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Annette Leigh Folwell

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A COMPARISON OF STUDENTS' AND PROFESSORS' PERCEPTIONS
OF TEACHER NONVERBAL IMMEDIACY BEHAVIORS

by

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B.A., University of Puget Sound, 1991

Presented in partial fulfillment of the requirements
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Chairman, Board of Examiners

Dean, Graduate School

Date
The relationship between students' and professors' perceptions of teacher nonverbal immediacy was explored. It was hypothesized that students' and professors' perceptions would be positively correlated. Further specific hypotheses were: 1) Student perceptions of teacher nonverbal immediacy behaviors would correlate with observations more than professor perceptions of nonverbal immediacy; 2) More effective professors would have a higher correlation with student self-reports of teacher nonverbal immediacy behaviors than less effective professors; 3) Teacher nonverbal immediacy behaviors would be positively correlated with student motivation; 4) Student perceptions of teacher nonverbal immediacy would be positively correlated with student learning; and 5) Student motivation would be positively correlated with student learning.

Seventeen classes, which included 17 professors and 392 students, from a public university in the west participated in this study. Each class was videotaped for one class session and the professor and students were asked to fill out a questionnaire at the end of the class. The questionnaire elicited demographic information, student learning and motivation, and perceptions of the professor's nonverbal immediacy behaviors.

The primary research question was assessed through simple correlation analysis. For each class, a summary score of nonverbal immediacy was calculated by determining the mean for all nonverbal items. For the remaining hypotheses, summed scores of motivation and learning was computed in the same manner. Videotape observations were coded on a nonverbal immediacy coding sheet and then a mean was determined for category and each class. Simple Pearson correlations were used to assess each hypothesis.

No correlation was found between students' and professors' perceptions of nonverbal immediacy behaviors. However, student perceptions of nonverbal immediacy behaviors were highly correlated with videotape observations of nonverbal immediacy behaviors. There was no difference in correlations between the students perceptions and the two groups of effective and ineffective professors perceptions. Student perceptions of nonverbal immediacy were positively correlated with student motivation and student learning.
ACKNOWLEDGMENTS

DEDICATED IN MEMORY OF JAMES P. CHAPLIN
He believed in his friends
and the power of education.

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CHAPTER I

INTRODUCTION

What exactly makes a good professor? How is it that some professors are effective while others seem to be lacking a key element? Everybody has had a teacher or professor that has motivated and inspired them to learn. That teacher could make the dry material interesting and relevant; and the "good stuff", even better. At the other extreme, each of us has had the teacher or professor that fits the stereotype, "Those that can, do; and those that can't, teach".

Every day teachers walk into classrooms and attempt to do what some people consider the impossible -they strive to increase a student's foundation of knowledge. When trying to be effective teachers and educate their students, teachers try to create a positive learning environment. This environment not only depends on the students and the subject being taught, but also on the teacher and his or her behaviors.

Within the last 20 years, research has concluded that teacher behaviors do have a significant effect on student learning and teaching effectiveness. One particular teacher behavior which greatly influences teacher effectiveness is nonverbal immediacy in the classroom.
The purpose of this study is to further the knowledge of teacher nonverbal immediacy behaviors. The present study will extend prior research by looking specifically at students' and professors' perceptions of nonverbal immediacy behaviors and comparing these perceptions to videotape observations. Also, this study will examine the relationship between student perceptions of teacher nonverbal immediacy and student motivation and learning.
CHAPTER II

REVIEW OF RELATED LITERATURE

Teacher Nonverbal Immediacy

Teacher nonverbal immediacy is a construct derived from the work of Mehrabian (1969) and further cultivated by Andersen's (1979) research work. Teacher nonverbal immediacy refers to those nonverbal behaviors that reduce or diminish psychological and/or physical distance between students and teachers (Andersen, 1979).

Mehrabian's Definition of Nonverbal Immediacy

The construct of nonverbal immediacy was developed from Mehrabian's (1969) work which reviewed the experimental conclusions from numerous studies involving the posture and position of a communicator related to the attitude and status of the receiver. Results showed that distance, eye contact, body orientation, arms-akimbo position (openness of arms), and trunk relaxation were the most reliable indicators of the communicator's attitude toward the receiver. In particular, the distances between people positively reflect their status differences; eye contact is at a maximum quantity when addressing moderately-high status people, moderate with high-status people, and minimal with low-status people. Also, differences between male's and female's arm openness was represented, but further investigation was necessary to reach any conclusive results. Thus nonverbal behaviors, such as distance, eye contact, and
body orientation, reflect the attitudes and status of the people involved in the conversation; moreover, these behaviors are viewed as the constructs of nonverbal immediacy.

**Teacher Nonverbal Immediacy and Teaching Effectiveness**

From Mehrabian's work, Andersen (1979) further developed nonverbal immediacy constructs and applied them to the classroom. She hypothesized that teacher nonverbal immediacy would correlate positively with teaching effectiveness. Teaching effectiveness was operationally defined as the ability to produce affective, cognitive, and behavioral student learning in the classroom. Subjects included 205 college students and their 13 instructors; individual students rated their instructor's immediacy on two different instruments. First, the Behavioral Indicant of Immediacy Scale (BII) was implemented; and then a nine-item semantic differential scale measured the perceived immediacy of the instructor. Overall, teacher nonverbal immediacy was found to be a good predictor of teaching effectiveness. In particular, immediacy was found to be a reliable predictor of student affect and of student behavioral commitment.
Educational Outcomes

Through research, teacher nonverbal immediacy has been correlated with numerous positive educational outcomes. Recent literature is discussed in lieu of the following education outcomes: affective learning; behavioral learning; cognitive learning; and student motivation and resistance.

Affective Learning

Affective learning can be defined as the development of favorable or unfavorable attitudes toward learning by the student (Bloom, 1956, as cited in Richmond et al., 1987). Affective learning is also one of the most researched areas of teacher nonverbal immediacy. The following five studies explored teacher nonverbal immediacy and its effects on affective learning. These five studies are representative of the literature available.

Andersen, Norton, and Nussbaum (1981) explored the relationship between teacher communication (including immediacy, solidarity, and communicator style) and student learning. Results from their three studies illustrated that communication behaviors influence students' perceptions of effective teaching. Teachers who are perceived as more immediate, have a positive communicator style, show interpersonal solidarity, and are perceived more positively by their students. Additionally, students reported these teachers as being more effective; and, in turn, students report greater positive affect towards the instructor and
Andersen and Withrow (1981) explored the impact of lecturer nonverbal expressiveness on affective learning. Nonverbal expressiveness was measured by a scale derived from the BII and the Communicator Style Measure (Norton, 1979, as cited in Andersen & Withrow, 1981). Subjects included 299 undergraduate students who were asked to complete the measures after watching two videotapes, one in which the lecturer was nonverbally expressive and the other in which the lecturer was not. Nonverbal expressiveness was a significant positive factor for improving instructional effectiveness. Subjects responded and liked the lecturer and the videotape more when the lecturer was nonverbally expressive when delivering the information.

Kearney, Plax, and Wendt-Wasco (1985) investigated teacher nonverbal immediacy as a predictor of student affective learning across different courses with varied content. The courses examined were put on a continuum ranging from P-Type (people-oriented content) to T-Type (task-oriented content). Participants consisted of 642 university business students who were asked to complete three different instruments, including the Teaching Immediacy (TI Scale), the students' perceived salience of teacher immediacy (STI Scale), and students' affective learning scale. Findings suggested that teacher immediacy was significant for some students' affective learning in
both P- and T-Type content courses. The extent of influence of teacher immediacy on student affective learning and students' perceptions of the importance of teacher immediacy was dependent on the course content.

McCroskey, Richmond, Plax, and Kearney (1985) examined the use of Behavioral Alteration Techniques (BATs) and their effects on student affective learning. The BATs measure was generated by Kearney, Plax, Richmond, and McCroskey (1984, as cited in McCroskey et al., 1985) and includes 22 sample statements of different behavior alteration techniques (e.g., "You will lose if you do it." or "You will enjoy it."). This measure was issued to 630 subjects, students in grades 7-12, and the following results were generated: student and teacher perceptions of BATs are not alike; both are related to the communication training of the teacher and the quality of the student. However, BAT usage was significantly correlated to student affective learning.

Plax, Kearney, McCroskey, and Richmond (1986) replicated and extended the McCroskey et al. (1985) research concerning nonverbal immediacy and student affective learning. Plax et al. (1986) hypothesized that teachers' selection of BATs would be associated with students' perceptions of teacher nonverbal immediacy. Additionally, Plax et al. hypothesized that teacher nonverbal immediacy and BAT usage would be positively associated with student affective learning. Two studies were implemented to
generate data; the first using 620 subjects from junior and senior high school, and the second using 1320 participants from several universities. All subjects completed the BATs, the General Immediacy Scale (GI), and a student affective learning scale. Findings from both subject pools confirmed these hypotheses. Teachers' selection of Behavioral Alteration Techniques (BATs) were associated with student perceptions of teacher immediacy. Further, teacher nonverbal immediacy and BAT employment were positively correlated to student affective learning. Results suggested that "teachers' nonverbal approach and immediacy may influence students' perceptions of teachers' selective use of BATs" (Plax et al., p.53).

