

THE RELATIONSHIPS AMONG TEACHER IMMEDIACY BEHAVIORS, STUDENT MOTIVATION, AND LEARNING

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Two studies investigated the relationship between teacher immediacy and student state motivation and the combined impact of these factors on learning. Study One participants completed all instruments based on a preceding class. The scales were randomly split between students in Study Two who completed them based on an intact class. Correlations revealed significant relationships between learning and both immediacy and motivation. Regression analyses indicated both unique and colinear predictability of learning by nonverbal immediacy and state motivation. Immediacy appears to modify motivation which leads to increased learning. Important implications of Study Two data indicate relationships observed in earlier research were not a simple function of confounding when scores were reported by the same subjects completing multiple instruments.

For many years theorists in educational psychology have viewed student motivation as one of the important elements that contribute to the learning process (Hall, 1966). Numerous investigations have been conducted that examine the motivational conditions of learning (e.g., Ames, 1986; Brophy, 1983; Deci, 1975; Dweck, 1986; Nicholls, 1984; Weiner, 1979). The underlying implication of student motivation appears to lie in the process of "how" students are taught, rather than "what" they are taught. This study explored that motivational aspect of communication in instruction.

One of the first assumptions often made concerning the instruction/learning relationship is that the behavior patterns of teachers affect the behavior patterns of students (Smith, 1979). One specific behavioral strategy, teacher immediacy, has been found to positively impact student learning through its approach-avoidance tendencies (Andersen, 1979; Gorham, 1988). The purpose of this research was to determine immediacy's relationship to student motivation and their combined impact on learning outcomes.

CENTRAL CONCEPTUALIZATIONS

Learning Outcomes. Learning has been conceptualized as a process involving the acquisition or modification of cognitive, affective, and/or behavioral outcomes (Bloom, 1956, 1976). Specifically, cognitive learning emphasizes comprehension and retention of knowledge; affective learning focuses on a positive or negative attitude toward the subject or teacher; and behavioral learning is the development of

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psychomotor skills. This study focused on the possible relationship of teacher immediacy and student motivation to cognitive and affective learning outcomes.

Student Motivation. Motivation has been described as a process that includes specific directive and stimulating properties (Brophy, 1983; Wlodkowski, 1978). This can lead students to arousal and instigative behaviors, give direction and purpose to their behaviors, allow behaviors to persist, and lead to choices of preferred behaviors (Ames, 1986; Dweck, 1986; Weiner, 1979). A general pattern of student motivation toward learning often takes the following sequential form—student energy, volition, direction, involvement, and completion (Wlodkowski, 1978). If one area of student motivation breaks down, the entire process may come to a complete halt.

Motivational Misconceptions. One aspect of motivation that makes this theory difficult to understand, as well as to apply, is the misleading beliefs related to this concept held by many (Wlodkowski, 1978). There are five of these beliefs.

Belief 1: When students are not willing to involve themselves in class activities or assignments, they are unmotivated. Although students may not be motivated to learn, they are usually motivated to do *something*. If that motivation is not directed toward learning, it is likely to be directed toward disruptive behaviors.

Belief 2: Teachers motivate students. Although no one person can claim sole responsibility for motivating another person, teachers can make learning attractive and stimulating, provide opportunities and incentives, allow for development, and match student interests.

Belief 3: Since students must learn in order to survive, making them learn is more important than their motivation to learn. If learning is associated with coercion it can become a generally aversive stimulus, one that students will go out of their way to avoid. Forced learning today may result in *no* learning tomorrow.

Belief 4: Threats can facilitate student motivation to learn. Using threats only stimulates students to become frightened and resentful of the threats and the person using them. The long term outcome is student avoidance of the teacher and the subject matter.

Belief 5: Learning automatically improves with increased student motivation. Although there is no conclusive evidence to support such a claim, motivation appears to be an important element that can enhance students' desire to learn. Motivation is not a panacea for instruction, but it may provide a foundation for effective instruction.

Trait/State Motivation. Student motivation to learn can be conceptualized either as a trait or state orientation (Brophy, 1987). Trait motivation is a general, enduring predisposition toward learning, while state motivation is an attitude toward a specific class. Motivation toward learning is often stimulated through various forms of modeling, communication of expectations, direct instruction, or socialization by teachers (Brophy, 1987). This motivational schema includes aspects of both affective and cognitive elements through development of instructional goals and strategies (Wittrock, 1978). According to this view, teachers can be active agents within the educational environment and, therefore, capable of stimulating the development of student motivation toward learning.

Time-Continuum Model of Motivation. Learning situations can be divided into three distinctive phases based on a time continuum (Wlodkowski, 1978). Each phase has a maximum potential for utilizing instructional techniques that influence the

learner. At the beginning of the learning process, student motivation can be influenced by attitudes toward their general learning environment, subject, teacher, self, and basic personal needs. During the learning phase, student motivation can be enhanced by the stimulation process of the learning experience and the affective experience of the student while learning. At the end of the learning task, student feedback can provide reinforcement value attached to the learning experience. Depending on the specific learning situation, each of these phases can be analyzed for their potential motivational opportunities.

