responsible for material the same as in ordinary lectures given by Carol. Do not mention "testing" and reply to their questions as noted below.

HOW TO RESPOND TO STUDENT QUESTIONS:

- Will we be tested? - "You will need to know this information the same as regular COMM 1010 material. We are interested in your response to the tape, but your course grade will not be affected by what we ask you to fill out today."
- Can we take notes? - "If you normally take notes in Carol's lecture, you can take notes today. That's up to you."
- Does this affect our grade? - "No, but we hope you will take this seriously and do your best. When you turn in the coupon next week in lecture, you'll get points for being here. Nothing else you do here today affects your grade in any way."

LOGISTICS:

- They attend their regular lecture day (Thur 2:00, Fri 10:00, or Fri 11:00), but they go to Wooten Hall instead of the lecture hall. Every TA has a master list of all room assignments, so you can help stragglers.
- Carol will be at the lecture hall with a master list, then move to Wooten Hall to troubleshoot. Paul will be in the central lobby of Wooten Hall with a backup TV/VCR and master list of room assignments. (if mixup ...)
- Check in 15 mins early with Paul in the lobby of Wooten Hall. He will have your materials, tape, and room

- assignment. Bring your master list so you can help students find their rooms.
- Cue the tape in advance. Set the volume during the countdown. Some tapes have long leaders, so if you rewind all the way to the beginning, advance to the countdown again.
- At 5 minutes past the hour, hand out packets and tell students to fill out the green attendance coupon and put it in their wallet, purse, textbook, etc. They must turn in the coupon one week later at the next lecture. No coupon, no attendance points.
- Read the first page aloud as they follow. Take up packets of anyone who does not wish to participate. They must remain and watch the tape to get credit.
- Tell students to open the colored seal at the bottom and fill out the first page only. Do not break the other seals or continue past the first page. Either pen or pencil is okay.
- When they're finished, start the videotape. At the conclusion, tell them to break the other seals and complete the packet. They're free to leave when finished. Remind them to bring the green coupon to the next lecture. At 50 past the hour, take up all remaining packets.
- Note: After the tape has begun, give late arrivals an attendance coupon only. Do not ask them to complete a response packet.
- Rewind tape and return all materials to Paul in Wooten lobby. Complete the entire cycle for the 10:00 and 11:00 sessions. (Different rooms, different tapes)

APPENDIX D
UNIVERSITY MAJORS

APPENDIX D

UNIVERSITY MAJORS

- 00-Undeclared Major

- 01-Accounting
- 02-Accounting Control Systems
- 03-Anthropology
- 04-Applied Arts and Sciences
- 05-Applied Behavior Analysis
- 06-Applied Gerontology
- 07-Archaeology
- 08-Art
- 09-Art History

- 10-Biochemistry
- 11-Biology
- 12-Business Computer Information Systems
- 13-Business Degree Programs

- 14-Ceramics
- 15-Chemistry
- 16-Child/Human Development & Family Studies
- 17-Communication Design
- 18-Communication Studies
- 19-Composition - Music
- 20-Computer Sciences
- 21-Criminal Justice
- 22-Cytotechnology

- 23-Dance
- 24-Drawing and Painting

- 25-Economics - Arts & Sciences
- 26-Economics - Business
- 27-Elementary and Secondary Teaching
- 28-Emergency Administration and Planning
- 29-Engineering Technology
- 30-Engineering Physics
- 31-English
- 32-Entrepreneurship and Strategic Management

- 33-Fashion Design
- 34-Fibers
- 35-Finance

36-Foreign Language

37-General Choral and Instrumental

38-General Studies

39-Geography

40-Geology

41-Health-Related Preprofessional Programs

42-History

43-Home Furnishings Merchandising

44-Hotel and Restaurant Management

45-Instrumental Performance

46-Insurance

47-Interior Design

48-Jazz Studies

49-Journalism

50-Keyboard Performance

51-Kinesiology

52-Law Preprofessional Program

53-Logistics

54-Marketing

55-Mathematics

56-Medical Technology

57-Merchandising

58-Metalsmithing and Jewelry

59-Music History and Literature

60-Music Theory

61-Music Degree Programs

62-Occupational Training and Development

63-Organizational Behavior and Human Resource Mgmt.

64-Philosophy

65-Photography

66-Physics

67-Political Science

68-Pre-Engineering Program

69-Printmaking

70-Production & Operations Management

71-Psychology

72-Radio, Television and Film
73-Real Estate
74-Recreation and Leisure Studies
75-Rehabilitation Studies

76-Sculpture
77-Social Science
78-Sociology
79-Social Work
80-Speech-Language Pathology/Audiology

81-Texas Academy of Math & Science
82-Theater Arts

83-Visual Arts Studies
84-Vocal Performance
85-Women's Studies
86-Other

APPENDIX E
INSTITUTIONAL REVIEW BOARD APPROVAL



University of North Texas
Research Services

September 1, 1999

Paul L. Witt
745 Monique Ct.
Cedar Hill, TX 75104

RE: IRB Application No. 99-153

Dear Mr. Witt:

Your proposal entitled "An Experimental Study of Teachers' Verbal and Nonverbal Immediacy, Student Motivation, and Cognitive Learning in Video Instruction," has been approved by the Institutional Review Board and is exempt from further review under 45CFR 46.101.

The UNT IRB must re-review this project prior to any modifications you make in the approved project. Please contact me if you wish to make such changes or need additional information.

Sincerely,

Reata Busby, Chair
Institutional Review Board

RB:sb

APPENDIX F
PARTICIPANT RESPONSE PACKET

University of North Texas
COMM 1010 Video Class Session
Participant Response Packet

Dear Possible Participant:

The material that will be presented today is part of the usual course content for COMM 1010. The material will be delivered by way of a 15-minute videotaped lecture by a guest instructor.

In connection with today's class, we are collecting data for research conducted by a graduate student. Although your attendance at this class session is required by your instructor, your participation in the study is completely voluntary. We are asking your permission to include your responses in this study. Because you cannot be identified in any way, your responses will be completely anonymous and confidential. You may withdraw at any time without penalty or any effect whatsoever on your grade for the course.

This study concerns different ways of delivering course content to students. You will be asked to complete some questions about yourself as a COMM 1010 student. Then you will watch a 15-minute videotaped lecture, followed by an assessment of your thoughts about the videotape. The data you provide will be analyzed in terms of means, correlations, etc.

If you choose not to participate, simply return this response packet to the monitor. If you have questions concerning the study, call Paul Witt at 817-272-3099.

THANK YOU

This project has been reviewed and approved by the UNT Committee for the Protection of Human Subjects 940-565-3940.

STOP. Do not turn the page until the monitor tells you to begin.

A. Circle the word that best describes your UNT classification:

Freshman Sophomore Junior Senior

B. Write in your major (if no major, indicate "undecided"):

C. Indicate your sex (circle one): M F

D. Write in your age: _____

Instructions: Please circle the number toward either word which best represents how you feel about receiving this part of COMM 1010 content by way of videotaped instruction. Even though the items may seem repetitious or redundant, please answer all 12 items. If you are not sure about an item, circle "4".

What are your feelings about receiving this part of COMM 1010 content by way of videotaped instruction?

Motivated	1	2	3	4	5	6	7	Unmotivated
Interested	1	2	3	4	5	6	7	Uninterested
Involved	1	2	3	4	5	6	7	Uninvolved
Not stimulated	1	2	3	4	5	6	7	Stimulated
Don't want to study	1	2	3	4	5	6	7	Want to study
Inspired	1	2	3	4	5	6	7	Uninspired
Unchallenged	1	2	3	4	5	6	7	Challenged
Uninvigorated	1	2	3	4	5	6	7	Invigorated
Unenthused	1	2	3	4	5	6	7	Enthused
Excited	1	2	3	4	5	6	7	Not excited
Aroused	1	2	3	4	5	6	7	Not aroused
Not fascinated	1	2	3	4	5	6	7	Fascinated

STOP. Do not break the seal or turn the page.
Wait for the class monitor to start the videotape.