Results clearly illustrated a positive correlation between student affective learning and teacher nonverbal immediacy (Andersen et al., 1981; Andersen & Withrow, 1981; Kearney et al., 1985; McCroskey et al., 1985). Immediate teachers are perceived move positively by students (Andersen et al., 1981; Andersen & Withrow, 1981) and are perceived to be more effective than less immediate teachers (Andersen et al., 1981). Also, employment of BATs were associated with student perceptions of teacher nonverbal immediacy and were found to be significantly correlated to student affective learning (Kearney et al., 1985; McCroskey et al., 1985).
Behavioral Learning

Behavioral learning refers to the development of observable behavior change in a student as a result of learning (Bloom, 1956, as cited in Richmond et al., 1987). Three studies investigated the correlation of teacher nonverbal immediacy and behavioral learning and their findings are discussed below.

Andersen (1979) explored the effects of teacher nonverbal immediacy on student behavioral learning and commitment. She hypothesized that teacher immediacy and student behavioral learning are positively correlated. Results indicated a significant positive relationship between these two factors; teacher immediacy was a good predictor of student behavioral learning and commitment to a teacher and the course itself.

Andersen and Withrow (1981) hypothesized that student behavioral learning would increase as videotaped lecturer nonverbal immediacy and expressiveness increased. Behavioral learning was measured by four semantic scales gauging the likelihood of attending another lecture on associated material and engaging in the strategies suggested in the lecture. Results did not support this hypothesis; behavioral learning did not correlate with nonverbal immediacy. The authors explained that the subjects' dislike for videotaped lectures led to these results. Additionally, the subjects indicated that they did like the videotape
significantly more when it was delivered in a expressive manner.

Sanders and Wiseman (1990) predicted that teacher immediacy would positively correlate with behavioral learning of Asian, Black, Hispanic, and White students. Findings demonstrated that teacher immediacy was positively associated with behavioral learning, regardless of ethnicity. However, behavioral learning was more difficult (compared to affective and cognitive learning) to influence through teacher immediacy.

Although results from these studies seem equivocal, results inferred that teacher nonverbal immediacy does influence student behavioral learning. Two studies demonstrated a positive association between teacher nonverbal immediacy and behavioral learning (Andersen, 1979; Sanders & Wiseman, 1990). Whereas a third study revealed that behavioral learning did not correlate with teacher nonverbal immediacy, but this finding could be due to other confounding variables (i.e., video taped lectures instead of lectures delivered in person).

Cognitive Learning

Cognitive learning is the comprehension and retention of knowledge (Bloom, 1956, as cited in Richmond et al., 1987). Three studies have researched the association of teacher nonverbal immediacy and cognitive learning. Andersen (1979) proposed that teacher nonverbal immediacy
would be positively associated with student cognitive learning. Student cognitive learning was assessed by a 50-item multiple choice test that was administered to the 205 subjects. Results did not support a significant positive correlation between teacher immediacy and cognitive learning.

Andersen et al. (1981) hypothesized that student cognitive learning would be positively related with teacher nonverbal immediacy. Cognitive learning was measured at two different times during the study; first, immediate recall was assessed, and then a two-day follow-up quiz assessed "correct" answers. The hypothesis was not confirmed; student cognitive learning was not significantly influenced by teacher nonverbal immediacy.

Richmond et al. (1987) investigated particular nonverbal immediacy behaviors and their effect on students' cognitive learning in two studies. Richmond et al. (1987) created and implemented a measure of nonverbal immediacy and a subjective measure of cognitive learning. Subjects included 361 students in the first study and 358 subjects in the second study. Results indicated that immediacy behaviors are significantly correlated with student cognitive learning. Specifically, smiling at the class and having a relaxed body position surfaced as the most important teacher nonverbal immediacy behaviors. The results of the correlation between teacher nonverbal
immediacy and cognitive learning are equivocal. Student cognitive learning did not correlate with nonverbal immediacy when the measure used to assess cognitive learning was a test or quiz (Andersen, 1979; Andersen et al., 1981). Conversely, immediacy behaviors were significantly correlated with cognitive learning when the measure used was a subjective scale where students assessed their own learning (Richmond et al., 1987).

Student Motivation and Student Resistance

Christophel (1990) published two studies which explored the relationship between teacher immediacy and student motivation and the combined influence of these elements on student learning. The first study employed self-report measures, including the Immediacy Behavior Scale (IBS), assessing student motivation levels, perceptions of teacher immediacy behaviors, and perceived learning in the participants' preceding class. In the second study, the scales were randomly split between the subjects and assessed the present class. Findings indicated significant correlations between student learning and both teacher immediacy and student motivation. Furthermore, teacher immediacy appears to influence motivation which leads to increased student learning.

Kearney, Plax, Smith, and Sorensen (1988) examined the effects of teacher nonverbal immediacy and strategy type on college students' probability of withstanding teacher
compliance-gaining efforts. The participants (n = 629 students) were asked to denote the probability of conforming to teacher demands in the subsequent scenarios: an immediate teacher who used prosocial behavior techniques; an immediate teacher who used antisocial behavior techniques; a nonimmediate teacher who used prosocial behavioral techniques; and a nonimmediate teacher who used antisocial techniques. Results indicated that students were more likely to resist an immediate teacher implementing antisocial techniques than an immediate teacher using prosocial techniques. In comparison, students were more likely to resist a nonimmediate teacher utilizing prosocial techniques and less likely to resist a nonimmediate teacher using antisocial techniques. Therefore, immediacy has an influence on students' resistance or compliance.

Summary

In sum, teacher nonverbal immediacy has been associated with student affective, behavioral, and cognitive learning (e.g., Andersen et al., 1981; Kearney et al., 1985; McCroskey et al., 1985; Richmond et al., 1987). Accordingly, teacher nonverbal immediacy positively influences teaching effectiveness (e.g., Andersen, 1979; Andersen et al., 1981; Kearney et al., 1985; McCroskey et al., 1985; Richmond et al., 1987). Furthermore, teacher nonverbal immediacy enhances student motivation.
(Christophel, 1990) and decreases student resistance to task demands (Kearney et al., 1988).

Teacher nonverbal immediacy has been positively correlated to students' overall learning. First, nonverbal immediacy has been associated with affective learning, meaning that teacher nonverbal immediacy enhances a student's favorable attitude toward learning (Andersen, 1979; Andersen et al., 1981; McCroskey et al., 1985; Plax et al., 1986). Second, teacher immediacy affects behavioral learning; thus when teacher nonverbal immediacy increases, there is an observable behavior change in the student (Andersen, 1979; Sanders & Wiseman, 1990). Finally, teacher nonverbal immediacy correlates with cognitive learning; when immediacy increases, so does the comprehension and retention of knowledge (Richmond et al., 1987).

Additionally, the research illustrates a positive correlation between teacher nonverbal immediacy and students' motivation (Christophel, 1990). Moreover, increased student motivation elevates student learning (Christophel, 1990). Also, teacher nonverbal immediacy decreases student resistance to task demands (Kearney et al., 1988).
Perception

Comparison of Student and Teacher Perceptions

Gorham and Zakahi (1990) investigated whether students and teachers perceive teacher verbal and nonverbal immediacy behaviors and classroom learning outcomes similarly. Participants included 526 students from 35 different intact classes. The participants completed Richmond et al.'s (1987) nonverbal immediacy measure, Gorham's (1988, as cited in Gorham & Zakahi, 1990) verbal immediacy measure, and two measures assessing cognitive learning (Richmond et al., 1987) and affective learning (Scott & Wheeless, 1975, as cited in Gorham & Zakahi, 1990). The teachers completed a self-report measure which allowed for the comparison of teachers' and students' perceptions. Results showed a high level of agreement in the students' and teachers' reports of immediacy and learning among the students in intact classes. Furthermore, students and teachers had a high level of agreement in their perceptions of teacher immediacy and learning.

Students from intact classes perceive teacher nonverbal immediacy behaviors similarly to other students and teachers (Gorham & Zakahi, 1990; Powell & Harville, 1990; Sanders & Wiseman, 1990). Teacher and student perceptions of teacher nonverbal immediacy behaviors corresponded to one another and have reported a positive association of nonverbal immediacy and learning outcomes (Gorham & Zakahi, 1990).
Statement of Hypotheses

The present study examined students' and professors' perceptions of professor nonverbal immediacy behaviors. Previously teacher nonverbal immediacy has been correlated with teacher effectiveness, increased affective, behavioral, and cognitive learning, and higher student motivation.

Although an earlier study demonstrated a high level of agreement between students' and teachers' reports of immediacy, it employed teacher self-reports to generate data for the comparison of teachers' and students' views of teacher immediacy. While the present study explores this same relationship between students' and professors' perceptions of nonverbal immediacy, it employs a measure of actual behavior rather than teacher self-reports. Each professor was videotaped teaching a class session. This concrete measure allows for a direct comparison of students' and professors' views of nonverbal immediacy.

The present study investigates the following basic research question: Is there a relationship between student reports of a professor's nonverbal immediacy and a professor's perception of his/her behaviors?

In addition, the following five secondary hypotheses were generated:

1. More effective professors will have higher correlations with student self-reports of teacher nonverbal immediacy behaviors than less effective professors.
2. Student perceptions of teacher nonverbal immediacy behaviors correlate with observations more than professor perceptions of nonverbal immediacy behaviors.

3. Teacher nonverbal immediacy behaviors will be positively correlated with student motivation.

4. Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student learning.
   4a. Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student cognitive learning.
   4b. Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student behavioral learning.
   4c. Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student affective learning.

5. Student motivation will be positively correlated with student learning.
   5a. Student motivation, as perceived by students, will be positively correlated with student cognitive learning.
   5b. Student motivation, as perceived by students, will be positively correlated with student behavioral learning.
   5c. Student motivation, as perceived by students, will be positively correlated with student affective learning.
Methods

Participants

The voluntary participants included undergraduate and graduate students from 17 intact classes and the professors from those classes. The classes used in this study were from a public university in the west and ranged from freshman to graduate level.