Teacher immediacy. Several studies have been conducted analyzing the use of teacher immediacy behaviors (e.g., Andersen, 1979; Gorham, 1988; Plax, Kearney, Richmond, & McCroskey, 1986; Richmond, Gorham, & McCroskey, 1987). Immediacy has been defined as the degree of perceived physical and/or psychological closeness between people (Mehrabian, 1967). In behavioral terms, immediacy is based on an approach-avoidance theory and is an affect-based construct.

Early investigations (Andersen, 1979; Andersen, Norton, & Nussbaum, 1981; Andersen & Withrow, 1981) examined teacher nonverbal immediacy as a potential predictor of instructional effectiveness and concluded perceptions of immediacy were highly correlated with favorable student attitudes. Immediate teachers were viewed by students as being more positive and effective, which, in turn, led to increased affect toward the instructor and the course itself. These studies pointed towards immediacy expressiveness as a potentially significant factor in improving instructional effectiveness.

One line of programmatic research on communication in the classroom has focused on teacher control strategies related to nonverbal immediacy and affective learning (McCroskey, Richmond, Plax, & Kearney, 1985; Plax, Kearney, McCroskey, & Richmond, 1986). In these studies teachers were viewed as classroom managers using, among other strategies, prompts, motivational messages, structured transitions, positive questioning techniques, and other available strategies to encourage students' staying on-task. Further investigation on the effects of teachers' nonverbal immediacy and strategy type regarding students' on-task compliance indicated the strong influence of teacher nonverbal immediacy in terms of students' decisions to resist or comply with on-task requests (Kearney, Plax, Smith, and Sorensen, 1988).

Specific studies have focused primarily on the impact of selected immediacy behaviors on student learning (Gorham, 1988; Kelley & Gorham, 1988; Richmond, Gorham, & McCroskey, 1987). The most salient teacher behaviors contributing to student learning were found to be vocal expressiveness, smiling, and a relaxed body position. Kelley & Gorham's (1988) experimental study isolated the effects of immediacy on cognitive learning, providing support of immediacy's arousal stimuli being highly associated with attentional focus, enhanced memory, and recall.

Cumulative results from these studies indicate that teacher immediacy behaviors have a positive relationship on student learning outcomes. Although facets of student motivation have been subjected to investigations within the educational environment, previous research has not specifically linked the approach-avoidance behavioral concept of immediacy with motivation. A review of these elements suggests that teacher immediacy may impact levels of learning by modifying student classroom motivation. Consequently, it was believed that students would be motivated to move towards (approach) classes they like and unmotivated or move away from (avoid) classes they dislike. Based on the conceptualization of and potential relationship

among these variables, the following hypotheses and research question were generated:

- H1: Student perceptions of teacher verbal and nonverbal immediacy behaviors will be positively associated with student state motivation.
- H2: Student perceptions of teacher immediacy behaviors will be positively associated with cognitive, affective, and behavioral learning.
- H3: Student perceptions of trait and state motivation will be positively associated with cognitive, affective, and behavioral learning.
- RQ: To what extent are teacher immediacy and student state motivation colinear predictors of learning?

METHODS

PROCEDURES

Self-report measures were used to determine student motivation levels, perceptions of teacher immediacy behaviors, and perceived learning. Participants included graduate and undergraduate students, teaching assistants, and faculty who were recruited from a wide range of University classes. This allowed for input from a diversified group of subjects in various disciplines. Students were informed their participation was completely voluntary, anonymous, and would not impact their class standing. Surveys were administered in classes approximately half-way through the semester allowing sufficient time for development of student classroom motivation toward learning, for teachers' immediacy behavior patterns to emerge and be observed, and for students to make a reasonable assessment of their own individual classroom progress.

Data collection for this research consisted of two separate studies. *Study One* required subjects to complete all instruments (motivation, immediacy, and learning) based on the class immediately preceding the one in which they served as subjects. This method of data collection has been used in many of the previous studies and provides many design advantages, not the least of which is that it allows for analyses of data obtained from a wide range of classes and teachers. The split-class model used in *Study Two* randomly assigned half of each class to complete the motivation and immediacy scales, while an approximately equal number of students completed the motivation and learning scales. Participants in this study were asked to complete the instruments based on the class in which they served as subjects. This model of data collection was designed to provide a greater degree of control over possible confounding results from simultaneous completion of measures among interrelated concepts which potentially could occur in the design of *Study One*.

MEASURES

Motivation. Trait and State Motivation Scales (see Figure 1) were completed by each participant. Both instruments consisted of the same twelve bi-polar adjectives designed to measure students' motivational attitudes. The Trait Motivation Scale was used to assess how students felt in general about taking classes at the University. Directions for the State Motivation Scale asked students how they felt about taking a specific course. Previous use of a general motivational instrument consisted of the first three items listed on the current scale (see Beatty, Forst, and Stewart, 1986). For the current research the number of bi-polar adjectives were expanded from three to

Trait Motivation Scale

Directions: These items are concerned with how *you feel in general* about taking classes at the University. Please circle the number toward either word which best describes your feelings. Note that in some cases the most positive score is "1" while in other cases it is "7."