On a scale of 0-9, how much did you learn in this video session? 0 means you learned nothing and 9 means you learned more than in any other class you've had.

Nothing 0 1 2 3 4 5 6 7 8 9 More than any other
class I've had

On the same scale, how much do you think you could have learned in the video session if you had had the ideal instructor?

Nothing 0 1 2 3 4 5 6 7 8 9 More than any other
class I've had

Instructions: Please respond to the following scales in terms of the videotaped instruction you just received. Circle one number on each of the four scales to indicate your judgment or evaluation of the item. Note that in some cases the most positive number is a "1" while in other cases it is _____

Content/subject matter of the video session:

Bad	1	2	3	4	5	6	7	Good
Valuable	1	2	3	4	5	6	7	Worthless
Unfair	1	2	3	4	5	6	7	Fair
Negative	1	2	3	4	5	6	7	Positive

The video instructor:

Good	1	2	3	4	5	6	7	Bad
Worthless	1	2	3	4	5	6	7	Valuable
Fair	1	2	3	4	5	6	7	Unfair
Positive	1	2	3	4	5	6	7	Negative

Instructions: Below are some statements taken from the video session you just saw. Please fill in the blanks in each statement below by writing in one word to fill in each blank. Because this is a timed test, you should go straight through and first answer all the ones you recall easily, then return to those you need to think about.

1. In the month of _____, all COMM 1010 students will deliver a _____ speech in their recitation section.
2. The title of today's class session is "The _____ to Persuade."
3. Communication is a _____ phenomenon. By that I mean that communication establishes links between persons and connects them in some sort of relationship.
4. That's what persuasion is--using _____ to _____ people.
5. Persuasive speaking is a very important _____ skill, because people _____ one another all the time in all kinds of settings, in one-one-one and small group interaction, as well as in public speaking where one person speaks to many.
6. The foundations of persuasive public speaking date all the way back to _____ B.C. and the work of _____, the Greek _____ and

teacher. He identified three strategies speakers can use to support or prove their arguments and thereby persuade their audience. These strategies are called the "_____ of persuasion," and they are still identified by the Greek words that he used.

7. "Since we have proved that A, B, and C happened, then it stands to reason that the defendant is _____." That's an example of _____ [Greek word].
8. Many people remember the _____ things they hear better than the _____, and final arguments have strong persuasive potential. That's called the principle of recency.
9. Draw from several different _____ that point to the same conclusion. That's called the principle of corroboration.
10. Hallmark sells more cards than anybody else, and their ad campaign is totally based on _____ [Greek word] appeals. Nobody is persuaded to buy cards based on _____ [Greek word] arguments, even though the information may be true and relevant.
11. The persuasive means called pathos refers not only to emotional appeals but also to _____

appeals, which are directed at the inner forces that energize or move a person to do something.

12. Many people in our society today dislike those pathetic pictures of starving children and the plea to "Send your donation before it's too late." However, it's important to know that when _____ appeals are communicated tastefully and ethically, they have an undeniable power to persuade.
13. All persuasive speakers want to maximize their ethos, their _____ as a person and a speaker.
14. People listen to and follow speakers who are credible, but they tend to _____ the ideas of people they see as phony or not to be trusted.
15. A very effective strategy used by some persuasive speakers is to increase their perceived competence by referring to _____ sources that support their argument. In effect, these speakers align themselves with recognized experts, which makes them sound more competent themselves.
16. _____ refers to personal qualities that attract others, excite them, and inspire confidence in the speaker's credibility as a leader.

17. It is preferable to believe and follow a person of high _____ and to adopt their proposals.
18. The most persuasive speakers, by virtue of their competence, _____, and _____, are perceived as highly credible and therefore have considerable power to persuade.
19. Some people are more influenced by their _____, others by their _____, and others by their perception and evaluation of the speaker.
20. Remember this: there are at least _____ means of persuading people, and our strongest and most persuasive appeals combine some or all of these strategies.

To conclude this response packet, please circle the word that best describes your prior contact with the guest instructor on the videotape.

Have you ever received instruction from this teacher before?

YES

NO

Are you acquainted with this teacher?

YES

NO

This is the end of the response packet. Please hand this to your monitor as you leave the classroom. Please help us by not talking to other students about the study before time for them to participate. THANK YOU.

APPENDIX G

TAXONOMY OF VERBAL IMMEDIACY CUES

APPENDIX G

TAXONOMY OF VERBAL IMMEDIACY CUES

(Mehrabian, 1969; Wiener & Mehrabian, 1968; Jordan, 1989; Gorham, 1988)

	<u>IMMEDIATE</u>	<u>NON-IMMEDIATE</u>
Distance	here, these, this tape	there, those, that tape
Time	I think	I used to think, I would think
Duration	longer contact	shorter contact
Probability	I will do it	I could do it, I might do it, I would do it
Participation	You should	You people should, someone should
Mutuality	we met each other	I met her
Active/passive	I told her	I had to tell her, I was asked to tell her
Concern	cares about students	seems not to like or care about students
Descriptive	clear, vivid adjectives	lacking vivid descriptors, vague or bland
Openness	self-disclosive, shares positive personal experiences	structured, impersonal, controlled, holds class at a distance
Detail	detailed explanations and story-telling	vague, too general to be clear
Inclusive pronouns	we, our class	you people, your class

Gives feedback	praises/affirms students	criticizes students
Gets feedback	asks questions, encourages student opinions	excludes student opinions entirely
Use of humor	light-hearted, jokes, puns, funny stories	lacking in humor and levity
Acquaintance	first name basis, teacher and students	uses formal names to emphasize status, or uses no names at all
Order	I'll see you and Jane	I'll see Jane and you
Specificity	Susan, Susan and Tom	a female student, some people
Modification	states ideas without modifiers	I think, it seems to me, it is obvious
Auto phrasing	states ideas without phrasing	just, you know, simply

APPENDIX H

SCRIPT FOR EXPERIMENTAL CONDITION 1

APPENDIX H

SCRIPT FOR EXPERIMENTAL CONDITION 1

HIGHER VERBAL, HIGHER NONVERBAL IMMEDIACY

[SMILE, DESK] Hi! Welcome to our video session of COMM 1010. I'm Jay Allison, and we're here today to talk together about persuasive communication -- that is, how we use words to influence other people, [EMPHASIS] or convince them to agree with us, or persuade them to do something we want them to do. This is an important topic, because in the month of November all COMM 1010 students will deliver a persuasive speech in their recitation section, and what we do together today will help you with that assignment. So, if you're ready, I'm ready to begin our discussion. The title of today's class session is "The Power to Persuade." [STEP]

Communication is a social phenomenon. By that I mean that communication establishes links between persons and connects them in some sort of relationship. In these relationships, we have goals, [GESTURES] things we want to communicate, things we want to see happen, and we typically use our words to help us accomplish our goals. It's common for us all to try to convince others to see things our way or persuade them to do something we want them to do. That's what persuasion is--using words to influence people.

For example, when you deliver a persuasive speech to your classmates, you use your skill with words to influence them to agree with you on some important topic. Persuasive speaking is a very important communication skill, because people influence one another all the time in all kinds of settings, in one-on-one and small group interaction, as well as in public speaking where one person speaks to many.

[PAUL] When Ginny and I were talking just now, [DESK] she was surprised to learn that the foundations of persuasive public speaking date all the way back to 350 B.C. and the work of Aristotle, the Greek philosopher and teacher. Aristotle identified three strategies speakers can use to support or prove their arguments and thereby persuade their audience. We call these three strategies the [EMPHASIS] "means of persuasion," and we still refer to them by the Greek words that Aristotle used. Let's take some time here and discuss the three classic means of persuasion.