Criteria were set prior to videotaping classes. First, the instructor of the class had to be a professor, not an instructor or teaching assistant. Second, class size was to be under 40 students because smaller classes allow for more teacher-student interaction. Third, no lab or discussion sections from large classes were allowed in the study. The researcher wanted to focus on lecturing styles of professors. Finally, because graduate classes are often a seminar discussion format, participating classes were limited to undergraduate classes.

Potential professor participants were approached personally by the researcher. The researcher provided an explanation of the study and what the professor's role would be, and then asked whether he or she would like to participate. If they agreed to participate in the study, then the researcher went to the professor's class and asked for student participants. Again, the researcher explained to the potential student participants the study and their
Two questionnaires were used to elicit demographic information, student and professor perceptions of teacher nonverbal immediacy, and learning scales. In particular, the student questionnaire requested demographic facts, four different learning outcomes, including affective, behavioral, and cognitive learning, and student motivation and perceptions of their professor's nonverbal immediacy behaviors. The professor questionnaire solicited demographic data and the professor's perception of his or her own nonverbal immediacy behaviors.

Professor nonverbal immediacy was measured through students' and professors' perceptions of nonverbal immediacy behaviors. Both students and professors were asked to rate the professor on 14 different nonverbal immediacy behaviors. This method has been substantiated by previous research and has a reliability factor of .89 (Richmond et al., 1987; Sanders & Wiseman, 1990).

For the present study, the nonverbal immediacy behavior items were tailored to fit a particular questionnaire. For example, a nonverbal immediacy item on a student questionnaire would read, "My professor gestures when talking to the class." The same item on the professor questionnaire would read, "I gesture when talking to my
class." (see Appendices C and D). The items were evaluated by using a four-point semantic scale with the anchors of: "Always", "Very Frequently", "Seldom", and "Never".

Cognitive learning was assessed through student perceptions of their own learning. This approach followed previous research (Richmond, McCroskey, Kearney & Plax, 1987; Richmond et al., 1987; Gorham, 1988; Gorham & Zakahi, 1990). Students were asked to rate how much they will have learned in the class and how much they think they could have learned if they had the "ideal instructor". These items are assessed by using a 10-point Likert-type scale with "0" meaning "you learned nothing" and "9" meaning "you learned more than in any other class you've had" (see Appendix E). Prior research has established a reliability score of .94 for this scale (Gorham, 1988).

A measurement of behavioral learning was derived from previous research (Andersen, 1979; Andersen & Withrow, 1981; Sanders & Wiseman, 1990). The scale measures the likelihood of actually attempting to use the behaviors, practices, and theories recommended in the course and the likelihood of enrolling in a course of related content, schedule permitting. These behavioral items were assessed on four, seven-point semantic-differential scales: likely/unlikely; possible/impossible; probable/improbable; and would/would not (see Appendix F). Reliability scores of this measure are reported between .94 and .86 (Andersen, 1979; Andersen &
Affective learning was evaluated by the affective measures developed by Scott and Wheeless (1975) and developed further by Andersen (1979) and McCroskey et al. (1985). This scale measured the students' attitudes toward the course, its content, instructor, and the likelihood of engaging in taking additional classes with the teacher of the course, schedule permitting. Students were asked to respond to four statements on four, seven-point semantic-differential scales. The scales were: likely/unlikely; possible/impossible; probable/improbable; and would/would not (see Appendix G). Prior studies have found reliability of this scale to range from .94 to .86 (McCroskey et al., 1985; Christophel, 1990).

To assess students' motivation, the State Motivation Scale was employed. The State Motivational Scale evaluates students' motivational attitude towards a particular class. Students were asked to complete 11 items that were placed on a seven-point semantic differential scale about their general feelings toward that specific class (see Appendix H). Use of the State Motivational Scale has been supported by past research and has a proven reliability factor of .91 (Beatty, Forst, & Steward, 1986; Christophel, 1990).

**Procedures**

Data Collection
Potential professor participants were approached personally by the researcher. The researcher provided an explanation of the study, the professors' role, and then asked whether they would like to participate. If they agreed to participate in the study, the researcher went to the professors' class and asked for student participants.

In participating classes, a video camera was positioned in the back of each classroom. The camera videotaped one entire class session. Taping started when the professor's lecture started and ended when the professor dismissed the class. The camera was focused strictly on the professor and his/her teaching behaviors. Any student involvement (i.e., asking questions or giving a short book report) was not videotaped. The camera remained focused on the professor during these interactions.

Questionnaires were distributed to volunteer subjects in their classrooms during their regular class times. Student and professor participants completed a questionnaire during the last five minutes of class in reference to that particular professor. The subjects were told by the researcher that she needed their help on research about improving classroom teaching. Furthermore, the researcher explained that the questionnaire should be completed individually by each participant without discussion of the items (see Appendix C). Students were asked to complete the instrument while the professor completed his/her
questionnaire. Students were guaranteed that their responses would not affect their standing in the course.

Data Analysis

Analysis of the present study's primary research question and hypotheses was conducted in three-parts. First, students' and professors' perceptions of teacher nonverbal immediacy were computed. Secondly, the frequency of students' and professors' nonverbal immediacy perceptions were correlated with the observed frequency of videotaped nonverbal immediacy behaviors. Finally, students' perceptions of teacher nonverbal immediacy were correlated with four educational outcome variables --cognitive learning, behavioral learning, affective learning, and student motivation.

The primary research question, which asked if there was a relationship between student reports of a professor's nonverbal immediacy and a professor's perceptions of his/her behaviors, was assessed through a simple correlation analysis. Before determining this calculation, the summed scores of students' and professors' perceptions of nonverbal immediacy behaviors were computed. A summary score was calculated by finding the mean of all nonverbal immediacy items. The correlation between students' and professors' perceptions was determined by comparing the summed score of professors' perceptions (n = 17) to summed score of students' perceptions (n = 17).
The second part of analysis concerned the coding of the videotapes. Each videotape was coded for professor nonverbal immediacy behaviors. Each videotape was divided into 30 minute segments and the second 30 minute segment was coded by two researchers. Nonverbal immediacy behaviors were coded for five seconds every minute (i.e., for the 30 minutes of coded videotape, there were 30 coded five second intervals).

Observations were tabulated on a nonverbal immediacy behavior coding sheet developed for this project. The coding sheet monitors six major areas of nonverbal immediacy behaviors including: movement; gesture; eye gaze; smile; body posture; and vocal expression (see Appendix B).

The first four nonverbal areas are broken into more precise nonverbal behaviors and coded for frequency. For example, if the behavior was present during the five second interval, a check was placed in the appropriate box. The last two nonverbal areas, body posture and vocal expression, were rated on a five-point Likert type scale. For a more complete description, see Table 3.1.
The videotapes were coded by the researcher and another graduate student in the Communication Studies department. Both coders went through a two hour training session where criteria and techniques for nonverbal coding were discussed. Reliability factors for the nonverbal immediacy coding sheet were assessed by Scott's Pi. Table 3.2 illustrates the reliability factors on all nonverbal codes.
The third and final portion of analysis discerns the relationship between the four educational outcome variables and the students' reports of teacher nonverbal immediacy. The summed score of the students' perceptions of nonverbal immediacy \((n = 17)\) was correlated individually with all four summed scores of the variables (i.e., the summed score of the students' perception of professor nonverbal immediacy.

### Table 3.2
Reliability Factors for Nonverbal Immediacy Coding Sheet

<table>
<thead>
<tr>
<th>Nonverbal Behaviors</th>
<th>Reliability Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Movement</strong></td>
<td></td>
</tr>
<tr>
<td>-Walking</td>
<td>.95</td>
</tr>
<tr>
<td>-Standing Behind Podium</td>
<td>.93</td>
</tr>
<tr>
<td>-Sitting on a Desk</td>
<td>1.00</td>
</tr>
<tr>
<td>-Writing on the Chalkboard</td>
<td>.97</td>
</tr>
<tr>
<td>-Leaning</td>
<td>.89</td>
</tr>
<tr>
<td><strong>Gestures</strong></td>
<td></td>
</tr>
<tr>
<td>-Pointing</td>
<td>.87</td>
</tr>
<tr>
<td>-Indicating</td>
<td>.98</td>
</tr>
<tr>
<td><strong>Eye Gaze</strong></td>
<td></td>
</tr>
<tr>
<td>-Looking at Students</td>
<td>.98</td>
</tr>
<tr>
<td>-Looking at Chalkboard</td>
<td>.97</td>
</tr>
<tr>
<td>-Looking at Notes</td>
<td>.94</td>
</tr>
<tr>
<td>-Looking at Overhead</td>
<td>.97</td>
</tr>
<tr>
<td><strong>Smile</strong></td>
<td>.86</td>
</tr>
<tr>
<td><strong>Body Posture</strong></td>
<td>.98</td>
</tr>
<tr>
<td><strong>Vocal Expression</strong></td>
<td>.97</td>
</tr>
</tbody>
</table>
was specifically correlated with the summed scores of cognitive learning, behavioral learning, affective learning, and student motivation).
CHAPTER IV

Results

Before any results were calculated, each individual class of student questionnaires were totaled and the mean for each questionnaire item was established. These 17 student means from the 17 intact classes were used, in conjunction with the 17 professor questionnaires and the 17 coded videotapes for the analysis.

Participants

The participating 17 intact classes were from 12 different departments which included: Communication Studies (1); Computer Science (2); Economics (1); Education (4); English (1); Foreign Language (2); Geology (1); Health and Human Performance (1); Physical Therapy (1); Radio and Television (1); and Social Work (1). Class size ranged from six to 52 students, with the average class size having 23 students.

