A Multi-cultural Examination of the Relationship Between Nonverbal Immediacy and Affective Learning

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Since the late 1970s an expanding body of research has pointed to the importance of nonverbal immediacy for effective teacher communication, particularly in terms of the teachers' impact on the affective learning of their students. Most of this research has been conducted with subjects who have represented a primarily caucasian, middle-class U.S. culture. The few studies which have examined other student groups have drawn on students from other subgroups still within the overall U.S. culture. The current research was based on data drawn from the cultures of Australia, Finland, and Puerto Rico as well as the dominant U.S. culture. Each study was conducted in the primary language of the sample studied. The results of this research indicated that increased teacher immediacy was associated with increased affective learning across these diverse cultures. Whether the norms in the culture favor high or low immediacy, if the teacher is comparatively more immediate, the student's affective learning is enhanced.

KEY CONCEPTS: Immediacy, affective learning, multi-cultural, cross-cultural, instruction, Australia, Finland, Puerto Rico

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The early work on immediacy in instruction was an outgrowth of efforts by faculty and students at West Virginia University to bring together the research literature in the fields of communication and education specifically directed toward identifying teacher behaviors associated with effective classroom instruction (Hurt, Scott, & McCroskey, 1978). The work of Andersen (1978, 1979) was of particular importance in this area. She proposed the construct of "nonverbal immediacy" (Mehrabian, 1969; 1971) as representing what she believed the research in education was finding to be particularly important in teaching effectiveness.

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Andersen (1978, 1979; Andersen & Andersen, 1982) drew on literature from the fields of communication and education to demonstrate that research already existed to indicate the positive impact of several nonverbal immediacy behaviors of teachers on classroom outcomes. Her own work advanced our understanding of the relationship between nonverbal immediacy and learning, particularly affective learning.

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In the subsequent decade and a half, a substantial body of research has accumulated which points to the important role that teacher immediacy plays in the enhancement of students' affective learning (e.g., Christophel, 1990a, 1990b; Frymier, 1992, 1994; McCroskey & Richmond, 1992; Plax, Kearney, McCroskey, & Richmond, 1986; Richmond, 1990; Thomas, 1994). The motivational theory advanced by Christophel (1990) and Richmond (1990) suggests that immediate behaviors of teachers directly impact the motivation of their students, resulting in increased learning. Their research and the more recent work of Thomas (1994) has established the correlational links which support the foundations of that theory. Subsequent work by Frymier (1992, 1994) has established that these links are causal, rather than coincidental, in nature.

Other research has established that nonverbal immediacy has mediational as well as direct effects on student's affective learning. For example, research focused on teachers' influence attempts indicates that the impact of these attempts is mediated by the immediacy relationship between teacher and student. Immediate teachers' influence attempts are more effective and less likely to result in student resistance than are those attempts of less immediate teachers (Burroughs, 1990; Plax, Kearney, McCroskey, & Richmond, 1986). Clearly, immediate teachers exert more power and influence and have more of a positive impact, both directly and indirectly, on their students' affective learning than do non-immediate teachers (McCroskey & Richmond, 1992).

Nonverbal Immediacy and Culture

Most of the research on the impact of nonverbal immediacy on affective learning (as is the case with most other research in instructional communication) has been conducted with subjects who represent a primarily caucasian, middle-class U.S. culture. The few studies which have examined other student groups have drawn on students from subgroups still within the overall U.S. culture (e.g., Powell & Harville, 1990; Sanders & Wiseman, 1990).

Powell and Harville's (1990) research found only small differences among non-Hispanic caucasian, Latino (primarily Mexican-American), and Asian-American subgroups (in a California university) with regard to the relationships between nonverbal immediacy behaviors and student's affective learning. In a very similar study at another California university, Sanders & Wiseman (1990) found the impact of immediacy on affective learning to be larger for the Hispanic (primarily Mexican-American) group than for African-American or Asian-American groups, but the non-Hispanic caucasian group did not differ significantly from any of the other three groups in the study.