[STAND]

The first means of persuasion concerns the influential [HEAD] power of reasoning, denoted by the Greek word *logos*.

When we make a rational case for our ideas and present arguments based on evidence, facts, and sound reasoning, we are using the persuasive proof called [EMPHASIS] *logos*. To help us see this clearly, picture a prosecuting attorney making closing arguments before a jury. Attorneys typically review the evidence, facts, and expert testimony, then draw an obvious and reasonable conclusion: [DEEP VOICE] "Since we have proved that A, B, and C happened, then it stands to reason that the defendant is guilty." That's an example of *logos* -- when we thoughtfully and skillfully present a [HEAD] factual, rational case to convince our listeners to accept our argument. We use *logos* all the time in one-on-one communication, too. You say to a friend, [LIGHT] "Let's go to the Outback Steak House tonight." And she says "I'm sorry, I can't afford a big dinner." Then you reply, "But they have a 2-for-1 special tonight," and she quickly changes her mind and goes along with you. By introducing facts to support our argument-*logos*-we often persuade our friends to do exactly what we want them to do. [PAUSE, STEP]

I really want to see every one of you make a good speech to your classmates, so let's look at a couple of techniques that make rational appeals more effective. First, you should carefully plan the sequence of your main points or arguments. Many people remember the last things they hear better than the first, and final arguments have strong persuasive potential. That's called the [EMPHASIS] principle of recency - when an argument exerts persuasive power because we presented it most recently to our audience. For example, when we dramatically conclude a speech on drug abuse by repeating our simple theme "Just say no to drugs," we count on the principle of recency to make those final words memorable and therefore strongly persuasive. [STEP]

Here's another way we make our rational appeals more effective: we draw from several different sources that point to the same conclusion. That's called the [EMPHASIS] principle of corroboration. For example, can we show [GESTURES] that medical studies, lawmakers, public opinion, and our own personal experience all point to the same conclusion? Then our case is very persuasive, because several different sources corroborate or agree with our conclusion. This is the persuasive power of [HEAD] *logos*, and you and I use *logos* all the time to get others to see things our way.

A lot of people make a lot of decisions based on *logos*. But let's face it-everybody doesn't make decisions based on rational thinking. No matter how many facts and good reasons

there are to do something, some people are just not convinced by facts alone. This brings us to a second means of persuasion called pathos.

[PAUSE, MOVE] To introduce pathos, I want to tell you about a UNT student we'll call Lisa. When Lisa moved to Denton, her parents sat her down and said, "Promise us you'll [EMPHASIS] never, ever drive if you have been drinking alcohol. It's dangerous, it's deadly. Don't do it!" I'm sure we all agree that their argument was reasonable, based on fact, and [HEAD] made good sense. But like some other students, Lisa didn't make all her decisions based on reason and good sense, and so from time to time she would drink a few beers at a party and then [GESTURE] weave and wobble as she drove her car back to campus. [SAD] I'm sorry to say that a terrible tragedy occurred that persuaded Lisa to change her mind and her behavior. One night her boyfriend was killed in a horrible accident caused by a drunk driver. [EXPRESSIVE] Her deep sadness at the loss of her boyfriend convinced Lisa of the very real dangers of drinking and driving, and we can easily understand why she vowed never to drink and drive again. Now here's the reason we're talking about Lisa: When she changed her mind based on [HEART] feelings rather than [HEAD] facts alone, she was convinced through the persuasive means called pathos. Pathos refers to the convincing power of emotions, feelings, and inner motivation. When we are moved emotionally, we all make decisions we're not willing to make based on good sense and facts alone. [STEP, FASTER]

Let's look at a more cheerful example of pathos: Have you seen the television commercials for Hallmark Cards? [DRAMATIC] Stirring music, everyday scenes, real people in meaningful relationships, grandmothers, little children, reaching out to one another by sending a sensitive and emotional card. [HEART] Pure pathos-love, friendship, celebration-the human experiences we all share. Hallmark sells more cards than anybody else, and their ad campaign is totally based on pathos appeals. Do you think we'd be persuaded if the president of Hallmark explained, [VOICE] "Our cards are made from 100% cotton paper. We use top quality ink. The glue on our envelopes tastes good and sticks longer, and all our poems rhyme." [CHUCKLE] Nobody is persuaded to buy cards based on logos arguments, even though the information may be true and relevant.

The persuasive means called pathos refers not only to emotional appeals but also to motivational appeals, which are directed at the [HEART] inner forces that energize or

move a person to do something. For example, my nephew Mark is a college student who wants a successful career, and he's thinking about going to law school. Mark's academic adviser believes he'll make a great lawyer, and she tried to persuade him by saying that he'd probably earn [EMPHASIS] \$100,000 his first year out of school. This is pathos, a motivational appeal to Mark's [HEART] desire for a successful career. Here we have an example of the combination of [HEAD] logos (the fact that lawyers make big bucks) and [HEART] pathos (Mark's desire to succeed professionally). [PAUSE, DESK]

Now, admittedly, some people don't like pathos very much. We're put off by strong emotional appeals that seem manipulative and unethical. Many people in our society today dislike those pathetic pictures of starving children and the plea to "Send your donation before it's too late." However, it's important to know that when emotional appeals are communicated [SLOW, EMPHASIS] tastefully and ethically, they have an undeniable power to persuade.

[STAND] Now, let's take a thorough look at a third classic method of influencing people, the means of persuasion called ethos.

Ethos is different from the first two means of persuasion, because ethos refers to you as a speaker, rather than to the words you say. Your [GESTURES] power to persuade someone depends in some measure on their perception of your character and integrity. Think about the personal qualities of the people who have persuasive influence over us. How much credibility do you attribute to your roommate or spouse, your major professor, your parents, your pastor, priest, or rabbi, the President of the United States? What is it about these individuals that makes us believe them or not, take their advice or not, agree with them or not?

Clearly we can see that the more [CHEST] credible they are, the more potential they have to persuade us. All persuasive speakers want to maximize their ethos, their credibility as a person and a speaker. Politicians, educators, advertisers, you and I as teachers and students—we're [EMPHASIS] all concerned with projecting a trustworthy, credible image. People listen to and follow speakers who are [CHEST] credible, but they tend to [WAVE OFF] reject the ideas of people they see as phony or not to be trusted.

[MOVE] Now here's some advice to help you make a really great speech: we can all increase our ethos -- our [CHEST] credibility -- in three ways: First is competence, or

knowledge about the topic. Do we [EMPHASIS] know what we're talking about? Are we experts on the subject? Do we have experience or credentials that make us an authority on the topic? A very effective strategy used by some persuasive speakers is to [SLOW, CLEAR] increase their perceived competence by referring to authoritative sources that support their argument. In effect, these speakers align themselves with recognized experts, which makes them sound more competent. Ethos includes competence, and competence increases [CHEST] credibility.

Another way we increase our credibility with our audience is by projecting an image of confidence and [EXPRESSIVE] dynamic personality. We call this charisma. Charisma refers to personal qualities that [GESTURES] attract others, excite them, and inspire confidence in the speaker's credibility as a leader. Listeners are more likely to agree with us when we use a dynamic speaking style, are open and honest, and speak with energy and expressiveness--all these contribute to our charisma. Ethos includes charisma, and charisma increases our [CHEST] credibility.

[MOVE] Because I want you to be proud of your speech and feel like you've done a really good job, I'm going to share with you a final tip on how to increase your credibility. [EMPHASIS] A very important dimension of ethos is our classmates' perception of our [SLOW] character and integrity. Are our motives pure? Can we be trusted? Are we basically moral, upstanding individuals who have our fellow students' best interests at heart? You see, it is preferable to believe and follow a person of [EMPHASIS] high character and to adopt their proposals. This brings us to a very important statement: [SLOW, CLEAR] The most persuasive speakers, by virtue of their competence, charisma, and character, are perceived as [CHEST] credible and therefore have considerable power to persuade.