Student participants ranged in age from 18 to 53 years and represented 38 different majors. One hundred sixty-eight of the student participants were male and 205 were female with 22 people not reporting their sex. The student participants represented all academic levels: 9 freshman, 43 sophomores, 98 juniors, 205 seniors, 26 graduates, and 11 students not reporting their class standing.

Of the 17 professor participants, 12 were male and five were female. The professor participants represented all
levels of professorship, which included: 3 assistant professors; 3 associate professors; 8 full professors; 2 visiting professors; and 1 professor not accounting his/her level. The years the professor participants have been teaching at the college level ranged from three to 28 years, with an average of 14.25 years.

**Primary Research Question**

Is there a relationship between students' reports of a professor's nonverbal immediacy behaviors and a professor's report of his/her nonverbal immediacy behaviors?

Based on prior research, the fundamental research question of the present study suggested that there would be a relationship between students' and professors' reports of teacher nonverbal immediacy. The correlations between the summary scores of students' and professors' reports of nonverbal immediacy was .03, a nonsignificant relationship. Closer examination of this research question showed no significant relationship between any particular item of students' and professors' reports of nonverbal immediacy behavior (e.g., student and professor reports of the professor sitting being the desk did not have a significant correlation).

Additional analysis of this research question was necessary to examine any relationships between particular perceptions of nonverbal behaviors. A significant correlation was found between students' and professors'
perceptions of vocal expression. These correlations are illustrated in Table 4.1. The only significant correlation was between student and professor perceptions of the professors' vocal expressions.

Table 4.1
Correlations between Students' and Professors' Perceptions of Nonverbal Immediacy Behaviors

<table>
<thead>
<tr>
<th>Student and Professor Perceptions of Nonverbal Immediacy Items</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sits Behind Desk</td>
<td>.34</td>
</tr>
<tr>
<td>Gesturing While Talking</td>
<td>.02</td>
</tr>
<tr>
<td>Monotone Voice</td>
<td>-.19</td>
</tr>
<tr>
<td>Looks at Students When Talking</td>
<td>.07</td>
</tr>
<tr>
<td>Smiles at Class</td>
<td>-.23</td>
</tr>
<tr>
<td>Tense Body Posture</td>
<td>.45</td>
</tr>
<tr>
<td>Touches Students</td>
<td>.32</td>
</tr>
<tr>
<td>Moves Around Classroom</td>
<td>.19</td>
</tr>
<tr>
<td>Sits on Desk</td>
<td>.23</td>
</tr>
<tr>
<td>Looks at Notes When Talking</td>
<td>.41</td>
</tr>
<tr>
<td>Stands Behind Podium</td>
<td>.26</td>
</tr>
<tr>
<td>Relaxed Body Posture</td>
<td>-.01</td>
</tr>
<tr>
<td>Smiles at Individuals</td>
<td>.37</td>
</tr>
<tr>
<td>Vocal Expression</td>
<td>.50*</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
Hypothesis 1
Student perceptions of teacher nonverbal immediacy behaviors will correlate with coded observations more than professor perceptions of nonverbal immediacy behaviors will correlate with the coded observations.

A simple correlation analysis probed the relationship between the observations of nonverbal immediacy and students' and professors' perceptions of nonverbal immediacy. Before calculating this relationship, student and professor nonverbal items were consolidated to correspond to the videotaped observations (i.e., student and professor items referring to smiling, either to the class or individuals, were added together to compare with observed videotape smiles).

In addition to assessing individual nonverbal behaviors, an overall summary score of student, professor, and videotape nonverbal immediacy behaviors were correlated. Results of these summary score correlations are reported in Table 4.2. There was an insignificant correlation ($r = .06$) between the professor perceptions and videotape observations of nonverbal immediacy. A strong, significant correlation ($r = .75$) between student perceptions and videotape observations was discovered. To determine if the difference between these independent correlations was significant, a z-test was employed. Results from the z-test indicate that the difference was significant, $z = .4975$ and $p = .05$. Therefore, there was a significant difference between the
strength of the student perceptions and videotape observations and the professor perceptions and videotape observations.

<table>
<thead>
<tr>
<th>Table 4.2</th>
<th>Correlations of Summed Scores of Student and Professor Nonverbal Immediacy and Videotape Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professor Perceptions of Nonverbal Behaviors</strong></td>
<td><strong>Student Perceptions of Nonverbal Behaviors</strong></td>
</tr>
<tr>
<td><strong>Videotape Observations</strong></td>
<td><strong>.06</strong></td>
</tr>
</tbody>
</table>

* p < .05
** p < .01

While professor perceptions did not correlate with the videotape observations (r = .06), student perceptions of professor nonverbal immediacy behaviors had a distinct positive correlation with the videotape observations (r = .75). Students were able to report their professors' nonverbal immediacy behaviors more accurately than the professors themselves. The professors were not able to correctly account for their nonverbal immediacy behaviors in the classroom.

In particular, significant correlations were found between student perceptions of gestures, smiles, and looking
at notes and videotape observations of these behaviors. Also, a significant correlation was discovered between professor perceptions of vocal expressions and the videotape observations of this behavior. Correlations between individual nonverbal immediacy behaviors are reported in Table 4.3.

Table 4.3
Correlations of Videotape Observations and Students' and Professors' Perceptions

<table>
<thead>
<tr>
<th>Videotape Observations</th>
<th>Professor Perceptions</th>
<th>Student Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking While Speaking</td>
<td>-.41</td>
<td>.30</td>
</tr>
<tr>
<td>Standing Behind Podium</td>
<td>-.28</td>
<td>-.31</td>
</tr>
<tr>
<td>Sitting On/Behind Desk</td>
<td>-.13</td>
<td>-.14</td>
</tr>
<tr>
<td>Gestures While Speaking</td>
<td>-.25</td>
<td>.69*</td>
</tr>
<tr>
<td>Looks at Students</td>
<td>.27</td>
<td>.21</td>
</tr>
<tr>
<td>Looks at Notes/Board</td>
<td>-.44</td>
<td>-.55*</td>
</tr>
<tr>
<td>Smile</td>
<td>.08</td>
<td>.50*</td>
</tr>
<tr>
<td>Body Position</td>
<td>.09</td>
<td>-.07</td>
</tr>
<tr>
<td>Vocal Expression</td>
<td>.67*</td>
<td>.24</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
Hypothesis 2

More effective professors will have a higher correlation with student self-reports of teacher nonverbal immediacy behaviors than less effective professors.

To test this hypothesis, an operational definition of an effective professor had to be constructed. Using a common research definition, an effective professor produces higher student learning (Andersen, 1979; Kearney et al., 1988; Sanders & Wiseman, 1990). Therefore, an overall learning score was computed for each class. The overall learning score was calculated by subtracting behavioral and affective learning scores from the cognitive learning score. The median of the overall learning score was used to divide the sample into two subsamples, an effective professor and ineffective professor groups.

To determine the relationship between effective and ineffective professors' perceptions and students' perceptions of nonverbal immediacy, professor perceptions were correlated with student perceptions of nonverbal immediacy. Significant correlations between these two sample groups were found (see Table 4.4). Specifically, the nonverbal items of "using a monotone voice", "looking at students", "smiles at class", "tense body posture", "sitting on a desk", and "smiles at individuals" were different between the effective and ineffective professor samples.
Table 4.4
Correlations of Effective and Ineffective Professors' and Students' Perceptions of Nonverbal Immediacy Behaviors

<table>
<thead>
<tr>
<th>Student Perceptions of Nonverbal Immediacy</th>
<th>Effective Professors' Perceptions</th>
<th>Noneffective Professors' Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sits Behind Desk</td>
<td>-.22</td>
<td>.32</td>
</tr>
<tr>
<td>Gestures While Talking</td>
<td>.21</td>
<td>-.34</td>
</tr>
<tr>
<td>Monotone Voice</td>
<td>.00</td>
<td>-.66*</td>
</tr>
<tr>
<td>Looks at Students</td>
<td>.57*</td>
<td>-.04</td>
</tr>
<tr>
<td>Smiles at Class</td>
<td>.29</td>
<td>-.52*</td>
</tr>
<tr>
<td>Tense Body Posture</td>
<td>-.65*</td>
<td>.00</td>
</tr>
<tr>
<td>Touches Students</td>
<td>.37</td>
<td>.34</td>
</tr>
<tr>
<td>Moves Around Classroom</td>
<td>.39</td>
<td>-.08</td>
</tr>
<tr>
<td>Sits on Desk</td>
<td>.27</td>
<td>-.76**</td>
</tr>
<tr>
<td>Looks at Notes</td>
<td>-.48</td>
<td>-.39</td>
</tr>
<tr>
<td>Stands Behind Podium</td>
<td>-.37</td>
<td>-.22</td>
</tr>
<tr>
<td>Relaxed Body Posture</td>
<td>.32</td>
<td>-.11</td>
</tr>
<tr>
<td>Smiles at Individuals</td>
<td>.15</td>
<td>.55*</td>
</tr>
<tr>
<td>Vocal Expression</td>
<td>.37</td>
<td>-.23</td>
</tr>
<tr>
<td>Summary Scores of Student Perceptions</td>
<td>.09</td>
<td>-.04</td>
</tr>
</tbody>
</table>

*  \( p < .05 \)
** \( p < .01 \)

A z-test for independent data was used to test the differences in the magnitude of the correlations between the two groups. The only significant z score was between effective and ineffective professor perceptions with student perceptions of "sitting on a desk". Ineffective professor perceptions of "sitting on a desk" were more closely aligned with student perceptions than were effective professors.
Hypothesis 3

Students' perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student motivation.