State Motivation Scale

Directions: These items are concerned with how *you feel* about the class you take *immediately preceding this class* (Study One) or *this specific class* (Study Two). 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

*Identical items were used for both Motivation Scales.
Items reflected for scoring.

FIGURE 1

TRAIT/STATE MOTIVATION SCALES*

twelve and students were asked to indicate their feelings (separately) about taking classes in general (trait motivation) and taking the specific class in which they were enrolled (state motivation). Reliabilities from the pilot studies and the present studies for the motivation scales ranged from .91 to .96 (see Table 1).

Immediacy. The Immediacy Behavior Scale (see Figure 2) included statements describing teacher verbal (Gorham, 1988) and nonverbal (Richmond, Gorham, & McCroskey, 1987) immediacy behaviors. Subjects were asked to indicate whether or

TABLE 1
RELIABILITIES OF SCALES

Scales	Study:		
	1	2—Group A	2—Group B
Trait Motivation	.91	.92	.93
State Motivation	.95	.96	.96
Verbal Immediacy	.88	.89	—
Nonverbal Immediacy	.83	.80	—
Affective Learning			
Attitudes:			
1. Content of Course	.86	—	.89
2. Behaviors Recommended	.90	—	.92
3. Instructor	.92	—	.91
Behavioral Intent:			
4. Engage in Behaviors	.93	—	.94
5. Enroll in Subject	.96	—	.97
6. Enroll with Teacher	.96	—	.97
Total Content (#1 + #5)	.92	—	.93
Total Instructor (#3 + #6)	.96	—	.96
Total Behavioral (#2 + #4)	.92	—	.93
Total Affective Learning	.97	—	.98

Below are a series of descriptions of things some teachers have been observed doing or saying in some classes. Please respond to the questions in terms of the class you take *immediately preceding this class* (Study One) or the *class you are in now* (Study Two). For each item, circle the number 0–4 which indicates the behavior of the teacher in that class.

Scale: Never = 0 Rarely = 1 Occasionally = 2 Often = 3 Very Often = 4

Verbal Items:

1. Uses personal examples or talks about experiences she/he has had outside of class.
2. Asks questions or encourages students to talk.
3. Gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her lecture plan.
4. Uses humor in class.
5. Addresses students by name.
6. Addresses me by name.
7. Gets into conversations with individual students before or after class.
8. Has initiated conversations with me before, after or outside of class.
9. Refers to class as "my" class or what "I" am doing.*
10. Refers to class as "our" class or what "we" are doing.
11. Provides feedback on my individual work through comments on papers, oral discussions, etc.
12. Calls on students to answer questions even if they have not indicated that they want to talk.*
13. Asks how students feels about an assignment, due date or discussion topic.
14. Invites students to telephone or meet with him/her outside of class if they have questions or want to discuss something.
15. Asks questions that have specific, correct answers.*
16. Asks questions that solicit viewpoints or opinions.
17. Praises students' work, actions or comments.
18. Criticizes or points out faults in students' work, actions or comments.*
19. Will have discussions about things unrelated to class with individual students or with the class as a whole.
20. Is addressed by his/her first name by the students.

Nonverbal items:

21. Sits behind desk while teaching.*
22. Gestures while talking to the class.
23. Uses monotone/dull voice when talking to the class.*
24. Looks at the class while talking.
25. Smiles at the class while talking.
26. Has a very tense body position while talking to the class.*
27. Touches students in the class.
28. Moves around the classroom while teaching.
29. Sits on a desk or in a chair while teaching.*
30. Looks at board or notes while talking to the class.*
31. Stands behind podium or desk while teaching.*
32. Has a very relaxed body position while talking to the class.
33. Smiles at individual students in the class.
34. Uses a variety of vocal expressions when talking to the class.

*Presumed to be *nonimmediate* verbal and nonverbal items. Items reflected for scoring.

FIGURE 2

IMMEDIACY BEHAVIOR SCALE

not their teachers used these immediacy behaviors and their frequency of use on a scale from "one" (rarely) to "four" (very often). The frequency score of "zero" was used to indicate teachers had not been observed using a specific immediacy behavior. Current reliabilities of summed scores for the verbal and nonverbal components of the immediacy behavior scale ranged from .80 to .89 (see Table 1).

Learning. Student perceptions of cognitive learning were assessed by their responses on two scales (see Figure 3; Richmond, Gorham, & McCroskey, 1987). A "learning loss" score was then computed by subtracting the score on the first scale from the score on the second scale, indicating the students' overall cognitive learning score. This score adjusted for the type of course in question and separates teacher

- (1) On a scale of 0–9, how much are you learning in the class *immediately preceding this class* (Study One) or the *class you are in now* (Study Two), 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 the class *immediately preceding this class* (Study One) or the *class you are in now* (Study Two) had you had the ideal instructor? (circle one)
- 0 1 2 3 4 5 6 7 8 9

FIGURE 3

COGNITIVE LEARNING SCALE

behavior from perceived value of the subject area. Reliability using this measure in previous research was reported at .94 (Gorham, 1988).