Now we understand that some people are more influenced by their [HEAD] thinking, others by their [HEART] feelings, and others by their perception of the [CHEST] speaker. That's why the best speakers select appropriate means of persuasion and use them in combination for maximum persuasive effect.

These are [EMPHASIS] really important concepts that we all need to understand if we want to express our ideas and accomplish our goals. I believe this is what communication is all about. [WATCH]

Well, it's been fun, but we need to draw this to a close. [DRAMATIC, STRONG] Remember this: there are at least

three means of persuading people, and our strongest and most persuasive appeals combine some or all of these strategies. When we use these principles, [SMILE] we can accomplish our communication goals, because we possess the power to persuade. Good-bye, and good luck! [SMILE]

APPENDIX I
SCRIPT FOR EXPERIMENTAL CONDITION 4

APPENDIX I

SCRIPT FOR EXPERIMENTAL CONDITION 4

LOWER VERBAL, LOWER NONVERBAL IMMEDIACY

[FROWN, SIT] Hi! Welcome to our video session of COMM 1010. I'm Jay Allison, and we're here today to talk together about persuasive communication -- that is, how we use words to influence other people, [NO EMPHASIS] or convince them to agree with us, or persuade them to do something we want them to do. This is an important topic, because in the month of November all COMM 1010 students will deliver a persuasive speech in their recitation section, and what we do together today will help you with that assignment. So, if you're ready, I'm ready to begin our discussion. The title of today's class session is "The Power to Persuade." [READ]

Communication is a social phenomenon. By that I mean that communication establishes links between persons and connects them in some sort of relationship. In these relationships, we have goals, [FAST] things we want to communicate, things we want to see happen, and we typically use our words to help us accomplish our goals. It's common for us all to try to convince others to see things our way or persuade them to do something we want them to do. That's what persuasion is--using words to influence people.

For example, when you deliver a persuasive speech to your classmates, you use your skill with words to influence them to agree with you on some important topic. Persuasive speaking is a very important communication skill, because people influence one another all the time in all kinds of settings, in one-on-one and small group interaction, as well as in public speaking where one person speaks to many.

When Ginny and I were talking just now, she was surprised to learn that the foundations of persuasive public speaking date all the way back to 350 B.C. and the work of Aristotle, the Greek philosopher and teacher. Aristotle identified three strategies speakers can use to support or prove their arguments and thereby persuade their audience. We call these three strategies the [FAST] "means of persuasion," and we still refer to them by the Greek words that Aristotle used. Let's take some time here and discuss the three classic means of persuasion. [SIGH, READ]

The first means of persuasion concerns the influential power of reasoning, denoted by the Greek word *logos*. When we make a rational case for our ideas and present arguments

based on evidence, facts, and sound reasoning, we are using the persuasive proof called logos. To help us see this clearly, picture a prosecuting attorney making closing arguments before a jury. Attorneys typically review the evidence, facts, and expert testimony, then draw an obvious and reasonable conclusion: "Since we have proved that A, B, and C happened, then it stands to reason that the defendant is guilty." That's an example of logos -- when we thoughtfully and skillfully present a factual, rational case to convince our listeners to accept our argument. We use logos all the time in one-on-one communication, too. You say to a friend, [FAST] "Let's go to the Outback Steak House tonight." And she says "I'm sorry, I can't afford a big dinner." Then you reply, "But they have a 2-for-1 special tonight," and she quickly changes her mind and goes along with you. By introducing facts to support our argument-logos-we often persuade our friends to do exactly what we want them to do. [SIGH]

I really want to see every one of you make a good speech to your classmates, so let's look at a couple of techniques that make rational appeals more effective. First, you should carefully plan the sequence of your main points or arguments. Many people remember the last things they hear better than the first, and final arguments have strong persuasive potential. That's called the principle of recency - when an argument exerts persuasive power because we presented it most recently to our audience. For example, when we dramatically conclude a speech on drug abuse by repeating our simple theme "Just say no to drugs," we count on the principle of recency to make those final words memorable and therefore strongly persuasive. [PAUSE]

Here's another way we make our rational appeals more effective: we draw from several different sources that point to the same conclusion. That's called the [STUMBLE] principle of corroboration. For example, can we show [FAST] that medical studies, lawmakers, public opinion, and our own personal experience all point to the same conclusion? Then our case is very persuasive, because several different sources corroborate or agree with our conclusion. This is the persuasive power of logos, and you and I use logos all the time to get others to see things our way. [MONOTONE]

A lot of people make a lot of decisions based on logos. But let's face it-everybody doesn't make decisions based on rational thinking. No matter how many facts and good reasons there are to do something, some people are just not

convinced by facts alone. This brings us to a second means of persuasion called pathos. [READ]

[PAUSE] To introduce pathos, I want to tell you about a UNT student we'll call Lisa. When Lisa moved to Denton, her parents sat her down and said, "Promise us you'll [FAST] never, ever drive if you have been drinking alcohol. It's dangerous, it's deadly. Don't do it!" I'm sure we all agree that their argument was reasonable, based on fact, and made good sense. But like some other students, Lisa didn't make all her decisions based on reason and good sense, and so from time to time she would drink a few beers at a party and then weave and wobble as she drove her car back to campus. [MONOTONE]

I'm sorry to say that a terrible tragedy occurred that persuaded Lisa to change her mind and her behavior. One night her boyfriend was killed in a horrible accident caused by a drunk driver. Her deep sadness at the loss of her boyfriend convinced Lisa of the very real dangers of drinking and driving, and we can easily understand why she vowed never to drink and drive again. Now here's the reason we're talking about Lisa: When she changed her mind based on feelings rather than facts alone, she was convinced through the persuasive means called pathos. Pathos refers to the convincing power of emotions, feelings, and inner motivation. When we are moved emotionally, we all make decisions we're not willing to make based on good sense and facts alone.

Let's look at a more cheerful example of pathos: Have you seen the television commercials for Hallmark Cards? [FAST] Stirring music, everyday scenes, real people in meaningful relationships, grandmothers, little children, reaching out to one another by sending a sensitive and emotional card. [NO EMPHASIS] Pure pathos-love, friendship, celebration-the human experiences we all share. Hallmark sells more cards than anybody else, and their ad campaign is totally based on pathos appeals. Do you think we'd be persuaded if the president of Hallmark explained, "Our cards are made from 100% cotton paper. We use top quality ink. The glue on our envelopes tastes good and sticks longer, and all our poems rhyme." [FROWN] Nobody is persuaded to buy cards based on logos arguments, even though the information may be true and relevant.

The persuasive means called pathos refers not only to emotional appeals but also to motivational appeals, which are directed at the inner forces that energize or move a person to do something. For example, my nephew Mark is a

college student who wants a successful career, and he's thinking about going to law school. Mark's academic adviser believes he'll make a great lawyer, and she tried to persuade him by saying that he'd probably earn [NO EMPHASIS] \$100,000 his first year out of school. This is pathos, a motivational appeal to Mark's desire for a successful career. Here we have an example of the combination of logos (the fact that lawyers make big bucks) and pathos (Mark's desire to succeed professionally). [PAUSE]

Now, admittedly, some people don't like pathos very much. We're put off by strong emotional appeals that seem manipulative and unethical. Many people in our society today dislike those pathetic pictures of starving children and the plea to "Send your donation before it's too late." However, it's important to know that when emotional appeals are communicated [NO EMPHASIS] tastefully and ethically, they have an undeniable power to persuade.

Now, let's take a thorough look at a third classic method of influencing people, the means of persuasion called ethos.