Correlations between student perceptions of teacher nonverbal immediacy and student motivation are reported in Table 4.5. To calculate this relationship, the summary score of student perceptions was correlated with the motivation score. Results showed a positive and significant correlation of .73 between these dimensions. Therefore, Hypothesis 3 was supported. In particular, gesturing while speaking, not using a monotone voice, looking at the class, smiling at the class and individuals, having a relaxed body position, and using a variety of vocal expression were the specific professor nonverbal immediacy behaviors that best predicted student motivation.
Table 4.5
Correlations of Students' Perceptions of Nonverbal Immediacy and Motivation

<table>
<thead>
<tr>
<th>Student Perceptions</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting Behind Desk</td>
<td>-.13</td>
</tr>
<tr>
<td>Gesturing While Speaking</td>
<td>.66**</td>
</tr>
<tr>
<td>Monotone Voice</td>
<td>-.65**</td>
</tr>
<tr>
<td>Looking at Class</td>
<td>.63**</td>
</tr>
<tr>
<td>Smiling at Class</td>
<td>.63**</td>
</tr>
<tr>
<td>Tense Body Position</td>
<td>-.24</td>
</tr>
<tr>
<td>Touching Students</td>
<td>.20</td>
</tr>
<tr>
<td>Moves Around Classroom</td>
<td>.41</td>
</tr>
<tr>
<td>Sitting On a Desk</td>
<td>.08</td>
</tr>
<tr>
<td>Looking at Notes While Talking</td>
<td>-.35</td>
</tr>
<tr>
<td>Stands Behind Podium</td>
<td>-.43</td>
</tr>
<tr>
<td>Relaxed Body Position</td>
<td>.54*</td>
</tr>
<tr>
<td>Smiling at Individuals</td>
<td>.59*</td>
</tr>
<tr>
<td>Variety of Vocal Expression</td>
<td>.72**</td>
</tr>
<tr>
<td>Summed Score of Student Perceptions</td>
<td>.73**</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
Hypothesis 4

Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student learning.

4a. Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student cognitive learning.

4b. Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student behavioral learning.

4c. Student perceptions of teacher nonverbal immediacy behaviors will be positively correlated with student affective learning.

A correlation analysis was employed to assess the association between student perceptions of nonverbal immediacy and student learning. The examination of the summary scores of student perceptions and student learning revealed no significant correlation ($r = .29$). To further the investigation of this hypothesis, student motivation was correlated with each type of learning. Results are reported in Table 4.6. A significant correlation of .61 was found between the summary scores of student perceptions and student affective learning. Particularly, the nonverbal immediacy behaviors of gesturing while talking, not using a monotone voice, looking at students, and using a variety of vocal expression were significantly correlated with affective learning.
Table 4.6
Correlations Between Students' Perceptions of Nonverbal Immediacy and Student Learning

<table>
<thead>
<tr>
<th>Student Perceptions</th>
<th>Cognitive Learning</th>
<th>Behavioral Learning</th>
<th>Affective Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting Behind a Desk</td>
<td>-.01</td>
<td>-.10</td>
<td>-.39</td>
</tr>
<tr>
<td>Gesturing While Talking</td>
<td>.27</td>
<td>.18</td>
<td>.67**</td>
</tr>
<tr>
<td>Monotone Voice</td>
<td>.03</td>
<td>-.07</td>
<td>-.53*</td>
</tr>
<tr>
<td>Looking at Students</td>
<td>.06</td>
<td>.12</td>
<td>.50*</td>
</tr>
<tr>
<td>Smiling at Class</td>
<td>-.04</td>
<td>.17</td>
<td>.57*</td>
</tr>
<tr>
<td>Tense Body Position</td>
<td>.23</td>
<td>-.06</td>
<td>-.11</td>
</tr>
<tr>
<td>Touching Students</td>
<td>.14</td>
<td>.10</td>
<td>.16</td>
</tr>
<tr>
<td>Moves Around Classroom</td>
<td>.12</td>
<td>.13</td>
<td>.41</td>
</tr>
<tr>
<td>Sitting on a Desk</td>
<td>-.08</td>
<td>.25</td>
<td>.18</td>
</tr>
<tr>
<td>Looking at Notes</td>
<td>-.08</td>
<td>-.16</td>
<td>-.24</td>
</tr>
<tr>
<td>Stands Behind Podium</td>
<td>-.20</td>
<td>-.30</td>
<td>-.35</td>
</tr>
<tr>
<td>Relaxed Body Position</td>
<td>-.29</td>
<td>.11</td>
<td>.34</td>
</tr>
<tr>
<td>Smiling at Individuals</td>
<td>.12</td>
<td>-.01</td>
<td>.41</td>
</tr>
<tr>
<td>Variety of Vocal Expression</td>
<td>.13</td>
<td>.13</td>
<td>.61**</td>
</tr>
</tbody>
</table>

Summary Score of Student Perceptions

* p < .05
** p < .01
Hypothesis 5

Student motivation will be positively correlated with student learning.
5a. Student motivation, as perceived by students, will be positively correlated with student cognitive learning.
5b. Student motivation, as perceived by students, will be positively correlated with student behavioral learning.
5c. Student motivation, as perceived by students, will be positively correlated with student affective learning.

In order to assess the relationship between student motivation and student learning, correlations were computed for motivation and a summary learning score. Results are summarized in Table 4.7 and indicate there was a significant, positive correlation between the summary scores of student motivation and student learning. To expand the examination of this hypothesis, the summary score of motivation was correlated with the summary scores of each type of student learning. This analysis of this hypothesis illustrated a strong correlation between student motivation and affective (r = .86) and behavioral learning (r = .67). Also, there is an interesting significant correlation between affective and behavioral learning (r = .62).
Table 4.7
Correlations Between Student Motivation and Student Learning

<table>
<thead>
<tr>
<th>Variables</th>
<th>Motivation</th>
<th>Behavioral Learning</th>
<th>Affective Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Learning</td>
<td>.42</td>
<td>.31</td>
<td>.38</td>
</tr>
<tr>
<td>Behavioral Learning</td>
<td>.67**</td>
<td>---</td>
<td>.62**</td>
</tr>
<tr>
<td>Affective Learning</td>
<td>.86**</td>
<td>.62**</td>
<td>---</td>
</tr>
<tr>
<td>Summary Learning Score</td>
<td>.73**</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
CHAPTER V

DISCUSSION

This chapter discusses the results and their implications. The primary research question will first be discussed followed by a discussion of the five hypotheses. Next, the limitations of the present study will be addressed. Finally, implications for future research will be examined.

Review of Current Findings

Primary Research Question

The basic research question was: Is there a relationship between students' perceptions of teacher nonverbal immediacy behaviors and a professor's own reports of his/her own nonverbal immediacy behaviors? The results of the present study did not show a relationship between students' and professors' overall perceptions of the professors' immediacy behaviors.

Although the results of this research question differ from an earlier study where students' and professors' perceptions coincided (Gorham & Zakahi, 1990), they do demonstrate an interesting element in the field of communication. Students and professors perceptions of the same event are quite discrepant. Professors and students do not "see" the same behavior even when they are in the same classroom. Numerous factors assist in forming a perception;
a person's past experiences, current mood, knowledge, and even the time of day play a part in perceiving some act, person, or thing. Consequently people's perceptions are typically not the same, which concurs with the overall findings of this research question.

There was, however, a significant correlation between students' and professors' perceptions of one nonverbal item -- vocal expression. Not only did students and professors perceive a professor using a variety of vocal expressions similarly, this variable was also significantly related to other student perceived nonverbal items. A professor's vocal expression had a significant, positive correlation with looking at students \((r = .72)\), having a relaxed body posture \((r = .50)\) and smiling at individuals \((r = .53)\), and had a negative correlation with standing behind a podium \((r = -.50)\).

Given that overall professor and student perceptions are unrelated, the correlation between students' and professors' perceptions of vocal expression is even more intriguing than originally viewed. Not only did students and professors perceive this behavior in the same way, the student sample demonstrated that this nonverbal behavior is linked to other nonverbal immediacy behaviors. A professor's vocal expression was related to other nonverbal behaviors, such as smiling to students, relaxed posture, looking at students, and not standing behind a podium. It
may be that vocal expression produces some sort of global response set, predisposing people to evaluate smiling, relaxed posture, looking at students and not standing behind a podium in similar ways.

Hypothesis 1

The first hypothesis stated that student perceptions of teacher nonverbal immediacy behaviors would correlate with the coded observations more than professor perceptions of nonverbal immediacy behaviors would. Results did support this hypothesis. A significant, positive correlation was found between student perceptions and observations of teacher nonverbal immediacy.

Students were able to report their professors' nonverbal immediacy behaviors more precisely than did the professors. A possible explanation for this finding might lie in the fact that the students were observing the professors' behaviors whereas the professors were trying to recall what behaviors they had used in a class session. It may be that "outsiders" are more accurate judges of nonverbal behaviors than are the sender.

This finding is interesting to consider from the professors' perspective. Why do professors not accurately report their own behaviors? A possible explanation could lie within the professor participants. The professor participants were asked for their perceptions of their
nonverbal behaviors of that particular class session, but professors could have reported their overall "Gestalt" impression or perceptions of their behaviors instead. Once a person has formed and accepted a perception, it is difficult to change one's mind about that particular perception. Thus, the professors could be relying on a preconceived perceptions of their behaviors and not what they actually did in that one class session. Alternatively, professors may not be aware of the specific cues they emit while teaching. Students, on the other hand, may be processing visually and auditorally more cues.