The kinds of small differences noted in the above studies are consistent with what we probably should expect when drawing data from subgroups which represent a regional subculture which is a part of the larger U.S. culture. The individuals in the ethnic subgroups in these studies may well be more culturally similar to one another (all were members of the California regional subculture) than they are to others in their ethnic subgroup who live in other regions of the U.S. or other countries.

While studies such as the above have value, it is important that we examine the potentially different roles nonverbal immediacy may play in truly different cultures--in circumstances where the teachers and/or the students are from a culture different from that which is predominant in the mainland U.S. In this way, we may be able to develop theory which will account for systematic differences which may be introduced when teacher and/or students are not from the same culture or are from a culture other than the dominant U.S. (i.e., non-Hispanic caucasian) culture.

The Current Study

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In the present study the attempt was made to obtain data from very divergent cultures. Four cultures were chosen. 1) The baseline data were drawn from U.S. college students from the same population employed in many of the previous studies. 2) Australian college students were chosen because they are English speaking and represent a culture presumed to be quite similar to the general U.S. culture, although very different in many surface aspects. 3) Puerto Rican college students were chosen because they represent an expressive and highly immediate Spanish-speaking culture which distinctly differs from that of the general U.S. culture, even though they are U.S. citizens. 4) Finnish college students were chosen because they represent a low-expressive, nonimmediate northern European culture and language community which is distinctly different from that of the U.S. and the other two cultures chosen.

It was assumed that if the relationships between nonverbal immediacy and affective learning in these diverse cultures were found to be very similar, a presumption for the generalizability of the findings in the U.S. research would be established. Future research would then need to be directed toward identifying the limitations of those generalizations. In contrast, if meaningful differences among the relationships between nonverbal immediacy and affective learning were to be found, no presumption of generalizability would be established. Future research would then need to be directed toward identifying the cultural elements which are responsible for the differences observed and developing culturally based recommendations for teachers' behaviors.

Research Questions

There were two research questions posed for this investigation:

- *RQ*1: To what extent is the relationship between nonverbal immediacy and affective learning consistent across cultures?
- *RQ2*: To what extent are the relationships between individual nonverbal immediacy behaviors and affective learning consistent across cultures?

The first question centers on the overall similarity of relationships among the cultures. Question 2 is concerned with the individual immediacy behaviors (movement, facial expression, vocal variety, etc.). It was recognized that the global perceptions of immediacy might be similar, but those perceptions might be differentially influenced by the individual behaviors in the different cultures. If this were found to be the case, it would suggest that teacher training regarding nonverbal immediacy would need to include different emphases in different cultures. We entered this research with the assumption that nonverbal immediacy on the part of teachers would have a positive relationship with students' affective learning across cultures. However, we also thought the impact of nonverbal immediacy might be greater in some cultures than others. However we believed it inappropriate to posit directional hypotheses relating to the differences because conflicting rationales led to hypotheses in opposite directions. One could, for example, hypothesize that in more immediate cultures more immediate teachers would have a stronger impact than in less immediate cultures due to their meeting student expectancies. On the other hand, one could hypothesize that in less immediate cultures more immediate teachers would have a stronger impact than in more immediate cultures due to their violation of expectancies and, thereby, attracting more attention. Given the absence of data from prior research to add credence to either of these hypotheses, we felt posing research questions was our best option.

Methods

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Measures

Immediacy. Nonverbal immediacy was measured by a 10-item revised version of the 14-item Nonverbal Immediacy Measure (NIM) first used by Richmond, Gorham, & McCroskey (1987). The 14-item version of the NIM instrument was developed to be a low-inference measure with a reference base consistent for all students, regardless of subject matter being studied or the culture of the student. It provides the respondent with items which describe individual immediacy behaviors (e.g., "Gestures while talking to the class.") and asks the respondent to indicate which of five response options best describes the teacher: Never = 0, Rarely = 1, Occasionally = 2, Often = 3, and Very Often = 4.