Ethos is different from the first two means of persuasion, because ethos refers to you as a speaker, rather than to the words you say. Your [FAST] power to persuade someone depends in some measure on their perception of your character and integrity. Think about the personal qualities of the people who have persuasive influence over us. How much credibility do you attribute to your roommate or spouse, your major professor, your parents, your pastor, priest, or rabbi, the President of the United States? What is it about these individuals that makes us believe them or not, take their advice or not, agree with them or not?

Clearly we can see that the more [MONOTONE] credible they are, the more potential they have to persuade us. All persuasive speakers want to maximize their ethos, their credibility as a person and a speaker. Politicians, educators, advertisers, you and I as teachers and students—we're [NO EMPHASIS] all concerned with projecting a trustworthy, credible image. People listen to and follow speakers who are credible, but they tend to reject the ideas of people they see as phony or not to be trusted. [PAUSE]

[READ] Now here's some advice to help you make a really great speech: we can all increase our ethos — our credibility — in three ways: First is competence, or knowledge about the topic. Do we [NO EMPHASIS] know what we're talking about? Are we experts on the subject? Do we have experience or credentials that make us an authority on

the topic? A very effective strategy used by some persuasive speakers is to [FAST] increase their perceived competence by referring to authoritative sources that support their argument. In effect, these speakers align themselves with recognized experts, which makes them sound more competent. Ethos includes competence, and competence increases credibility.

Another way we increase our credibility with our audience is by projecting an image of confidence and dynamic personality. We call this charisma. Charisma refers to personal qualities that attract others, excite them, and inspire confidence in the speaker's credibility as a leader. Listeners are more likely to agree with us when we use a dynamic speaking style, are open and honest, and speak with energy and expressiveness--all these contribute to our charisma. Ethos includes charisma, and charisma increases our credibility. [FAST]

Because I want you to be proud of your speech and feel like you've done a really good job, I'm going to share with you a final tip on how to increase your credibility. [NO EMPHASIS] A very important dimension of ethos is our classmates' perception of our [FAST] character and integrity. Are our motives pure? Can we be trusted? Are we basically moral, upstanding individuals who have our fellow students' best interests at heart? You see, it is preferable to believe and follow a person of high character and to adopt their proposals. This brings us to a very important statement: [FAST] The most persuasive speakers, by virtue of their competence, charisma, and character, are perceived as credible and therefore have considerable power to persuade.

Now we understand that some people are more influenced by their thinking, others by their feelings, and others by their perception of the speaker. That's why the best speakers select appropriate means of persuasion and use them in combination for maximum persuasive effect.

[MONOTONE] These are really important concepts that we all need to understand if we want to express our ideas and accomplish our goals. I believe this is what communication is all about. [WATCH]

Well, it's been fun, but we need to draw this to a close. [MONOTONE] Remember this: there are at least three means of persuading people, and our strongest and most persuasive appeals combine some or all of these strategies. When we use these principles, we can accomplish our communication goals, because we possess the power to persuade. Good-bye, and good luck! [FROWN]

APPENDIX J
TAXONOMY OF NONVERBAL IMMEDIACY CUES

APPENDIX J

TAXONOMY OF NONVERBAL IMMEDIACY CUES

(Andersen, 1979; Mehrabian, 1969, 1981; Richmond, Gorham, & McCroskey, 1987)

	<u>IMMEDIATE</u>	<u>NON-IMMEDIATE</u>
Proximity	approaches students, steps in front of desk or lectern	remains at a distance behind desk or lectern
Eye gaze	frequent, prolonged eye contact with class in general and individual students	infrequent or very brief eye contact only; looks at notes or board while talking
Gestures	uses illustrators, emblems, and affect displays	infrequent or ineffective use of hands and arms
Body position	informal, relaxed, open body positions	formal, tense, closed body positions
Movement	walks around, shifts and changes positions and locations	sits or remains stationary, rigid, does not move around
Facial expressions	smiles at individual students and the class in general; pleasant expressions	dead-pan expression, frowning, or unpleasant expressions
Touch	appropriately touches students	does not touch anyone
VOCALICS:		
Expressiveness	expressive, dynamic style; variety; shows feeling	dull, monotone style; unchanging; shows no feeling
Pitch	pleasant, variety for emphasis	too high/low, distracting; unchanging

Volume	can be easily heard, variety	too loud/soft, distracting; unchanging
Articulation	distinct pronunciation, correct	mispronounces words, imprecise or unclear
Vocal quality	resonant, pleasing	disturbing, distracting, non- resonant
Pauses	for reflection or emphasis	due to lapse in thought or organization, too long
Fillers	uses no fillers	distracting use of um, uh, and, etc.

APPENDIX K
SCRIPT FOR EXPERIMENTAL CONDITION 3

APPENDIX K

SCRIPT FOR EXPERIMENTAL CONDITION 3

LOWER VERBAL, HIGHER NONVERBAL IMMEDIACY

[SMILE, GLASSES, DESK] This is a video session of COMM 1010. I'm Dr. Allison, and I've been asked to speak on the topic of persuasive communication -- that is, how people use words to influence other people, [EMPHASIS] or convince someone to agree with them, or persuade someone to do something they want them to do. That is an important topic, because in the month of November all COMM 1010 students will deliver a persuasive speech in their recitation section, and what I do today could help you with that assignment. I'm ready to begin my lecture now. The title of today's class session is "The Power to Persuade." [STEP]

Communication is a social phenomenon. By that I mean that communication establishes links between persons and connects them in some sort of relationship. In those relationships, people have goals, [GESTURES] things they want to communicate, things they want to see happen, and they typically use their words to help them accomplish their goals. It's common for people to try to convince others to see things their way or persuade them to do something they want them to do. That's what persuasion is--using words to influence people.

An example might be when you people deliver a persuasive speech to classmates, you'll have to use your skill with words to influence them to agree with you on some important topic. Persuasive speaking is a very important communication skill, because people influence one another all the time in all kinds of settings, in one-on-one and small group interaction, as well as in public speaking where one person speaks to many.

[PAUL] You people would probably be surprised to learn that [DESK] the foundations of persuasive public speaking date all the way back to 350 B.C. and the work of Aristotle, the Greek philosopher and teacher. Aristotle identified three strategies speakers can use to support or prove their arguments and thereby persuade their audience. These strategies are called the [EMPHASIS] "means of persuasion," and they are still identified by the Greek words that Aristotle used. I'm going to take a moment to explain to you the three classic means of persuasion. [STAND]

The first means of persuasion concerns the influential [HEAD] power of reasoning, denoted by the Greek word logos. If people were to make a rational case for their ideas and present arguments based on evidence, facts, and sound reasoning, they would be using the persuasive proof called [EMPHASIS] logos. To illustrate, picture a prosecuting attorney making closing arguments before a jury. Attorneys typically review the evidence, facts, and expert testimony, then draw an obvious and reasonable conclusion: [DEEP VOICE] "Since we have proved that A, B, and C happened, then it stands to reason that the defendant is guilty." That's an example of logos -- when speakers simply present a [HEAD] factual, rational case to convince their listeners to accept the argument. You guys use logos all the time in one-on-one communication, too. If somebody proposed to their friend [LIGHT] that they go to a steak house for dinner, and the friend said they were sorry but they couldn't afford a big dinner, then the first person might say that it was 2-for-1 that night, and the friend would probably change their mind and go with them. By introducing facts to support the argument-logos-the friend might be persuaded to do exactly what the first person wanted them to do. [PAUSE, STEP]

You people are going to have to make good speeches to your classmates, so I'm going to tell you about a couple of techniques that make rational appeals more effective: First, you'd better carefully plan the sequence of your main points or arguments. Many people remember the last things they hear better than the first, and final arguments have strong persuasive potential. That's called the [EMPHASIS] principle of recency - when an argument exerts persuasive power because you presented it most recently to your audience. For example, if somebody dramatically concluded a speech on drug abuse by repeating the simple theme "Just say no to drugs," they would be counting on the principle of recency to make those final words memorable and therefore strongly persuasive. [STEP]

People could make their rational appeals more effective if they would draw from several different sources that point to the same conclusion. That's called the [EMPHASIS] principle of corroboration. Can a speaker show that [GESTURES] medical studies, lawmakers, public opinion, and their own experience all point to the same conclusion? Then that case is very persuasive, because several different sources corroborate or agree with their conclusion. That's the persuasive power of [HEAD] logos, and people use logos all the time to get others to see things their way.