Another confounding variable which could affect professor perceptions of themselves could be the presence of the video camera itself. The researcher tried to compensate by using the second half hour of a videotape, allowing a professor to "adjust" to the presence of a video camera. But this compensation might not have been enough and the camera may have impaired the nonverbal teaching behaviors of the professor, thus throwing off the professors' usual behaviors emitted. Professors, then, may be responding to what they usually nonverbally and not to changes caused by the presence of the camera.

Hypothesis 2

The second hypothesis proposed that more effective professors would have a higher correlation with student self-reports of teacher nonverbal immediacy behaviors than
would less effective professors. The results did not support this hypothesis.

Although there were no significant differences in overall perceptions of these two sample groups, there were four specific nonverbal items that were perceived differently. There was a significant relationship between how the students of an effective professor perceived the professors' behaviors of "sitting on a desk" and how the students of a noneffective professor perceived these same behaviors.

Despite the fact that the present study's findings do not correspond with previous research results which indicate that students and professors view nonverbal immediacy behaviors similarly, it is interesting to note that the only differences between the two sample groups were in regards to a nonimmediacy behavior. The nonverbal item of "sitting on a desk" is considered to be nonimmediate behavior. It may be that students focus on negative nonverbal behaviors. When a professor uses these negative behaviors, students are finely tuned to their emission. These behaviors might even be "macro" cues, carrying more meaning in a negative way than the other positive cues. It may be that students do not respond well to these behaviors and may not be learning as much as they possibly could from a professor when she or he employs these behaviors.
Hypothesis 3

The third hypothesis stated that students' perceptions of nonverbal immediacy would be positively correlated with student motivation. The research supported this hypothesis. An overall significant correlation was found between the summed scores of student perceptions and student motivation. This finding coincides with previous research that has demonstrated the same correlation (Christophel, 1990).

Closer examination of individual student perceptions of nonverbal immediacy behaviors illustrate seven significant relationships between nonverbal immediacy and motivation. Specifically, these significant relationships involved the nonverbal behaviors of gesturing while speaking, not using a monotone voice, looking at students, smiling at the class and individuals, having a relaxed body posture, and using a variety of vocal expressions.

Furthermore, the results demonstrate that having a variety of vocal expressions can be a good predictor of student motivation because both positive and negative items (vocal expression and monotone voice) had a significant correlation with student motivation. Also, both smiling items were shown to be reliable predictors of motivation. It may be that vocal expression and smiling are two primary behaviors that motivate students in the classroom.
Hypothesis 4

Hypothesis 4 postulated that student perceptions of nonverbal immediacy behaviors would be positively correlated with student learning. Results did not support this hypothesis. The findings of the present study do not concur with the results of prior research even though learning was operationalized in the same way (Andersen, 1979; Richmond et al., 1987; Sanders & Wiseman, 1990).

Furthermore Hypotheses 4a and 4b which stated that there would be a correlation between student perceptions and cognitive and behavioral learning were not supported. However, there was a significant, positive correlation between student perceptions of nonverbal immediacy and affective learning. Therefore Hypothesis 4c was confirmed. The results correspond with prior studies (Andersen, 1979; Andersen et al., 1981; McCroskey et al., 1985; Plax et al., 1986). Therefore, student perceptions of professor nonverbal immediacy influence students' favorable attitudes towards learning.

There were five nonverbal immediacy behaviors that demonstrated themselves to be good predictors of affective learning. Particularly, gesturing while talking, not using a monotone voice, looking and smiling at students, and using a variety of vocal expressions were significantly correlated with producing affective learning.

Although no statistically significant correlations were
found concerning student perceptions and cognitive and behavioral learning, the significant relationship between student perceptions and affective learning is an interesting one to examine. If a professor's nonverbal immediacy behaviors positively effect a student's affective learning, producing an affection or liking to the course and its content, then professors have a "tool" for getting students interested in their class and discipline.

Teachers at all levels, kindergarten through graduate programs, search for ways to get students interested in subject matter. Nonverbal immediacy behaviors offer a way in which to increase a student's positive attitudes towards school or a subject area. Once a student has a positive attitude toward a field of study, cognitive and behavioral learning might increase after the student has become interested in an area. Thus, an inference could be made that affective learning could positively effect behavioral and cognitive learning when examined in a longitudinal study.

Hypothesis 5

The fifth hypothesis stated that student motivation would be positively correlated with student learning. Results supported this hypothesis and concur with an earlier study (Christophel, 1990). Student learning was significantly correlated with student motivation. It is interesting to note that behavioral and affective learning
was positively correlated with motivation while no correlations were found between cognitive learning and student motivation.

This finding can be explained by two different possibilities. First, a student self-report measure used to assess cognitive learning was used. When measuring a concept such as one's knowledge of a subject area (cognitive learning), a person may not want to report that she or he had learned nothing in a class. The data typically showed a high level of cognitive learning across all the classes sampled. This fact leads the researcher to believe that the participants gave a socially desirable response and reported high learning regardless of their actual learning.

While the behavior and affective learning measures used self-reports also, there may not be the same degree of bias present. Reporting whether you like a class (affective learning) or use the behaviors taught in a class (behavioral learning) does not tap the same domain as reporting that you did not learn anything in a class (cognitive learning). Therefore, the researcher believes that while the cognitive scale is not accurately measuring a student's actual cognitive learning, the behavioral and affective scales may be measuring a student's application and liking of a subject area.
Summary

The present study's results did not support the primary research question and Hypotheses 2 and 4. There was no correlation between students' and professors' perceptions of nonverbal immediacy behaviors. Additionally, when the professor sample was split into subgroups, effective and non-effective professors, there was no difference in correlations between student and professor perceptions of nonverbal immediacy behaviors. Therefore, even if a professor is judged to be effective by his or her students, that does not indicate a higher correlation of perceptions between students and professors. Also, student perceptions of teacher nonverbal immediacy do not influence student learning.

The findings did support Hypotheses 1, 3 and 5. Student perceptions of professor nonverbal immediacy were highly correlated with videotape observations of professor nonverbal immediacy behaviors. Student perceptions of nonverbal immediacy were positively associated with student motivation. Also, student motivation was found to have a positive correlation with student learning.

Although the primary research question and Hypotheses 2 and 4 were not supported by the results of the present study, a closer examination of these premises reveals interesting findings. Individual significant correlations were found. For example, Hypothesis 4 was not supported.
overall. But there are significant correlations between student learning and certain nonverbal items such as gesturing while speaking, not using a monotone voice, looking at students, smiling at the class, and using a variety of vocal expressions. Similar individual significant correlations were found within any of the six hypotheses, whether the hypotheses were supported or not supported by the findings of the present study. In particular, using a variety of vocal expressions was found to significantly correlate with three of the five postulates that considered student perceptions of nonverbal immediacy behaviors.

Limitations of the Present Study

Some limitations of the present study have been addressed during the Review of Current Findings section of this chapter. Three primary limitations of the present study will be addressed: self-report measures, small sample size, and videotape observations.

Self-Report Measures

A limitation of the present study is the use of self-report measures to measure some of the variables involved. The use of self-reports is applicable and acceptable for student perceptions of nonverbal immediacy and student behavioral and affective learning. But the use of a self-report measure to assess student cognitive learning seems to
present a problem for the present study.

Past research has presented the argument that, "...it is reasonable to expect them (students) to estimate with considerable accuracy the amount they learn in a given class" (Richmond et al., 1987). Students can accurately summarize their feelings about a class and depict whether they use behaviors recommended in class, but to ask students to objectively report their overall cognitive learning may not be realistic. An alternative way to operationalize learning is using students' test scores over a period of time. This is further discussed in the Implications for Future Research section.

Sample Size

Although the present study's sample included 17 classes, 17 professors and 393 students, the sample size is small. Most research comparing student and professor perceptions of nonverbal immediacy behaviors uses a mean of a class for analysis (Gorham & Zakahi, 1990). This class mean is calculated by adding all the student questionnaires from one class together and using those averages to compare to the professor's questionnaire. By utilizing such an analysis, sample size is greatly decreased and the chances of demonstrating a significant correlation are notably diminished. This could be one explanation for the difference between the present study's findings (no correlation between student and professor perceptions of
nonverbal immediacy) and past research which demonstrated a significant correlation between these variables (Gorham & Zakahi, 1990).

Videotape Observations

Videotape observations can be viewed as a possible limitation of the present study. As mentioned when discussing the results of Hypothesis 1, videotape observations could have two confounding effects on the present study. First, the presence of a video camera in a classroom may have affected a professor's actual teaching behaviors. The present study assumed that there would be some sort of effect by the presence of the video camera and tried to counteract this effect by using a later section of the videotape to code. By doing so, the researcher hoped that the professor would be acclimated to the video camera's presence. Even though the present study took steps to guard against this confounding variable, the presence of the video camera may have affected the professors' behavior.

A second potential limitation of videotape observations concerns the coding time interval of the observations. The adequacy of the time allotted for these observations (one-half hour) and the coded time interval (five seconds for every minute) is unknown. Although coding five seconds every minute could be done reliably, it was an arbitrary choice.
**Implications for Future Research**

Further research regarding teacher nonverbal immediacy could focus on the present study's recurring nonverbal immediacy items which could be studied more closely. For example, instead of assessing all of the standard nonverbal immediacy items, such as sitting on a desk and touching students, future work could center on vocal expression, gesturing, smiling and looking at the students. These four nonverbal behaviors were significantly correlated with almost all of the hypotheses and seem to be the most noticeable nonverbal behaviors for students. Further work on these four perceptions might illuminate their continuing centrality in perceptions.