The NIM has been found to be reliable when used by either teachers or students and the validity coefficient between teachers' and students' perceptions of teacher immediacy is good (Gorham & Zakahi, 1990). This instrument has been used in most of the recent research on immediacy in instruction, often in conjunction with an instrument intended to measure verbal immediacy (e.g. Burroughs, 1990; Christophel, 1990a, 1990b; Frymier, 1992, 1994; Powell & Harville, 1990; Richmond, 1990; Sanders & Wiseman, 1990, Thomas, 1994; Thomas, Richmond, & McCroskey, 1994; Thompson, 1992). It has excellent predictive validity and acceptable reliability (.70-.85 in most reports).

FIGURE 1. Perceived Nonverbal Immediacy Behavior Scale

Directions: Below are a series of descriptions of things some teachers have been observed doing in some classes. Please respond to the statements in terms how well they apply to this teacher. Please use the following scale to respond to each of the statements: Never=0 Rarely=1 Occasionally=2 Often=3 Very Often=4

1. Gestures while talking to the class.

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- 2. Uses monotone/dull voice when talking to the class.*
- 3. Looks at the class while talking.
- 4. Smiles at the class while talking.
 - 5. Has a very tense body position while talking class.*
- 6. Moves around the classroom while teaching.
- 7. Looks at the board or notes while talking to the class.*
- 8. Has a very relaxed body position while talking to the class.
- 9. Smiles at individual students in the class.**
- Uses a variety of vocal expressions when talking to the class.

* Item should be reflected prior to scoring.

** Recommended replacement for #9 in future use: "Frowns at the class while talking."* See note 1.

All 14 items of the NIM instrument were completed by the subjects in all samples in this study. However, the items relating to touch and sitting or standing while teaching were found to be poor items in all of the samples. Examination of available data sets from earlier research indicated they frequently were poor items in those studies as well. The data from the present research indicated that college teachers in all four cultures virtually never touch their students (means ranged from .3 to .6, with the U.S. mean being the highest of the four groups). Subjects in the U.S. sample indicated that college teachers sometimes sit and sometimes stand, but that they are able to be immediate or nonimmediate in either position. Thus, neither sitting nor standing is a reliable predictor of a teacher's immediacy. In reliability analyses it was found that elimination of these items would increase or have no impact on the reliability of the instrument, hence they were eliminated. The revised instrument (RNIM) is presented in Figure 1.

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Affective Learning. Affective learning was measured by two instruments. The first asked the student to respond to four, 7-step bipolar scales related to "My attitude about the *content* of this course." The four bipolar scales used were: good-bad, worthless-valuable, fair-unfair, and positive-negative. The second instrument asked for similar responses to "My likelihood of actually *enrolling in another course of related content, if I had the choice and my schedule permits.*" The bipolar scales used were: likely-unlikely, impossible-possible, probable-improbable, and would-would not. These same instruments have been used in most of the previous research in this area and have been found to be both reliable and valid (e.g, Christophel, 1990; Frymier, 1994; Sanders & Wiseman, 1990).

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All instruments were presented to the students in their first language (English in the U.S. and Australia; Spanish in Puerto Rico; Finnish in Finland). The Werner and Campbell (1970) back-translation method was employed for the Finnish and Spanish versions of the instruments.

Procedures

In order to obtain data pertaining to a wide variety of teachers and subject matter in each of the cultures, to avoid problems with having students fill out questionnaires on the teacher of the class in which the data were collected, and to obtain data on teachers who would not otherwise permit their students to complete the questionnaires, we employed the methodology first employed by Plax et al. (1986). This method asks the student to complete the questionnaires on the class that the student had most recently before the class in which the data are collected. Thus, if the student took Physics 100 at 10:00 A.M. and completed this instrument in History 125 at 11:00 A.M., he or she would be completing the instrument on the physics course, not on the course in which the instrument was given to her or him.