A lot of people make a lot of decisions based on logos. But let's face it-everybody doesn't make decisions based on rational thinking. No matter how many facts and good reasons there are to do something, some people are just not convinced by facts alone. This brings us to a second means of persuasion called pathos.

[PAUSE, MOVE] To introduce pathos, I want to tell you about a UNT student we'll call Lisa. When Lisa moved to Denton, her parents sat her down and said, "Promise us you'll [EMPHASIS] never, ever drive if you have been drinking alcohol. It's dangerous, it's deadly. Don't do it!" It's clear to me that their argument was reasonable, based on fact, and [HEAD] made good sense. But like some other students, Lisa didn't make all her decisions based on reason and good sense, and so from time to time she would drink at a party and then [WEAVING GESTURE] drive her car back to campus.

[SAD] However, something happened that persuaded Lisa to change her mind and her behavior. One night her boyfriend was killed in a horrible accident caused by a drunk driver. [EXPRESSIVE] The loss of her boyfriend convinced Lisa of the very real dangers of drinking and driving, and it's no surprise to me that she vowed never to drink and drive again. There's a reason why I'm telling you about Lisa: When she changed her mind based on [HEART] feelings rather than [HEAD] facts alone, she was convinced through the persuasive means called pathos. Pathos refers to the convincing power of emotions, feelings, and inner motivation. When people are moved emotionally, sometimes they might make decisions they were not willing to make based on good sense and facts alone. [STEP, FASTER]

I'll cite another perhaps more cheerful example of pathos: Have you seen the television commercials for Hallmark Cards? [DRAMATIC] Music, everyday scenes, people in relationships, reaching out by sending a greeting card. [HEART] Pure pathos-love, friendship, celebration-the experiences shared by all humans. Hallmark sells more cards than anybody else, and their ad campaign is totally based on pathos appeals. Do you think people would be persuaded if the president of Hallmark explained that [VOICE] their cards are made from 100% cotton paper, they use top quality ink, the glue on their envelopes tastes good and sticks longer, and all their poems rhyme? [CHUCKLE] Nobody is persuaded to buy cards based on logo arguments, even though the information may be true and relevant.

The persuasive means called pathos refers not only to emotional appeals but also to motivational appeals, which are directed at the [HEART] inner forces that energize or move a person to do something. For example, a college student wanted a successful career, and he was thinking about going to law school. His academic adviser believed he'd make a great lawyer, and she tried to persuade him by telling him that he'd probably earn [EMPHASIS] \$100,000 his first year out of law school. That would be pathos, a motivational appeal to the student's [HEART] desire for a successful career. That would also be an example of the combination of [HEAD] logos (the fact that lawyers make big bucks) and [HEART] pathos (the student's desire to succeed professionally). [PAUSE, DESK]

Now, I admit that some of you out there probably don't like pathos very much. You could be put off by strong emotional appeals that seem manipulative and unethical. Many people in our society today dislike those pathetic pictures of starving children and the plea to "Send your donation before it's too late." However, it's important to know that when emotional appeals are communicated [SLOW, EMPHASIS] tastefully and ethically, they have an undeniable power to persuade.

[STAND] Next, I'll give you a quick glance at a third classic method of influencing people, the means of persuasion called ethos.

Ethos is different from the first two means of persuasion, because ethos refers to the speakers, rather than to the words they say. A speaker's [GESTURE] power to persuade someone might depend in some measure on the listener's perception of the speaker's character and integrity. Think about the personal qualities of the people who have persuasive influence over you. How much credibility do you attribute to your roommate or spouse, your major professor, your parents, your pastor, priest, or rabbi, the President of the United States? What is it about those individuals that makes you believe them or not, take their advice or not, agree with them or not?

Maybe you can see that the more [CHEST] credible speakers are, the more potential they have to persuade others. All persuasive speakers want to maximize their ethos, their credibility as a person and a speaker. Politicians, educators, advertisers, teachers and students—they're [EMPHASIS] all concerned with projecting a trustworthy, credible image. People listen to and follow speakers who are [CHEST] credible, but they tend to [WAVE

OFF] reject the ideas of people they see as phony or not to be trusted.

[MOVE] Now I'm going to tell you what makes for a really great speech. Speakers can increase ethos, their [CHEST] credibility, in three ways: First is the speaker's competence, their knowledge about the topic. Do they [EMPHASIS] know what they're talking about? Are they experts on the subject? Do they have experience or credentials that make them an authority on the topic? A very effective strategy used by some persuasive speakers is to [SLOW, CLEAR] increase their perceived competence by referring to authoritative sources that support their argument. In effect, these speakers align themselves with recognized experts, which makes them sound more competent. Ethos includes competence, and competence increases one's [CHEST] credibility.

Another way speakers might increase their credibility with audiences is if they projected an image of confidence and [EXPRESSIVE] dynamic personality. That's called charisma. Charisma refers to personal qualities that [GESTURES] attract others, excite them, and inspire confidence in the speaker's credibility as a leader. Listeners are more likely to agree with speakers when they use a dynamic speaking style, are open and honest, and speak with energy and expressiveness--all those contribute to one's charisma. Ethos includes charisma, and charisma increases one's [CHEST] credibility.

[MOVE] Students who want to be proud of their speech and feel like they've done a really good job should listen to a final tip on how to increase credibility. [EMPHASIS] A very important dimension of ethos is the listener's perception of the speaker's [SLOW] character and integrity. Are their motives pure? Can they be trusted? Are they basically moral, upstanding individuals who have their listeners' best interests at heart? You see, it is preferable to believe and follow a person of [EMPHASIS] high character and to adopt their proposals. That leads to a very important statement: [SLOW, CLEAR] The most persuasive speakers, by virtue of their competence, charisma, and character, are perceived as [CHEST] highly credible and therefore have considerable power to persuade.

Now you should understand that some people are more influenced by their [HEAD] thinking, others by their [HEART] feelings, and others by their perception of the [CHEST] speaker. The best speakers select appropriate means of

persuasion and use them in combination for maximum persuasive effect.

Those are [EMPHASIS] really important concepts that somebody would need to understand if they wanted to express their ideas and accomplish their goals. As far as I'm concerned, that's what communication is all about. [WATCH]

Well, I suppose I should draw the lecture to a close. [DRAMATIC, STRONG] Remember this: there are at least three means of persuading people, and the strongest and most persuasive appeals combine some or all of these strategies. When speakers use those principles, [SMILE] they can probably accomplish their communication goals, because they would possess the power to persuade. [SMILE]

APPENDIX L
SCRIPT FOR EXPERIMENTAL CONDITION 2

APPENDIX L

SCRIPT FOR EXPERIMENTAL CONDITION 2

HIGHER VERBAL, LOWER NONVERBAL IMMEDIACY

[FROWN, SIT] Hi! Welcome to our video session of COMM 1010. I'm Jay Allison, and we're here today to talk together about persuasive communication -- that is, how we use words to influence other people, [NO EMPHASIS] or convince them to agree with us, or persuade them to do something we want them to do. This is an important topic, because in the month of November all COMM 1010 students will deliver a persuasive speech in their recitation section, and what we do together today will help you with that assignment. So, if you're ready, I'm ready to begin our discussion. The title of today's class session is "The Power to Persuade." [READ]

Communication is a social phenomenon. By that I mean that communication establishes links between persons and connects them in some sort of relationship. In these relationships, we have goals, [FAST] things we want to communicate, things we want to see happen, and we typically use our words to help us accomplish our goals. It's common for us all to try to convince others to see things our way or persuade them to do something we want them to do. That's what persuasion is--using words to influence people.

