A Comparison of the Relationship Between Instructor Nonverbal Immediacy and Teacher Credibility in Brazilian and U.S. Classrooms

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A Comparison of the Relationship Between Instructor Nonverbal Immediacy and Teacher Credibility in Brazilian and U.S. Classrooms

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Sixty-six students at a Brazilian university and 100 students at a large university in the Southeastern United States completed measures of nonverbal immediacy and source credibility regarding the instructor in the class immediately prior to the one in which the research took place. Among U.S. students, perceived instructor nonverbal immediacy behavior was positively associated with all 3 dimensions of source credibility: competence, trustworthiness, and caring. Among Brazilian students, instructor nonverbal immediacy was positively related to competence and caring only. The relationship of nonverbal immediacy to instructor competence was stronger Brazilian than it was for U.S. students.

Keywords: Brazil; Instructor Credibility; Nonverbal Immediacy

Among the most widely studied constructs in instructional communication is nonverbal immediacy. Nonverbal immediacy involves the use of behaviors such as eye contact, smiling, direct body orientation, close proxemics, gesturing, vocal inflections, and physical contact while communicating. These behavior patterns increase the sensory stimulation between two persons and decrease physical and psychological distances (Andersen, 1979; Witt & Wheeless, 2001). Non-immediate behaviors, in contrast,
communicate “avoidance, dislike, coldness, and interpersonal distance” (Kearney, Plax, Smith, & Sorensen, 1988, p. 55), and can cause people to “avoid or move away from things they dislike, evaluate negatively, or do not prefer” (Mehrabian, 1971, p. 1). Instructor nonverbal immediacy in U.S. classrooms has been associated with a range of positive instructional outcomes including cognitive (King & Witt, 2009), affective (Burroughs, 2007), and behavioral learning (Sanders & Wiseman, 1990).

Immediacy is also arguably the instructor behavior most frequently associated with teacher credibility. Viewed as a potent type of persuasive proof since the time of Aristotle, credibility is understood to be comprised of three dimensions: competence, trustworthiness, and goodness (McCroskey & Teven, 1999; McCroskey & Young, 1981; Teven & McCroskey, 1996). When students perceive their instructors as credible, they report greater motivation (Frymier & Thompson, 1992) and increased cognitive learning (Beatty & Zahn, 1990; Wheeless, 1975). Research has consistently identified a positive relationship between nonverbal immediacy behaviors of instructors and instructor credibility (Johnson & Miller, 2002; Schrodt & Witt, 2006; Schrodt et al., 2009; Teven & Hanson, 2004). Schrodt et al. (2009), in fact, concluded that instructor credibility entirely moderates the positive relationship between nonverbal immediacy and learning.

The volume and content of the literature about teacher immediacy suggest it is a powerful part of instructor effectiveness in the United States (Burroughs, 2007). However, research that considers immediacy across cultural boundaries remains limited. Cross-cultural research into the effects of instructor immediacy have compared effects of immediacy in U.S. classrooms with classrooms in Australia (McCroskey, Richmond, Sallinen, Fayer, & Barraclough, 1995), China (Myers, Zhong, & Guan, 1998; Zhang, 2006; Zhang, Oetzel, Gao, Wilcox, & Takai, 2007), Finland (McCroskey et al., 1995), France (Roach, Cornett-DeVito, & DeVito, 2005), Germany (Roach & Byrne, 2001; Zhang et al., 2007), Japan (Neuliep, 1997; Pribyl, Sakamoto, & Keaten, 2004; Zhang et al., 2007), Kenya (Johnson & Miller, 2002), and Korea (Park, Lee, Yun, & Kim, 2009). A quick glance at this list reveals a clear geographic pattern. Other than Kenya, all of the nations investigated are either Western or East Asian. This is congruent with the general trend in the field of intercultural communication of relying on investigations in these regions as the basis for cross-cultural theorizing (Miller, 2005; Shuter, 1990).

No studies that we are aware of have quantitatively investigated instructor nonverbal immediacy in Latin American countries. Some research has drawn comparisons between Euro-American students and those of Latino students in the United States. For instance, Collier and Powell (1990) found only small differences between Latino Americans and White Americans with respect to immediacy. Sanders and Wiseman (1990) also uncovered little difference between Latino and non-Latino Whites, although they found the impact of immediacy behaviors on Latino students to be greater than on Black or Asian students. Comparing students in Puerto Rico, mainland United States, Australia, and Finland, McCroskey et al. (1995) found correlations of immediacy to attitudes toward instructors to be lower for Puerto Rican students on most items than for other cultures in the study. Although these studies
have distinct applications to multicultural classrooms, as McCroskey et al. noted and Park et al.’s (2009) study of Korean students in the United States and Korea suggests, the similarities between ethnic subgroups existing within U.S. culture may be greater than the differences. Research in countries of origin, as opposed to their diasporas, may reveal larger differences.