To measure affective learning, students were asked to estimate six components of their attitudes toward course content, instructor, and behavioral intentions (see Figure 4; Gorham, 1988; McCroskey, Richmond, Plax, & Kearney, 1985; Scott & Wheelless, 1975). Six subscores and a total score (indicating students' general affective learning) were computed. Current reliabilities for these scales ranged from .86 to .98 (see Table 1).

DATA ANALYSES

Study One. To analyze the data relating to the three hypotheses, simple and multiple correlations and regression analyses were computed to determine the associations among immediacy, motivation, and learning scores. To provide information relating to the research question, regression analyses were computed with learning scores as criterion variables and immediacy and motivation scores as predictive variables.

Study Two. Three data sets were created. Group A included data from the subjects who provided motivation and immediacy data. Group B provided motivation and learning data. "Classes," the third data set, were the mean responses provided by Group A and Group B subjects in each class. Thus, "N" in this set equaled the number of classes. A t-test of the trait and state motivation scores provided by the subjects in the two halves of the Study Two (Group A and Group B) was computed to test for the comparability of the subjects. The classification of halves accounted for less than one percent of the variability in the scores, therefore, the two groups were considered equivalent.

Simple and multiple correlations between immediacy and motivation scores were computed for Group A and Classes to test hypothesis one. Hypothesis two was tested by simple and multiple correlations and regression analyses between immediacy and learning for Classes. Correlational analyses and multiple regressions based on Group A's motivation scores and Group B's learning scores were used to test hypothesis three. To probe the research question, regression analyses were computed with learning scores (Group B) as criterion variables and immediacy and motivation scores (Group A) as predictive variables.

RESULTS

Study One. Participants in Study One ($n = 562$) indicated a representation of courses in nine colleges. Arts and Sciences classes accounted for the highest representation in this study, which is consistent with the total enrollments in the University.

Using the following scales, evaluate the class you are in *immediately preceding* this class (Study One) or *this class* (Study Two). Please circle the number for each item which best represents your feelings.

My attitude about 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*

My likelihood of actually attempting to *engage in the behaviors recommended* in this course :

(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*

My likelihood of actually *enrolling in another course of related content*, if I had the choice and my schedule permits: (If you are graduating, assume you would still be here.)

(17) Likely	1	2	3	4	5	6	7	Unlikely*
(18) Impossible	1	2	3	4	5	6	7	Possible
(19) Probable	1	2	3	4	5	6	7	Improbable*
(20) Would	1	2	3	4	5	6	7	Would not*

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.)

(21) Likely	1	2	3	4	5	6	7	Unlikely*
(22) Impossible	1	2	3	4	5	6	7	Possible
(23) Probable	1	2	3	4	5	6	7	Improbable*
(24) Would	1	2	3	4	5	6	7	Would not*

*Items reflected for scoring.

FIGURE 4

AFFECTIVE LEARNING SCALE

Variation in enrollment was distributed equally across class size (small, medium, and large). Virtually all participants (>99%) were undergraduate students.

Hypothesis one postulated that student perceptions of teacher verbal and nonverbal immediacy behaviors would be positively associated with student state motivation (see Table 2). Simple and multiple correlational analyses indicated that students' perceptions of teacher immediacy and students' state motivation levels were posi-

TABLE 2
CORRELATION BETWEEN IMMEDIACY AND STATE MOTIVATION*

Data Set	Verbal	Nonverbal	Combined
Study 1	.47 (.51)	.34 (.38)	.49
Study 2—Group A	.40 (.43)	.42 (.48)	.46
Study 2—Classes	.36 (.39)	.47 (.54)	.60

*All correlations significant @ .0001.

Correlations in parentheses are disattenuated.

tively correlated. These results indicated that students who perceived their teachers as more verbally and nonverbally immediate also reported greater levels of class motivation.

Analyses of data related to hypothesis two found student perceptions of teacher immediacy behaviors were positively associated with student learning as predicted (see Table 3). These analyses supported findings from previous studies which indicated student perceptions of learning were positively associated with teacher immediacy behaviors. Multiple regressions indicated nonverbal immediacy was more predictive of learning than verbal immediacy (see Table 5).

Correlational analyses related to hypothesis three indicated student perceptions of trait and state motivation were positively associated with student learning (see Table 4). Multiple regressions (see Table 6) revealed that student motivation was predictive of learning at a significant level. State motivation scores were more highly predictive than trait motivation scores.

Initial analyses of both immediacy variables and learning indicated that nonverbal immediacy was the primary predictive variable (see Table 5). Based on these data, multiple correlations and regression analyses were computed with nonverbal immediacy and state motivation to determine their colinear predictive value (see Table 7). Although there were strong correlations between nonverbal immediacy and the criterion variables, when partial correlation analyses were computed, most of the