For example, when you deliver a persuasive speech to your classmates, you use your skill with words to influence them to agree with you on some important topic. Persuasive speaking is a very important communication skill, because people influence one another all the time in all kinds of settings, in one-on-one and small group interaction, as well as in public speaking where one person speaks to many.

When Ginny and I were talking just now, she was surprised to learn that the foundations of persuasive public speaking date all the way back to 350 B.C. and the work of Aristotle, the Greek philosopher and teacher. Aristotle identified three strategies speakers can use to support or prove their arguments and thereby persuade their audience. We call these three strategies the [FAST] "means of persuasion," and we still refer to them by the Greek words that Aristotle used. Let's take some time here and discuss the three classic means of persuasion. [SIGH, READ]

The first means of persuasion concerns the influential power of reasoning, denoted by the Greek word *logos*. When we

make a rational case for our ideas and present arguments based on evidence, facts, and sound reasoning, we are using the persuasive proof called logos. To help us see this clearly, picture a prosecuting attorney making closing arguments before a jury. Attorneys typically review the evidence, facts, and expert testimony, then draw an obvious and reasonable conclusion: "Since we have proved that A, B, and C happened, then it stands to reason that the defendant is guilty." That's an example of logos -- when we thoughtfully and skillfully present a factual, rational case to convince our listeners to accept our argument. We use logos all the time in one-on-one communication, too. You say to a friend, [FAST] "Let's go to the Outback Steak House tonight." And she says "I'm sorry, I can't afford a big dinner." Then you reply, "But they have a 2-for-1 special tonight," and she quickly changes her mind and goes along with you. By introducing facts to support our argument-logos-we often persuade our friends to do exactly what we want them to do. [SIGH]

I really want to see every one of you make a good speech to your classmates, so let's look at a couple of techniques that make rational appeals more effective. First, you should carefully plan the sequence of your main points or arguments. Many people remember the last things they hear better than the first, and final arguments have strong persuasive potential. That's called the principle of recency - when an argument exerts persuasive power because we presented it most recently to our audience. For example, when we dramatically conclude a speech on drug abuse by repeating our simple theme "Just say no to drugs," we count on the principle of recency to make those final words memorable and therefore strongly persuasive. [PAUSE]

Here's another way we make our rational appeals more effective: we draw from several different sources that point to the same conclusion. That's called the [STUMBLE] principle of corroboration. For example, can we show [FAST] that medical studies, lawmakers, public opinion, and our own personal experience all point to the same conclusion? Then our case is very persuasive, because several different sources corroborate or agree with our conclusion. This is the persuasive power of logos, and you and I use logos all the time to get others to see things our way. [MONOTONE]

A lot of people make a lot of decisions based on logos. But let's face it-everybody doesn't make decisions based on rational thinking. No matter how many facts and good reasons there are to do something, some people are just not

convinced by facts alone. This brings us to a second means of persuasion called pathos.

[PAUSE, READ] To introduce pathos, I want to tell you about a UNT student we'll call Lisa. When Lisa moved to Denton, her parents sat her down and said, "Promise us you'll [FAST] never, ever drive if you have been drinking alcohol. It's dangerous, it's deadly. Don't do it!" I'm sure we all agree that their argument was reasonable, based on fact, and made good sense. But like some other students, Lisa didn't make all her decisions based on reason and good sense, and so from time to time she would drink a few beers at a party and then weave and wobble as she drove her car back to campus. [MONOTONE]

I'm sorry to say that a terrible tragedy occurred that persuaded Lisa to change her mind and her behavior. One night her boyfriend was killed in a horrible accident caused by a drunk driver. Her deep sadness at the loss of her boyfriend convinced Lisa of the very real dangers of drinking and driving, and we can easily understand why she vowed never to drink and drive again. Now here's the reason we're talking about Lisa: When she changed her mind based on feelings rather than facts alone, she was convinced through the persuasive means called pathos. Pathos refers to the convincing power of emotions, feelings, and inner motivation. When we are moved emotionally, we all make decisions we're not willing to make based on good sense and facts alone.

Let's look at a more cheerful example of pathos: Have you seen the television commercials for Hallmark Cards? [FAST] Stirring music, everyday scenes, real people in meaningful relationships, grandmothers, little children, reaching out to one another by sending a sensitive and emotional card. [NO EMPHASIS] Pure pathos-love, friendship, celebration-the human experiences we all share. Hallmark sells more cards than anybody else, and their ad campaign is totally based on pathos appeals. Do you think we'd be persuaded if the president of Hallmark explained, "Our cards are made from 100% cotton paper. We use top quality ink. The glue on our envelopes tastes good and sticks longer, and all our poems rhyme." [FROWN] Nobody is persuaded to buy cards based on logos arguments, even though the information may be true and relevant.

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college student who wants a successful career, and he's thinking about going to law school. Mark's academic adviser believes he'll make a great lawyer, and she tried to persuade him by saying that he'd probably earn [NO EMPHASIS] \$100,000 his first year out of school. This is pathos, a motivational appeal to Mark's desire for a successful career. Here we have an example of the combination of logos (the fact that lawyers make big bucks) and pathos (Mark's desire to succeed professionally). [PAUSE]

Now, admittedly, some people don't like pathos very much. We're put off by strong emotional appeals that seem manipulative and unethical. Many people in our society today dislike those pathetic pictures of starving children and the plea to "Send your donation before it's too late." However, it's important to know that when emotional appeals are communicated [NO EMPHASIS] tastefully and ethically, they have an undeniable power to persuade.

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Clearly we can see that the more [MONOTONE] credible they are, the more potential they have to persuade us. All persuasive speakers want to maximize their ethos, their credibility as a person and a speaker. Politicians, educators, advertisers, you and I as teachers and students—we're [NO EMPHASIS] all concerned with projecting a trustworthy, credible image. People listen to and follow speakers who are credible, but they tend to reject the ideas of people they see as phony or not to be trusted.

[READ] Now here's some advice to help you make a really great speech: we can all increase our ethos -- our credibility -- in three ways: First is competence, or knowledge about the topic. Do we [NO EMPHASIS] know what we're talking about? Are we experts on the subject? Do we have experience or credentials that make us an authority on

the topic? A very effective strategy used by some persuasive speakers is to [FAST] increase their perceived competence by referring to authoritative sources that support their argument. In effect, these speakers align themselves with recognized experts, which makes them sound more competent. Ethos includes competence, and competence increases credibility. [READ]

Another way we increase our credibility with our audience is by projecting an image of confidence and dynamic personality. We call this charisma. Charisma refers to personal qualities that attract others, excite them, and inspire confidence in the speaker's credibility as a leader. Listeners are more likely to agree with us when we use a dynamic speaking style, are open and honest, and speak with energy and expressiveness--all these contribute to our charisma. Ethos includes charisma, and charisma increases our credibility.

[FAST] Because I want you to be proud of your speech and feel like you've done a really good job, I'm going to share with you a final tip on how to increase your credibility. [NO EMPHASIS] A very important dimension of ethos is our classmates' perception of our [FAST] character and integrity. Are our motives pure? Can we be trusted? Are we basically moral, upstanding individuals who have our fellow students' best interests at heart? You see, it is preferable to believe and follow a person of high character and to adopt their proposals. This brings us to a very important statement: [FAST] The most persuasive speakers, by virtue of their competence, charisma, and character, are perceived as credible and therefore have considerable power to persuade.

Now we understand that some people are more influenced by their thinking, others by their feelings, and others by their perception of the speaker. That's why the best speakers select appropriate means of persuasion and use them in combination for maximum persuasive effect.