Data were collected toward the end of the term in each culture so that the students would have substantial exposure to the teacher and content of the class about which they were responding. All students completed the questionnaires anonymously. The Australian sample included 139 students from the Warrnambool Institute of Advanced Education. The Puerto Rican sample included 431 students from the University of Puerto Rico, Rio Piedras. The Finnish sample included 151 students from the University of Jyvaskyla. The U.S. sample included 365 students from West Virginia University.

Preliminary analyses indicated there were no significant differences on any measure attributable to biological sex of student or teacher, so subsequent analyses did not include the sex variable. Alpha reliabilities for the immediacy instrument and for the affective learning measures for each of the cultures are reported in Table 1. As noted in Table 1, all reliabilities were satisfatory, although the lower reliability of the RNIM with the Puerto Rican sample (.69) led us to discover a problem with one item on the instrument.¹

	Sample						
Measure	Australia	Finland	Puerto Rico	U.S.A.			
Nonverbal Immediacy	.79	.89	.69	.85			
Affect Toward Content	.82	.72	.82	.86			
Willingness to Take Another Course in the Content	.95	.98	.93	.96			

TABLE 1. Alpha Reliability Estimates for Measures

Immediacy and Affective Learning

Data Analyses

Scores on the measures were subjected to analyses of variance to determine whether there were any general differences in perceptions of immediacy or affective learning among the students in the four cultures. Differences between correlations of immediacy with the affective learning measures among the cultures were tested by *t*-tests for independent samples (employing the usual r to z transformations; Bruning & Kintz, 1968).

A supplementary analysis was conducted employing some of the individual items on the RNIM as discrete predictors of affective learning. Six scores were selected to represent six different nonverbal codes (gesture, voice, eye contact, facial expression/smiling, movement, and body position). The simple correlations were obtained as well as the multiple correlation (regression) of these six with each of the affective learning measures. These analyses permitted examination of the comparative importance of the various nonverbal behaviors across the four cultures.

	Sample							
	Austr	alia	Finla	and	Puerto	Rico	U.S	S.A.
Measure*	М	SD	М	SD	М	SD	М	SD
Revised Nonverbal Immediacy Measure	25.6 _{ab}	6.1	23.9 _{ab}	7.9	28.8 _a	5.6	28.2 ь	7.8
Affect Toward Content	20.6 _a	4.7	20.9 _b	4.3	23.1 _{ab}	4.9	21.6 °	5.1
Willingness to Enroll in Another Class in Content	19.3 _a	6.7	18.8 _b	7.6	20.8 _{ab}	7.4	19.8	7.9

TABLE 2. Means and Standard Deviations of Measures

Ranges of scores (possible) for the measures are as follows: Total immediacy 0-40; Affect and Willingness each 4-28. Obtained ranges were consistent with possible ranges.

Means with same subscript on same measure are significantly different, p < .05.

Results

Table 2 reports the means and standard deviations for the immediacy and learning measures. Analysis of variance indicated that the students in the various cultures differed in the degree to which they perceived their teachers to be immediate (F = 32.49, d.f. 3, 1082, p < .0001; $r^2 = .14$). Post hoc *t*tests indicated that the Puerto Rican and U.S. samples did not differ from each other but reported their teachers as being significantly more immediate than did the students from either Australia or Finland. The Finnish teachers were reported to be less immediate than the teachers from any other culture.

Significant differences were found in the analyses of variance of the scores for affect toward content (F = 5.12, d.f. 3,1082, p < .01; $R^2=.03$) and willingness to enroll in another class in the same content (F = 4.32, d.f. 3,1082, p < .01; $R^2=.02$). The Puerto Rican students reported more positive affect toward the content of their classes than the students in any of the other three cultures, and those three did not differ from each other. The Puerto Rican students also indicated a greater willingness to enroll in another class in the same content than did the students from Australia and Finland. The U.S. students did not differ from any of the other groups.