TABLE 3
CORRELATION BETWEEN IMMEDIACY AND LEARNING*

Data Set	Verbal	Nonverbal	Combined
Study 1			
Cognitive Learning			
Simple Learning Score	.38	.40	.45
Learning Loss Score	-.38	-.50	.52
Affective Learning			
Attitudes:			
1. Content of Course	.33 (.38)	.34 (.40)	.39
2. Behaviors Recommended	.36 (.40)	.34 (.40)	.41
3. Instructor	.50 (.56)	.59 (.68)	.64
Behavioral Interest:			
4. Engage in Behaviors	.36 (.40)	.31 (.36)	.39
5. Enroll in Subject	.32 (.35)	.33 (.37)	.37
6. Enroll with Teacher	.52 (.57)	.55 (.58)	.62
Total Affective Learning	.50 (.54)	.51 (.55)	.58
Study 2—Classes			
Cognitive Learning			
Simple Learning Score	.30	.40	.40
Learning Loss Score	-.45	-.61	.61
Affective Learning			
Attitudes:			
1. Content of Course	.29 (.33)	.44 (.52)	.44
2. Behaviors Recommended	.31 (.34)	.44 (.51)	.44
3. Instructor	.47 (.52)	.67 (.79)	.67
Behavioral Interest:			
4. Engage in Behaviors	.44 (.48)	.38 (.44)	.45
5. Enroll in Subject	.14 (.15)**	.13 (.15)**	.15**
6. Enroll with Teacher	.47 (.51)	.60 (.68)	.61
Total Affective Learning	.42 (.48)	.52 (.58)	.53

*All correlations significant @ .0001.

**Nonsignificant at probability .05.

Correlations in parentheses are disattenuated.

TABLE 5
DECOMPOSITION OF IMMEDIACY LEARNING RELATIONSHIPS

	Unique Variance Attributable to:			Total Variance
	Verbal	Nonverb	Colinear	
Study 1				
Cognitive Learning				
Simple Learning Score	.04	.06	.10	.20
Learning Loss Score	.02	.13	.13	.28
Affective Learning				
Attitudes:				
1. Content of Course	.03	.04	.08	.15
2. Behaviors Recommended	.05	.04	.07	.16
3. Instructor	.06	.15	.20	.41
Behavioral Intent:				
4. Engage in Behaviors	.05	.02	.09	.16
5. Enroll in Subject	.03	.04	.07	.14
6. Enroll with Teacher	.08	.11	.19	.38
Total Affective Learning	.08	.10	.16	.34
Study 2—Classes				
Cognitive Learning				
Simple Learning Score	.03	.07	.06	.16
Learning Loss Score	.00	.17	.20	.37
Affective Learning				
Attitudes:				
1. Content of Course	.00	.11	.08	.19
2. Behaviors Recommended	.00	.10	.10	.20
3. Instructor	.00	.23	.22	.45
Behavioral Intent:				
4. Engage in Behaviors	.06	.01	.13	.20
5. Enroll in Subject	.01	.00	.01	.02
6. Enroll with Teacher	.01	.15	.22	.37
Total Affective Learning	.01	.11	.16	.28

variance predictable by the nonverbal correlations were attributable to the colinear state motivation predictor. This indicated that, for the most part, nonverbal immediacy must first modify student state motivation, as the theory underlying this research predicted, in order to impact learning. The exception to this generalization was limited to the affective subcategories which were attitude toward the instructor and a tendency to enroll again with that teacher. A significant portion of the variance in these subscores was predictable directly by nonverbal immediacy without need for mediation of student motivation. This revealed a direct, rather than indirect, effect for immediacy.

Study Two. The split-class model used in Study Two represented intact classes where participants completed specific instruments based on the class in which they served as subjects. Results of Group A ($n = 624$) reflected scores from one-half of the class responding to the motivation and immediacy scales. The scores reported for Group B ($n = 624$) indicated responses from the remaining half of the class completing the motivation and learning instruments. The third set of scores, Classes ($n = 60$) reflected a compilation of mean scores by class for all subjects participating in Study Two. This data set represented Group A's motivation and immediacy scores and Group B's learning scores. The majority of classes included in this study were from Arts and Sciences and Human Resources and Education. The classes were split

TABLE 4
CORRELATION BETWEEN MOTIVATION AND LEARNING*

Data Set	Trait	State	Combined
Study 1			
Cognitive Learning			
Simple Learning Score	.25	.60	.60
Learning Loss Score	-.15	-.47	.48
Affective Learning			
Attitudes:			
1. Content of Course	.34 (.39)	.59 (.66)	.59
2. Behaviors Recommended	.28 (.31)	.51 (.55)	.51
3. Instructor	.22 (.24)	.54 (.58)	.54
Behavioral Intent:			
4. Engage in Behaviors	.32 (.35)	.53 (.56)	.53
5. Enroll in Subject	.19 (.20)	.53 (.56)	.53
6. Enroll with Teacher	.21 (.23)	.55 (.58)	.55
Total Affective Learning	.31 (.33)	.66 (.69)	.66
Study 2—Group B			
Cognitive Learning			
Simple Learning Score	.27	.71	.72
Learning Loss Score	-.14	-.50	.52
Affective Learning			
Attitudes:			
1. Content in Course	.41 (.45)	.75 (.82)	.75
2. Behaviors Recommended	.36 (.39)	.60 (.64)	.61
3. Instructor	.30 (.33)	.61 (.66)	.61
Behavioral Intent:			
4. Engage in Behaviors	.33 (.35)	.57 (.60)	.57
5. Enroll in Subject	.27 (.28)	.60 (.63)	.61
6. Enroll with Teacher	.21 (.22)	.62 (.65)	.64
Total Affective Learning	.37 (.39)	.77 (.79)	.77
Study 2—Classes			
Cognitive Learning			
Simple Learning Score	.37	.69	.69
Learning Loss Score	-.27	-.60	.60
Affective Learning			
Attitudes:			
1. Content in Course	.41 (.46)	.61 (.66)	.62
2. Behaviors Recommended	.20 (.22)	.39 (.41)	.39
3. Instructor	.34 (.37)	.56 (.60)	.57
Behavioral Intent:			
4. Engage in Behaviors	.39 (.42)	.51 (.54)	.53
5. Enroll in Subject	.46 (.49)	.53 (.55)	.60
6. Enroll with Teacher	.33 (.35)	.57 (.59)	.57
Total Affective Learning	.44 (.46)	.64 (.66)	.66