Another implication for future research is the measure of cognitive learning. In past research, two methods of evaluating cognitive learning have been utilized. Andersen (1979) used a single test grade to examine cognitive learning and Richmond et al. (1987) used a self-report measure to gauge this variable. Future research could use test grades during the semester or quarter to assess a student's cognitive learning. Using a method such as this would accomplish two goals. First, an objective measure would be used instead of subjective self-reports. Second, using several tests or the mean of several tests over a period of time would be a more reliable measure than a single test score.
A third implication of future research considers the analysis of the data. Research to date, including this study, has used a class mean for statistical analysis which reduces the sample size. Thus, the likelihood of finding significant correlations is lowered. Future studies could compare a professor's scores to each student's scores. For example, if a class had 25 students, the professor's scores could be repeated 25 times and then correlated with the 25 students' scores. This would greatly increase the sample size and could have an effect of the results of a study.

Finally, future research could approach the study of teacher nonverbal immediacy from a qualitative or interpretive position. Using a qualitative perspective, a researcher could consider important aspects of the classroom based perception process. First, the social construction of reality principle could be considered. This principle states that our actions and interactions produce and constitute the very world in which we live. Also by employing qualitative research, examination of a person's "knowledge" could occur. Morris (1977) commented that knowledge is socially distributed in our society. Social distribution of knowledge refers to the boundless personal characteristics or attributes, which makes each person an individual, that gives people knowledge. Our social knowledge is what makes each person an individual with unique perceptions and viewpoints. By employing the social
construction of reality principle and utilizing the social
distribution of knowledge philosophy of qualitative
research, a researcher could examine perceptions more
closely and thoroughly.

Conclusion

Although the findings of the present study did not
support the majority of the hypotheses presented, some
interesting conclusions can be made. Students were able to
report professor nonverbal immediacy behaviors more
accurately than could the professors. Students' perceptions
of professor nonverbal immediacy behaviors are significantly
related to motivation and affective learning. If a
professor's immediacy behaviors can motivate a student and
influence a student's liking of a discipline, then a
professor has accomplished a difficult task. Not only has
the professor inspired a student to learn, but also has
created a desire to discover knowledge.
REFERENCES


APPENDICES
APPENDIX A

Nonverbal Immediacy Observation Coding Sheet

<table>
<thead>
<tr>
<th>VOGAL EXPRESSION</th>
<th>EYE CONTACT</th>
<th>GESTURING</th>
<th>MOVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1=Never, 5=Always)</td>
<td>(1=Never, 5=Almost)</td>
<td>(1=Never, 5=Almost)</td>
<td>(1=Never, 5=Almost)</td>
</tr>
<tr>
<td>SMILE</td>
<td>STUDENTS</td>
<td>TALKING</td>
<td>SITTING ON DECK</td>
</tr>
<tr>
<td>NOTES</td>
<td>CLASSROOM</td>
<td>LEAVING</td>
<td>STANDINGBEHINDTEDIAN</td>
</tr>
<tr>
<td>GESTURE</td>
<td>ONBEAN</td>
<td>WRITINGONBEAN</td>
<td>BASKETBALL</td>
</tr>
<tr>
<td>SHOW</td>
<td>LEAVING</td>
<td>WRITING</td>
<td>CRICKET</td>
</tr>
<tr>
<td>POSE</td>
<td>LEAVING</td>
<td>WRITING</td>
<td>VOLLEYBALL</td>
</tr>
</tbody>
</table>
APPENDIX B

Professor Cover Letter and Confidentiality Form

Dear Professor Participant:

I want to thank you again for allowing me to come into your classroom. The field of instruction communication could not advance without people like you who are willing to participate in studies such as this one.

For my thesis, I am studying instructional communication, communication that occurs in the classroom. Specifically, I am examining how students and professors perceive teaching behaviors, and how these behaviors affect student motivation and learning. I am asking your students to fill out a questionnaire that measures their perceptions of your teaching behaviors and their own learning and motivation towards your class. As they are filling out their questionnaire, I would like you to complete the following questionnaire. The questionnaire asks you to also evaluate some of your teaching behaviors.

Your participation in this project is entirely voluntary. Your reading and signing the bottom of this page will serve as your informed acceptance of participation. You may refuse to answer any specific question and may terminate your participation at any time. Information collected and reported will be identified only by a participant number. Your actual name will not be connected to any responses you provide or to the videotape.

If you are interested in the study’s findings or would like to talk about the project, you can contact me at the end of the semester. At that time, I will have a summary of results available. Also, I am presenting a colloquium about my thesis project at the end of April; you will receive an invitation to this event through campus mail and I would be delighted if you would come to it. If you need to contact me for any reason, my office telephone number is 243-6604.

__________________________________________
Researcher’s Signature

__________________________________________
Participant’s Signature

________________________
Date
Dear Student Participant:

My name is Annette Polwell and I am a graduate student in the Communication Studies department. I would like to ask you for five minutes of your time to complete a questionnaire.

For my thesis, I am examining communication that occurs in the classroom. Specifically, I am examining how students and professors perceive teaching behaviors, and how these teaching behaviors affect student motivation and learning. In this questionnaire, I will ask you to rate your own learning and motivation towards this class. Also, some questions ask you to rate the performance of your professor.

Your answers will be entirely confidential. Your professor will not see this questionnaire, only myself and my research assistant will have access to it. Information collected and reported will be identified only by a participant number. Your answers cannot be traced to you.

Your participation in this project is entirely voluntary. Your completion of this questionnaire will serve as your informed acceptance of participation in this study. You may refuse to answer any specific question and may terminate your participation at any time.

If you are interested in the study's findings, you can contact me at the end of the semester. At that time, I will have a summary of results available. My office telephone number is 243-6604. Thank you for your time and help.
APPENDIX D

Professor Nonverbal Immediacy Scale

1. I sit behind a desk when I teach.*

2. I gesture when I am talking to my class.

3. I use a monotone voice when talking to my class.*

4. I look at my students when I am talking.

5. I smile at the class as a whole, not just individual students.

6. I have a tense body position when I am talking to my class.*

7. I touch students in my class.

8. I move around the classroom when I am teaching.

9. I sit on a desk or chair when I am teaching.*

10. I look at the chalkboard or notes when I am talking to the class.*

11. I stand behind a podium or desk when I am teaching.*

12. I have a relaxed body position when I am talking to my class.

13. I smile at individual students in my class.

14. I use a variety of vocal expression when I am talking to my class.

* Presumed to be nonimmediate.
APPENDIX E

Student Nonverbal Immediacy Scale

1. My professor sits behind a desk when s/he teaches.*
2. My professor gestures when s/he is talking to the class.
3. My professor uses a monotone voice when talking to the class.*
4. My professor looks at students when s/he is talking.
5. My professor smiles at the class as a whole, not just individual students.
6. My professor has a tense body position when s/he is talking to the class.*
7. My professor touches students in the class.
8. My professor moves around the classroom when s/he is teaching.
9. My professor sits on a desk or chair when s/he is teaching.*
10. My professor looks at the chalkboard or notes when s/he is talking to the class.*
11. My professor stands behind a podium or desk when s/he is teaching.*
12. My professor has a relaxed body position when s/he is talking to the class.
13. My professor smiles at individual students in the class.
14. My professor uses a variety of vocal expression when s/he is talking to my class.

* Presumed to be nonimmediate.
APPENDIX F

Cognitive Learning Scale

(1) On a scale of 0-9, how much are you learning in this class, with 0 meaning you learned nothing and 9 meaning you learned more than in any other class you've had? (circle one)

0 1 2 3 4 5 6 7 8 9

(2) How much do you think you could have learned in this class had you had the ideal instructor? (circle one)

0 1 2 3 4 5 6 7 8 9
APPENDIX G

Behavioral Learning Scale

Using the following scales, evaluate this class. Please circle the number for each item which best represents your feelings.

In real life situations, the likelihood of actually attempting to use the behaviors/practices/theories recommended in the course is:

(1) Likely  1   2   3   4   5   6   7  Unlikely
(2) Possible 1 2 3 4 5 6 7 Impossible
(3) Probable 1 2 3 4 5 6 7 Improbable
(4) Would  1   2   3   4   5   6   7 Would Not

Your likelihood of actually enrolling in another course of related content, if your schedule would permit, is:

(5) Likely  1   2   3   4   5   6   7  Unlikely
(6) Possible 1 2 3 4 5 6 7 Impossible
(7) Probable 1 2 3 4 5 6 7 Improbable
(8) Would  1   2   3   4   5   6   7 Would Not
APPENDIX H

Affective Learning Scale

Using the following scales, evaluate this class. Please circle the number for each item which best represents your feelings.

My attitude toward the content of this course:
(1) Good 1 2 3 4 5 6 7 Bad*
(2) Worthless 1 2 3 4 5 6 7 Valuable
(3) Fair 1 2 3 4 5 6 7 Unfair*
(4) Positive 1 2 3 4 5 6 7 Negative*

My attitude about the behaviors recommended in this course:
(5) Good 1 2 3 4 5 6 7 Bad*
(6) Worthless 1 2 3 4 5 6 7 Valuable
(7) Fair 1 2 3 4 5 6 7 Unfair*
(8) Positive 1 2 3 4 5 6 7 Negative*

My attitude about the instructor of this course:
(9) Good 1 2 3 4 5 6 7 Bad*
(10) Worthless 1 2 3 4 5 6 7 Valuable
(11) Fair 1 2 3 4 5 6 7 Unfair*
(12) Positive 1 2 3 4 5 6 7 Negative*

The likelihood of my taking another course with the teacher of this course, if I have a choice, is: (If you are graduating, assume you would still be here.)
(13) Likely 1 2 3 4 5 6 7 Unlikely*
(14) Impossible 1 2 3 4 5 6 7 Possible
(15) Probable 1 2 3 4 5 6 7 Improbable*
(16) Would 1 2 3 4 5 6 7 Would Not*

*Items reflected for scoring.
APPENDIX I

State Motivational Scale

Directions: These items are concerned with how you feel about this specific class. Please circle the number toward either word which best represents your feelings. Note that in some cases the most positive score is "1" while in other cases it is "7".