These are [MONOTONE] really important concepts that we all need to understand if we want to express our ideas and accomplish our goals. I believe this is what communication is all about. [WATCH]

Well, it's been fun, but we need to draw this to a close. [MONOTONE] Remember this: there are at least three means of persuading people, and our strongest and most persuasive appeals combine some or all of these strategies. When we use these principles, we can accomplish our

communication goals, because we possess the power to persuade. Good-bye, and good luck! [FROWN]

APPENDIX M

RATERS' MEASURE OF VERBAL IMMEDIACY

APPENDIX M

RATERS' MEASURE OF VERBAL IMMEDIACY

Tape Number _____ Rater Number _____

TEACHER'S VERBAL IMMEDIACY BEHAVIORS

Circle a number to indicate the teacher's overall verbal immediacy during the videotaped instruction you observed:

VERBALLY IMMEDIATE 6 5 4 3 2 1 VERBALLY NONIMMEDIATE

ACQUAINTANCE: first name basis, teacher and students	6	5	4	3	2	1	FORMALITY: formal names or no names at all
OPEN: self-discloses, shares positive personal experiences	6	5	4	3	2	1	CLOSED: impersonal, structured, holds class at a distance
INCLUSIVE: we, our class	6	5	4	3	2	1	SEPARATE: you people, your class
CONCERNED: cares about students, seems to like them	6	5	4	3	2	1	UNCONCERNED: seems not to like or care about Students
DETAIL: detailed explanations and story-telling	6	5	4	3	2	1	UNCLEAR: too general to be clear, sometimes confusing
LONGER CONTACT: I'll take some time to do this	6	5	4	3	2	1	SHORTER CONTACT: I only have a minute to do it
CERTAINTY: they do	6	5	4	3	2	1	PROBABILITY: they could, they might, they would

ACTIVE: I told her 6 5 4 3 2 1 PASSIVE: I had to tell
her, I was asked to
tell her

NEAR: here, these, 6 5 4 3 2 1 FAR: there, those,
this that

APPENDIX N

RATERS' MEASURE OF NONVERBAL IMMEDIACY

APPENDIX N

RATERS' MEASURE OF NONVERBAL IMMEDIACY

Tape Number _____ Rater Number _____

TEACHER'S NONVERBAL IMMEDIACY BEHAVIORS

Circle a number to indicate the teacher's overall nonverbal immediacy during the videotaped instruction you observed:

NONVERBALLY IMMEDIATE 6 5 4 3 2 1 NONVERBALLY NONIMMEDIATE

Approaches viewers, steps in front of desk	6	5	4	3	2	1	Remains at a distance, stays behind desk
Frequent, prolonged eye contact	6	5	4	3	2	1	Infrequent or very brief eye contact only; looks at notes while talking
Gestures with hands and/or arms to illustrate or emphasize points	6	5	4	3	2	1	Infrequent or ineffective use of hands and arms
Informal, relaxed, open body positions	6	5	4	3	2	1	Formal, tense, closed body positions
Walks around, shifts and changes positions and locations	6	5	4	3	2	1	Sits or remains stationary, rigid, does not move around
Smiles at viewers in general, pleasant expressions	6	5	4	3	2	1	Dead-pan or unpleasant, expression, frowning

Expressive, dynamic speaking style; vocal variety (tone, pace, etc.)	6	5	4	3	2	1	Dull, monotone speaking style; unchanging
Shows feeling	6	5	4	3	2	1	Shows no feeling
Distinct, correct pronunciation	6	5	4	3	2	1	Mispronounces words, imprecise or unclear
Uses no fillers such as um, uh, and, etc.	6	5	4	3	2	1	Distracting use of um, uh, and, etc.

APPENDIX O
SUBJECTIVE RESPONSES FROM RATERS

APPENDIX 0

SUBJECTIVE RESPONSES FROM RATERS

1. Did the conditions you observed on the videotapes appear realistic and a reasonable representation of the specific verbal and nonverbal combinations I have just revealed to you?

All raters replied affirmatively. Three raters said that they had had a teacher who resembled the immediacy combination they observed on the tape.

2. Did you see or hear anything that seemed out of place or would have distorted or misrepresented the specific condition I just revealed to you?

Only one rater answered positively. She said that, on tape 1, the instructor "seemed limited to a tightly defined video area around the table" and that natural classroom delivery would probably have provided greater flexibility of movement.

3. Do you have any other comments or observations about the tapes you viewed?

Most made brief, positive comments affirming the conditions. One rater said, "I really had to concentrate to focus my attention on the verbal cues alone, because it is hard to separate the verbal and the nonverbal."

APPENDIX P
SUBJECTIVE RESPONSES FROM PARTICIPANTS

APPENDIX P

SUBJECTIVE RESPONSES FROM PARTICIPANTS

Visited Sections 237, 239, and 242
10-11 days after the experiment

1. Who attended the video session in Wooten Hall?

Majority of hands up (76% of enrolled students attended).

2. What did you expect? What had your instructor and small section leader told you about it in advance?

Majority had no expectations, no idea what to expect. Only knew it would be video, nothing about content, but that they would be held responsible for the information and get points for attendance. "We weren't told anything except to be there." One thought it might be somebody more like the course instructor. One expected a live lecturer, not video. One thought it would be more interesting than it was.

3. Students were told which specific conditions they had viewed, then were asked: Was the tape you watched a realistic representation of the intended condition?

Condition 1 - 16 of 17 students agreed that it was as described. One called it "traditional, just what you'd expect from a videotape" and therefore boring to him. Another added that the material was already familiar to her, but that the instructor moved around and used gestures while teaching.

Condition 2 - All 15 students agreed that it was as described. Very boring, no movement, too much reading. One said the information was good but the teaching was not; she could listen and learn but not watch him and learn, since he made no real connection with the audience.

Condition 3 - All 13 students agreed that it was as described. One added that the teacher seemed personable but sounded like he didn't know what he was talking

about. Another said she tried not to pay attention to his delivery but to the information he was presenting.

Condition 4 - All 15 students agreed that it was as described. Very boring teacher, one student said he nearly walked out.

4. Did you hear or see anything unusual in the tape that would contradict that condition, or seemed out of place or confusing?

Condition 1 - No contradictions, but sometimes the smiles and gestures seemed forced and scripted.

Condition 2 - No contradictions noted.

Condition 3 - No contradictions, but he may have overdone the smiles at times.

Condition 4 - No contradictions noted.

5. Do you have any other comments or suggestions about the tape you saw, as it relates to the condition we were attempting to portray?

"People who like computers and technology might like video courses, because you can sit there and take in the information and take notes. But somebody who doesn't like that style might not like video lectures very much."

6. One final question: Have you ever had a teacher who communicated similarly to the tape you watched?

Condition 1 - All 17

Condition 2 - 13 of 15

Condition 3 - All 13

Condition 4 - 7 of 11 (4 said never had a teacher that boring before)

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instructor was actually performing one of four scripted manipulations reflecting higher and lower combinations of specific verbal and nonverbal cues, representing the four cells of the 2x2 research design. Immediately after the lecture, students completed a recall measure, consisting of portions of the video text with blanks in the place of key words. Participants were to fill in the blanks with exact words they recalled from the videotape.

Findings strengthened previous research associating teacher nonverbal immediacy with enhanced cognitive learning outcomes. However, higher verbal immediacy, in the presence of higher and lower nonverbal immediacy, was not shown to produce greater learning among participants in this experiment. No interaction effects were found between higher and lower levels of verbal and nonverbal immediacy. Recall scores were comparatively low in the presence of higher verbal and lower nonverbal immediacy, suggesting that nonverbal expectancy violations may have hindered cognitive learning. Student motivation was not found to be a significant source of error in measuring immediacy's effects, and no interaction effects were detected between levels of student motivation, teacher verbal immediacy, and teacher nonverbal immediacy.