*All correlations significant @ .0001.

Correlations in parentheses are disattenuated.

between small and medium size enrollment. Undergraduate students were primarily represented in this second study (>95%).

Hypothesis one confirmed immediacy variables were positively correlated with state motivation scores (see Table 2). Correlational analyses testing hypothesis two found teacher immediacy behaviors positively associated with student learning on all but one level of affect (see Table 3). Multiple regressions indicated nonverbal immediacy was more predictive of learning than was verbal immediacy (see Table 5). Data analyses related to the third hypothesis indicated student trait and state motivation were positively associated with student learning (see Table 4). Regression

analyses revealed state motivation scores reflected higher predictiveness on all levels of learning than did trait motivation scores (see Table 6).

Data analyses bearing on the research question indicated generally nonverbal immediacy must modify state motivation to impact learning (see Table 7). The exception to this generalization was related to specific subcategories of affect towards the instructor and a tendency to enroll again with that teacher. A significant portion of the variance in these subscores was predictable directly by nonverbal immediacy (without first passing through motivation).

TABLE 6
DECOMPOSITION OF TRAIT/STATE MOTIVATION RELATIONSHIP WITH LEARNING

	Unique Variance Attributable to:			Total Variance
	Trait	State	Colinear	
Study 1				
Cognitive Learning				
Simple Learning Score	.00	.30	.06	.36
Learning Loss Score	.01	.21	.01	.23
Affective Learning				
Attitudes:				
1. Content of Course	.00	.24	.11	.35
2. Behaviors Recommended	.00	.18	.08	.26
3. Instructor	.00	.24	.05	.29
Behavioral Intent:				
4. Engage in Behaviors	.00	.18	.10	.28
5. Enroll in Subject	.01	.25	.02	.28
6. Enroll with Teacher	.00	.26	.04	.30
Total Affective Learning	.00	.34	.10	.44
Study 2—Group B				
Cognitive Learning				
Simple Learning Score	.02	.45	.05	.52
Learning Loss Score	.02	.26	-.01	.27
Affective Learning				
Attitudes:				
1. Content of Course	.00	.39	.17	.56
2. Behaviors Recommended	.00	.24	.13	.37
3. Instructor	.00	.28	.09	.37
Behavioral Intent:				
4. Engage in Behaviors	.00	.21	.11	.32
5. Enroll in Subject	.00	.29	.08	.37
6. Enroll with Teacher	.02	.36	.03	.41
Total Affective Learning	.00	.45	.14	.59
Study 2—Classes				
Cognitive Learning				
Simple Learning Score	.00	.33	.14	.47
Learning Loss Score	.00	.29	.07	.36
Affective Learning				
Attitudes:				
1. Content of Course	.01	.21	.16	.38
2. Behaviors Recommended	.00	.11	.04	.15
3. Instructor	.00	.21	.11	.32
Behavioral Intent:				
4. Engage in Behaviors	.02	.13	.13	.28
5. Enroll in Subject	.05	.11	.16	.32
6. Enroll with Teacher	.00	.21	.11	.32
Total Affective Learning	.02	.24	.17	.43

TABLE 7
DECOMPOSITION OF NONVERBAL IMMEDIACY/STATE MOTIVATION RELATIONSHIP WITH LEARNING

	Unique Variance Attributable to:			Total Variance
	Nonverb	State Motiv.	Colinear	
Study 1				
Cognitive Learning				
Simple Learning Score	.04	.25	.11	.40
Learning Loss Score	.13	.10	.12	.35
Affective Learning				
Attitudes:				
1. Content of Course	.02	.06	.29	.37
2. Behaviors Recommended	.03	.17	.09	.29
3. Instructor	.19	.13	.15	.47
Behavioral Intent:				
4. Engage in Behaviors	.02	.20	.08	.30
5. Enroll in Subject	.02	.19	.09	.30
6. Enroll with Teacher	.15	.15	.15	.45
Total Affective Learning	.09	.27	.17	.53
Study 2—Classes				
Cognitive Learning				
Simple Learning Score	.00	.31	.16	.47
Learning Loss Score	.10	.09	.27	.46
Affective Learning				
Attitudes:				
1. Content of Course	.01	.19	.18	.38
2. Behaviors Recommended	.07	.03	.12	.22
3. Instructor	.17	.05	.27	.49
Behavioral Intent:				
4. Engage in Behaviors	.01	.13	.13	.27
5. Enroll in Subject	.05	.31	-.03	.33
6. Enroll with Teacher	.11	.07	.26	.44
Total Affective Learning	.03	.17	.25	.45

DISCUSSION

The principal goal of this research was to determine the relationship between student state motivation and teacher immediacy and their impact on learning outcomes. This investigation demonstrated that a portion of teacher immediacy behaviors must first modify students' state motivation prior to immediacy becoming an effective predictor of learning. The results of this study clearly supported the theory of immediacy's positive influence, although often indirect, on all levels of learning. These findings provided a more comprehensive understanding regarding the interrelatedness of immediacy, motivation, and learning.