1. Motivated
   - 1 2 3 4 5 6 7
   - Unmotivated

2. Interested
   - 1 2 3 4 5 6 7
   - Uninterested

3. Involved
   - 1 2 3 4 5 6 7
   - Uninvolved

4. Not stimulated
   - 1 2 3 4 5 6 7
   - Stimulated

5. Don't want to study
   - 1 2 3 4 5 6 7
   - Want to study

6. Inspired
   - 1 2 3 4 5 6 7
   - Uninspired

7. Unchallenged
   - 1 2 3 4 5 6 7
   - Challenged

8. Uninvigorated
   - 1 2 3 4 5 6 7
   - Invigorated

9. Unenthused
   - 1 2 3 4 5 6 7
   - Enthused

10. Excited
    - 1 2 3 4 5 6 7
    - Not Excited
(11) Aroused 1 2 3 4 5 6 7  Not Aroused

(12) Not fascinated 1 2 3 4 5 6 7  Fascinated
APPENDIX J

Complete Professor Questionnaire

Thank you for participating in this study. Please complete the following demographic information.

Employment Position: ______________

How many years have you taught at the college level? ___

Sex: Male Female

Using the following scales, evaluate this particular class that you are teaching. Please circle the number for each item which best represents your feelings.

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I sit behind a desk when I teach.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I gesture when talking to my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I use a monotone voice when talking to my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I look at the class when I am talking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I smile at the class as a whole, not just individual students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I have a tense body position when I am talking to my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I touch students in my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I move around the classroom when I am teaching.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I sit on a desk or chair when I am teaching.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I look at the chalkboard or notes when I am talking to my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I stand behind a podium or desk when I am teaching.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. I have a relaxed body position when I am talking to my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. I smile at individual students in my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. I use a variety of vocal expression when I am talking to my class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX K

Complete Student Questionnaire

Thank you for participating in this study. Please complete the following demographic information.

Age: ________ Sex: Male Female

Using the following scales, evaluate this class. Please circle the number for each item which best represents your feelings.

1. In real life situations, the likelihood of actually attempting to use the behaviors/practices/theories recommended in the course is:
   Likely 1 2 3 4 5 6 7 Unlikely
   Possible 1 2 3 4 5 6 7 Impossible
   Probable 1 2 3 4 5 6 7 Improbable
   Would 1 2 3 4 5 6 7 Would Not

2. Your likelihood of actually enrolling in another course of related content, if your schedule would permit, is:
   Likely 1 2 3 4 5 6 7 Unlikely
   Possible 1 2 3 4 5 6 7 Impossible
   Probable 1 2 3 4 5 6 7 Improbable
   Would 1 2 3 4 5 6 7 Would Not

3. My attitude toward the content of this course:
   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

4. My attitude about the behaviors recommended in this course:
   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

5. My attitude about the instructor of this course:
   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

6. The likelihood of my taking another course with the teacher of this course, if I have a choice, is: (If you are graduating, assume you would still be here.)
   Likely 1 2 3 4 5 6 7 Unlikely
   Impossible 1 2 3 4 5 6 7 Possible
   Probable 1 2 3 4 5 6 7 Improbable
   Would 1 2 3 4 5 6 7 Would Not

7. On a scale of 0-9, how much are you learning in this class, with 0 meaning you learned nothing and 9 meaning you learned more than in any other class you've had? (circle one)
   0 1 2 3 4 5 6 7 8 9

8. How much do you think you could have learned in this class had you had the ideal instructor? (circle one)
   0 1 2 3 4 5 6 7 8 9
These items are concerned with how you feel about this specific class. Please circle the number toward either word which best represents your feelings. Note that in some cases the most positive score is **7** while in other cases it is ***.

9. Motivated 1 2 3 4 5 6 7 Unmotivated
10. Interested 1 2 3 4 5 6 7 Uninterested
11. Involved 1 2 3 4 5 6 7 Uninvolved
12. Not intellectually stimulated 1 2 3 4 5 6 7 Intellectually stimulated
13. Want to study 1 2 3 4 5 6 7 Don't want to study
14. Inspired 1 2 3 4 5 6 7 Uninspired
15. Unchallenged 1 2 3 4 5 6 7 Challenged
16. Uninvigorated 1 2 3 4 5 6 7 Invigorated
17. Unenthused 1 2 3 4 5 6 7 Enthused
18. Excited about the material 1 2 3 4 5 6 7 Not excited about the material
19. Not fascinated 1 2 3 4 5 6 7 Fascinated

Using the following scales, evaluate this class. Please circle the number for each item which best represents your feelings.

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. My professor sits behind a desk when she teaches.</td>
<td>Always</td>
<td>Very Frequently</td>
<td>Seldom</td>
<td>Never</td>
</tr>
<tr>
<td>21. My professor gestures when talking to the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22. My professor uses a monotone voice when talking to the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Always</td>
<td>Frequently</td>
<td>Seldom</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>--------</td>
<td>------------</td>
<td>--------</td>
</tr>
<tr>
<td>22. My professor looks at the class when she is talking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24. My professor smiles at the class as a whole, not just individual students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25. My professor has a tense body position when she is talking to the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26. My professor touches students in the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. My professor moves around the classroom when she is teaching.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28. My professor sits on a desk or chair when she is teaching.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29. My professor looks at the chalkboard or notes when she is talking to the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30. My professor stands behind a podium or desk when she is teaching.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31. My professor has a relaxed body position when she is talking to the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32. My professor smiles at individual students in the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33. My professor uses a variety of vocal expression when she is talking to the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
APPENDIX L

IRB Proposal

Intra-campus MEMORANDUM

UNIVERSITY OF MONTANA

DATE: January 19, 1993

TO: Ms. Annette L. Folwell and Professor W. Wilmot
    Department of Communications Studies

FROM: University of Montana Institutional Review Board for Use of Human Subjects in Research

As a result of [ ] administrative review or [ ] deliberations by the University of Montana Institutional Review Board your proposed research project, _______

A Comparison of Students' and Professors' Perceptions of Nonverbal Immediacy Behaviors

[ ] has been approved and is considered

[ ] a "no risk" project not requiring the written informed consent of the participants.

[ ] To involve sufficient risk to require the written informed consent of the participants as defined in the UM Policy Statement for the Use of Human Subjects in Research as amended in the memorandum of December 28, 1978, to your department.

[ ] has been conditionally approved and the conditions imposed by the Board are:

[ ] has not been approved in its present form. The Board suggests that you:

NOTE: It is mandatory that you report immediately to the IRB:

1. Changes in procedures,
2. Unanticipated problems,
3. Adverse reactions of, or effects on, subjects.
The proposed study seeks to integrate the area of student/instructor relationships with a method of analyzing interpersonal relationship perceptions.

1A. The study is being done to fulfill the thesis requirement for the master of arts degree in communication studies. Review of past literature illustrates that nonverbal immediacy influences student learning; in particular, nonverbal immediacy has been correlated with cognitive, behavioral, and affective learning as well as student motivation. But there is a shortcoming in this literature. There has been no study that analyzes the students' and teachers' perceptions of nonverbal immediacy and compares those findings with a concrete measure of actual nonverbal immediacy. This study will address this weakness in the research. Class sessions will be videotaped and later coded to provide a concrete measure of comparison. Instructors and students will complete a questionnaire that ascertains their perceptions of teacher nonverbal immediacy. Further, students will rate their own cognitive, behavioral, and affective learning on semantic differential scales.

1B. A video camera will be set inconspicuously in the back of the classroom. It will tape the entire class session for that day. This videotape will later be coded by coders. At the end of the class session, the participants will be asked to fill out the attached questionnaire.

1C. Participation will be entirely voluntary. The researcher will randomly select instructors and explain the study to them. If they agree to the study, a video camera will record one day of teaching in their classroom. At the end of the class, student participants will be asked to fill out the attached questionnaire. Participation is voluntary and participants can decline to fill out the questionnaire. Participants will remain anonymous and results will be confidential.
1D. This study will take place in the various classrooms of the participating instructors. The video camera will remain in the back of the classroom at all times and will only be taping the instructor’s behaviors, never any students. The instructor and student participants will fill out the questionnaire in class. The questionnaire will be returned immediately to the researcher.

2. The completion of this research should benefit not only the communication field, but teachers at all levels of education. A more thorough understanding of teacher effectiveness will provide valuable understanding into all areas of education. Although the student participants will receive no direct benefits from this research, instructor participants will have the option of meeting with the researcher to discuss their own teacher effectiveness and how s/he could improve in this area.

3. The participants in this study will be asked to fill out a short questionnaire (2-3 pages) in class and will return the questionnaire immediately to the researcher.

4. Participants will consist of 20 instructors and 600 students from various classes at the University of Montana. All participants are adults.

5. No risk to the participants is anticipated.

6. Participation in the study will be entirely voluntary and the participants can discontinue participation in the study at any time.

7. Participants' anonymity and confidentiality will be guaranteed. No names will be associated with the videotapes and there will be no names used on the questionnaire.

8. Although physical, psychological, or social risks or discomfort are not expected, the attached informed consent form will be signed by every participant.

9. A waiver of written informed consent is included to provide information to the participants.

10. No ethical responsibility to the participants, other than providing a short and clear questionnaire that is easily completed, is anticipated.