Table 3 reports the simple correlations of the affect measures with the total RNIM scores and the scores on the individual items as well as the multiple correlations of the six selected RNIM items with each affect measure. No significant differences between correlations of the RNIM scores with the affect toward content measure across the cultures were found. In all cultures teacher nonverbal immediacy was found to be positively correlated with affect toward the content being taught. The correlations ranged from .27 to .39, from .36 to .49 after correction for attenuation due to unreliability (important because of the lower reliability of the RNIM in the Puerto Rican data). The multiple correlations based on the six selected items followed the same pattern, ranging from .36 to .47 (p > .05). These correlations are best described as moderate and of about the magnitude observed in previous research which broke out affect toward content separate from overall student affect. Examination of the correlations of the individual items with affect toward content and enrollment did not indicate any striking variations from culture to culture, although the correlations with content obtained from the Finnish data were nearly all higher for each item than for the other cultures. Examination of the simple correlations of the items with enrollment indicated the correlations for the Finnish sample were consistently higher and those for the Puerto Rican sample were consistently lower than for the other cultures.

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Discussion

General Conclusions

Our first research question addressed the extent to which the relationships between nonverbal immediacy and affective learning are consistent across cultures. Our results indicate that, in all four cultures, increased teacher immediacy is significantly associated with increased affect toward the content of the class and, in three of the four (Puerto Rico being the exception), increased immediacy is associated with increased willingness to enroll in another class in the same subject matter. The simple correlations between overall perceptions of teacher immediacy and affective learning as well as the multiple correlation (regression) results (with the exception of those involving willingness to take another course in Puerto Rico) were all positive and accounted for 6-24% of the variance in affective learning. The measurement problem encountered in Puerto Rico most likely confounded the results relating to affect in that culture.

The U.S. and Puerto Rican teachers were seen as more immediate than those from Australia and Finland. Corresponding differences in affective learning, however, were not observed. This suggests that the general level of immediacy in the culture may not be related to student affective learning. That is, whether the norms in the culture favor high or low immediacy, if the teacher is comparatively more immediate, the student's affective learning is enhanced. The anticipated expectancy effect for violations of the cultural norms was not observed for either highly immediate or lowly immediate cultures.

Our second research question was directed toward possible differences with regard to individual immediacy behaviors from culture to culture. No unusual pattern became evident in this research. Rather, the pattern for the individual nonverbal behaviors is reflected in the pattern for the total immediacy score. In most cases movement and gesture were the nonverbal immediacy behaviors that were least associated with affective learning across the cultures studied. Vocal variety, eye contact, and smiling were generally the nonverbal behaviors most highly related to affective learning.

Predictor(s)		Sample				
	Criterion*	Australia	Finland	Puerto Rico	U.S.A.	
Total Immediacy Score	Content	.33 (.41)**	.39 (.49)	.27 (.36)	.34 (.40)	
Six-Item Scores (multiple-r)	Content	.39	.47	.36	.39	
1. Gesture	Content	.05	.19	.07	.16	
2. Voice	Content	.12	.36	.27	.32	
3. Eye Contact	Content	.26	.33	.26	.23	
4. Smiling	Content	.30	.43	.24	.30	
6. Movement	Content	.14	.10	.03	.13	
8. Body Position	Content	.21	.31	.22	.30	
Total Immediacy Score	Enroll	.25 (.29) _a	.37 (.40) _b	.10 (.16) _{abc}	.31 (.36) _e	
Six-Item Scores (multiple-r)	Enroll	.30	.26	.22	.33	
1. Gesture	Enroll	.10	.19	.02	.12	
2. Voice	Enroll	.10	.38	.13	.28	
3. Eye Contact	Enroll	.26	.31	.07	.17	
4. Smiling	Enroll	.25	.29	.05	.25	
6. Movement	Enroll	.02	.14	.08	.13	
8. Body Position	Enroll	.12	.20	.18	.26	

TABLE 3. Correlations and Multiple Correlations of Nonverbal Immediacy Measures with Affect Measures

Content = Affect toward course content, Enroll = Willingness to enroll in another course in same content area.

** Numbers in parentheses are disattenuated correlation estimates.

^{abc} Correlations with same subscript involving the total immediacy score are significantly different, p < .05.