The positive correlation between immediacy and state motivation provided the support for the theory that these variables were substantively interrelated. These results confirmed the prediction that highly motivated students also reported observing more immediate teachers. A noticeable difference was found in the simple correlations between verbal and nonverbal immediacy with state motivation. Study One reported the highest simple correlation with verbal immediacy (.47), while Study Two—Classes' nonverbal immediacy was the highest simple correlation (.47). The only distinguishable difference between the two studies was implementation of different methodologies to collect data.

Based on a *a priori* examination of student motivation and teacher immediacy, these concepts were considered to be important factors in the process of learning. Although a number of studies have explored these theories independently, there appeared to be little specific research isolating related properties and proving their positive association. Both concepts were described as possessing similar approach-avoidance type stimulation tendencies. The high correlations observed in the present data suggest such analogous properties are present.

Hypothesis two was generated to replicate previous programmatic research relating immediacy with learning. In all instances, correlations in Study One confirmed results of earlier research indicating higher teacher immediacy was associated with higher levels of learning. Study Two-Classes' correlational analyses also supported the positive relationship between immediacy and learning with the exception of one subcategory, enroll in subject, which was found to be nonsignificant. This reported anomaly was a particularly interesting negative result, on a post hoc basis, the result seems quite reasonable. Understandably, students should not be expected to enroll in a particular subject taught by one teacher based only on another teacher's immediacy behaviors. Related research utilizing different data collection methods, such as those described in Study One, have previously reported higher correlations between immediacy and potential enrollment. One possible explanation for this deviation may be described as a "halo effect" created by the originally designed research model requiring all participants to complete both the immediacy and learning instruments at the same time. However, in Study Two-Classes, immediacy scores were reported by Group A, while perceived learning was determined by Group B. The major distinction between these two data collection methods was the immediacy and learning instruments had been completed by two separate groups evaluating the same class and teacher. This methodological difference provides one explanation for the nonsignificant correlation.

The only learning scores which revealed slightly higher correlations with verbal immediacy were Study One's affective learning subcategories toward "behaviors recommended" and "engage in behaviors." Results from Study Two-Classes indicated stronger verbal immediacy influence on "engage in behaviors." This indicated only one category differed between Study One and Study Two-Classes which attributed higher correlations to verbal immediacy. The remaining positive correlations revealed nonverbal immediacy was more highly correlated with learning than verbal immediacy.

One major differentiation between these two studies was the noticeably higher nonverbal correlations with learning in Study Two-Classes, both within and between studies, relative to Study One. Although in most instances both verbal and nonverbal immediacy were found to be positively correlated with learning, it would appear that Study Two-Classes' attributed a much higher degree of learning to nonverbal immediacy. This does not seem to be the case with Study One's relationship among these same variables which indicated verbal and nonverbal immediacy were more comparably correlated with learning. Since Group A immediacy scores were correlated with Group B learning scores in Study Two-Classes, the reportedly higher correlations and greater dispersion among immediacy scores once again pointed toward the methodological differences to provide an explanation.

In the colinear relationship between verbal and nonverbal immediacy predicting student learning, slightly higher unique variances were found with verbal immediacy

predicting “behaviors recommended.” In all other cases, Study One scores indicated slightly higher predictive values based on nonverbal immediacy. Study Two-Classes attributed higher predictive values to nonverbal immediacy on all but two categories, while verbal immediacy accounted for little or no unique variance. Based on these results, nonverbal immediacy was considered separately with state motivation to determine their combined colinear predictive values on learning.

These findings support previous studies which have also acknowledged the greater impact of nonverbal immediacy on learning when compared to its verbal counterpart (Gorham, 1988). Gorham reported that while nonverbal immediacy most often accounted for a greater portion of unique variance with learning than did verbal immediacy, the colinear prediction for the variables contributed the greatest degree of variance. This same effect remained consistent throughout the current study.

Correlational analyses to test the relationship between trait and state motivation and learning were conducted on three data sets (Study One, Study Two-Group B, and Study Two-Classes). In all instances, state motivation correlated much higher with learning than did trait motivation. The colinear relationship between trait and state motivation with learning underscored similar conclusions reported by the correlational data. In scores computed on two data sets (Study One and Study Two-Group B), both cognitive and affective learning were largely attributable to state motivation with trait motivation at no time accounting for more than two percent of the variance. Out of the combined learning subcategories, five reported no unique variance attributable to trait motivation. In the data set for Study Two-Classes, the only score where trait motivation accounted for more than two percent unique variance was the students’ behavioral intent to “enroll in subject.” As discovered in earlier analyses, this affective subcategory was the only one reported to be nonsignificant when correlated with immediacy. Distinguishing this score from others provides one possible explanation for the ineffectiveness of immediacy on students’ behavioral interest towards enrollment. It would seem reasonable that a student’s intention towards enrolling in a specific course would be more subject to trait motivational factors, rather than state motivation, when making decisions outside of the classroom environment.

These results clearly implied that what little trait motivation impacts learning only occurred when combined with state motivation. The unique variance regarding students’ motivation and learning was unequivocally attributable to state motivation. This finding strongly supports the theory that student state motivation levels are modifiable within the classroom environment. Specifically, in this study, a portion of student state motivation was directly modified by teacher immediacy behaviors. This discovery provides an unmistakable confirmation of previous claims regarding the importance of students’ classroom-specific motivational levels in relationship to learning.

In most cases, data addressing the research question provided strong support for the colinear predictability of nonverbal immediacy and state motivation. This finding focused directly on the theoretical construct proposing immediacy and motivation as interrelated predictive variables of learning. In both Study One and Study Two-Classes, unique variance was more highly attributable to state motivation predicting higher cognitive learning for the simple learning scores. These results point out the strong impact which state motivation had on the cognitive learning of these students and how immediacy’s effect was indirect.

In Study One and Study Two-Classes, nonverbal immediacy reflected equal or more unique variance for the affective subcategories of “instructor” and “enroll with teacher.” Study Two-Classes also reported a higher degree of unique variance attributable to nonverbal immediacy with “behaviors recommended.” In these subcategories nonverbal immediacy reflected a more direct impact on learning. All other affective learning subcategory scores were found to be more highly correlated with state motivation over nonverbal immediacy.

Immediacy behaviors which appear to impact students more directly would indicate that teachers may create positive affect in some cases without first motivating students. Students may also enroll in a class with that teacher based on affect independent from the teacher’s motivational abilities. In addition, student attitudes toward complying with the behaviors recommended by teachers can be directly influenced by nonverbal immediacy, rather than first modifying motivation before compliance occurs. This supports previous findings that uncovered the positive impact of teacher immediacy on students’ classroom behaviors (Kearney, Plax, Smith, & Sorensen, 1988; Kearney, Plax, & Wendt-Wasco, 1985).

As indicated above, three subcategories emerged where affective learning was directly impacted by nonverbal immediacy. On the remaining learning subcategories, student attitudes toward “content of course” and the likelihood of their “engaging in behaviors” or “enrolling in subject,” immediacy first interacts with the students’ motivational system before substantial learning can be attributable to this predictive variable. These results again pointed towards immediacy’s indirect impact on learning.

One limitation regarding the generalizability of these results refers to the limited cross-section of teachers represented in this study. Based on the methodological distinctions used in collecting data for Study One versus data collection in Study Two-Classes, there were some obvious representational differences. The relationships reported in Study One were comparable to previous studies which incorporated classes and their respective teachers without data being collected by all class participants and without the teachers’ prior knowledge. Study Two was dependent on gaining the instructor’s permission for inclusion in this study and represented 60 individual classes versus the 562 classes represented in Study One. However, this second study required several students to evaluate each class and instructor, with an equal number of students completing different combinations of instruments.

An important note regarding the comparison of these diverse systems for collecting data is that, where one methodology has potential limitations, the other methodology operates to overcome those given limitations. Although these methods are essentially quite different, this triangulation of research provides two separate data sets reporting comparable information on the same concept.

These results have important implications not only because this study has replicated most findings of previous research using a different data collection method, but also by implementing a newly designed methodology which eliminated potential contamination. The removal of such contamination was accomplished by one group of students reporting immediacy, while another group of students reported their learning. Consequently, the results in Study Two do not indicate relationships which were based upon confounding variables where scores were reported by the same subjects completing multiple instruments, therefore, providing potentially inflated correlations. This split-class methodology reported similarities to and unique differ-

ences from those found when using the original data collection method, indicating most earlier discoveries were not simply an artifact of measurement.

Analyses using the split-class model of data collection provided strong theoretical support for teachers who were perceived as highly immediate by one group of students produced more motivated students in another group. This finding was not attributable to a methodological artifact. Further investigation revealed that increased immediacy positively modifies state motivation which, in turn, positively impacts learning.

Clearly this research points to the strong impact of teachers using immediacy behaviors to modify student motivation and increase learning at the college level. The results observed in this study might prove to be much stronger if data was collected at the elementary or secondary levels where teachers are seen as a more potent factor in student learning. However, variance generated in this college environment, where students are presumed to be relatively independent, can only serve to support the idea that there would be a much greater effect in other learning environments.

The conclusiveness of this research reflects the critical role of teachers' communicative behaviors, such as immediacy, which modify student state motivation, and should accordingly receive more prominent attention in the training and development of potential teachers. Although students conceivably enter the classroom with predetermined levels of trait motivation, their state motivation levels are modifiable by teachers. As demonstrated by this study, immediacy positively impacts all levels of learning, either directly or indirectly, in combination with student state motivation.

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