From the Finnish Perspective

The data in this study indicated that Finnish teachers were less immediate than the teachers from comparison cultures. This observation is in accordance with previous findings related to presentational communicative behaviors displayed by the Finns (Sallinen-Kuparinen, 1986). Finnish communication culture is historically influenced by the written mode of communication, with task-orientation, formality, and indirectness as major concomitants. There is a considerable social distance between the speaker and audience. Respect for the speaker holding the floor is characterized by demand for

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noninterference. With regard to the extent to which the self is exposed in interaction, rather modest, emotionally and nonverbally restricted communicative patterns are favored.

Immediacy as a concept predominantly represents the process-product paradigm widely used in instructional communication, thus implying primarily a stimulus-response type of one-way communicative act and reflecting a behavioristic orientation to teaching. The relationship between immediacy and learning might emerge in quite a new light if a series of background variables would be entered in studies, such as different cognitive styles and learning styles (Sallinen-Kuparinen, 1992) in students. Combining speaker and listener characteristics in cross-cultural comparisons might warrant future attention particularly in low-immediate cultures with a high emphasis on receiver characteristics in communication.

From the Puerto Rican Perspective

The RNIM scores in Puerto Rico are high, but they are not significantly different from those in the U.S. The similarity in these scores is also reflected in the scores for affective learning. There are two possible explanations for this. The first is that the U.S. influence on many nonverbal codes is strong due to the political affiliation of Puerto Rico to the U.S. as well as English-Language movies, cable TV, and video cassettes that are now a part of everyday life on the island. These factors plus frequent travel to the U.S. can explain the similarities between the two countries. The second explanation is that Caribbean Hispanic cultures are more similar to the U.S. than they are to those in Northern Europe and the Pacific.

One way to determine which of these explanations is more accurate would be to conduct a study in the Dominican Republic, the Spanish-speaking country closest to Puerto Rico on the west, which has had much less American influence. A comparison of the immediacy scores between these two islands with the same language and similar cultures would help to determine the extent to which the similarities between the U.S. and Puerto Rican data is a function of "Americanization" in Puerto Rico.

Although Puerto Rican students report high willingness to take another course in the same content area, the correlation of total immediacy scores and willingness to take another course in the same content was lower than the correlation for students in the other three cultures. It may be that in a highly immediate culture such as Puerto Rico immediacy does not have the same effect on willingness to enroll that it does in less immediate cultures. A study with the improved version of the RNIM in Puerto Rico and another highly immediate culture could test this speculation.

The Puerto Rican students' interpretation of the RNIM item "Smiles at individual students" came as a surprise to the Puerto Rican translators as well as the others involved in this research. This serendipitous finding indicates the importance of being watchful for possible different interpretations of other items on this measure, and other measures developed in the U.S., as they are employed in diverse cultural contexts.

A Caution for Future Research

It probably is very important that we remain mindful that the immediacy metaphor as advanced by Mehrabian (1969) is just that, a metaphor. If we are to apply proxemic theory as a function of the metaphor, we are likely to find it less satisfactory in predicting the impact of psychological closeness than the impact of physical closeness. Clearly, however, in the current research, to the extent that nonverbal immediacy produced psychological closeness across cultures, it also produced positive results in terms of affective learning across cultures.

NOTE

¹Subsequent to completion of these data analyses and preparation of the initial report of this research, students from the same population included in this study were engaged in focus groups to determine whether translation problems existed. These discussions indicated that there were no problems with the literal translation of the instrument. However, one item (# 9 "Smiles at individual students in the class") was interpreted by many of these students in a way very different from the students in the other cultures, and in a way which was not consistent with the intent of the item on the measure. Instead of seeing this behavior as a positive indication of teacher immediacy, many of these students saw it as an indication of the teacher showing prejudicial favoritism toward some students over others. Omission of this item was subsequently found to raise the reliability of the RNIM so as to be consistent with its reliability in the other cultures. Consequently, we recommend substituting a new item in place of item 9 in future use of this instrument. The new item is "Frowns at the class while talking." This item should be reflected prior to scoring the instrument.

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