The purpose of this study was to investigate the association of nonverbal immediacy and credibility in Brazilian university classrooms, and to compare those results with findings in the United States. Brazil is a high-context culture—that is, most of the information in communication “is either in the physical context or is internalized in the person, whereas very little is in the coded, explicit, transmitted part of the message” (Hall, 1981, p. 91). In such an environment, it may well be that instructor nonverbal immediacy carries a more specific meaning than it does in the low-context U.S. culture, where the bulk of information resides in the explicit verbal code. Crabtree and Sapp’s (2004) action-based case study research on a single Brazilian master’s class being taught by a U.S. American professor revealed that Brazilian students expected social, emotional, and physical closeness with their professors. Unlike in the United States, where initiation of nonverbal immediacy behaviors is typically the prerogative of the higher power interlocutor, Brazilian students were comfortable spontaneously greeting instructors on the street with an embrace and a kiss on the cheek, and expected instructors to be actively interested in their personal, as well as academic affairs. Thus, it appears that instructor immediacy behaviors might be interpreted differently by Brazilian as opposed to U.S. American students.

Therefore, we first advanced a hypothesis attempting to replicate previous findings on immediacy and credibility in the United States:

\[ H1: \text{There will be positive relationships between perceived instructor nonverbal immediacy and all dimensions of instructor credibility among U.S. American students.} \]

Because information explicitly addressing immediacy in Brazilian university classrooms is scant, we next posed a research question:

\[ RQ1: \text{What will be the relationship between perceived instructor nonverbal immediacy and the three dimensions of instructor credibility among Brazilian students?} \]

Finally, we sought to compare results between the two samples:

\[ RQ2: \text{How will relationships between nonverbal immediacy and dimensions of instructor credibility differ between U.S. and Brazilian students?} \]

**Method**

**Participants**

One hundred students in a general education class within the communication department at a large university in the Southeastern United States and 66 students from the school of engineering at a large Brazilian university participated in the study.
Our original intention had been to access a broader swath of majors in the Brazilian sample; however, after data collection had already begun, we were informed by the contact administrator at the Brazilian university that data collection would take place only among engineering students. Data were collected in the middle of the semester in each country to ensure that students had enough time to be familiar with their instructors’ nonverbal behaviors. Participation was strictly voluntary and confidential, and there was no extra credit or any other incentive given to students for their participation. Permission to conduct the study was obtained at each university in line with institutional policy on research with human subjects.

Ninety-two percent of Brazilian students and 97% of U.S. students were between the ages of 18 and 23. Fifty-seven percent of the Brazilian students were men, and 42.4% were women; in the U.S. sample, 44% were men, 54% were women, and 2 did not indicate their gender. Student year of study in both samples ranged from the first to the fourth year; but, whereas 64% of U.S. students were in their first year, the largest number of Brazilian students (46%) were in their second year of study.

**Instruments**

Students were asked to think of the instructor of the class they had immediately prior to the one they were in and completed the questionnaire with that individual in mind. This technique has been successfully used in previous studies to access student responses to a wide variety of instructors (e.g., McCroskey et al., 1995; Richmond, McCroskey, & Johnson, 2003; Roach et al., 2005). Questionnaires for the U.S. sample were written in English. For the Brazilian sample, a Portuguese version was developed by a professional translator in Brazil, and then back-translated into English by a native Portuguese speaker in the United States. Brislin (1970) recommended this technique in cross-cultural research to ensure accuracy. After translation, pretesting was conducted in both countries and, based on the feedback received during that process, minor modifications were made to the instructions in the questionnaire and to the sequence of some of the questions.

**Nonverbal Immediacy Scale (NIS).** Nonverbal immediacy was measured via Richmond et al.’s (2003) NIS. The instrument uses 26 items—13 positively worded items and 13 negatively worded items—to which participants respond on a 5-point Likert-type scale. The NIS has reported reliabilities of .90 and higher with U.S. participants (Richmond et al., 2003). We are aware that there may be unique nonverbal immediacy behaviors in Brazil that are not captured in the scale (for arguments on this point and a description of the development of a Chinese immediacy scale, see Zhang & Oetzel, 2006). Nevertheless, because the NIS had not been used cross-culturally at the time of our data collection (J. C. McCroskey, personal communication, August 19, 2008), we believed it would be useful to determine whether the scale would indicate evidence of reliability outside of the United States. Reliabilities obtained from our samples indicate that the scale did, in fact, perform better in the non-U.S. sample than similar measures have performed in the past (for a
summary, see Zhang & Oetzel, 2006). Cronbach’s alphas were as follows: Brazil, .89; United States, .91.

Source Credibility Scale. We used Teven and McCroskey’s (1996) Source Credibility Scale which is an 18-item semantic differential measure, consisting of 3 six-item subscales, each tapping one of the three dimensions of credibility. Alpha reliabilities in previous uses have ranged from .81 to .95 for competence (Mazer, Murphy, & Simonds, 2009; Zhang & Sapp, 2009), from .78 to .98 for trustworthiness (Mazer et al., 2009; Schrodt et al., 2009), and from .72 to .96 for goodwill (Mazer et al., 2009; Schrodt et al., 2009). Reliabilities in our study were as follows: caring, Brazil = .75 and United States = .89; competence, Brazil = .71 and United States = .79; and trustworthiness, Brazil = .89 and United States = .86. To determine whether the measures factored similarly in both samples, we ran an exploratory factor analysis. Principal components analysis with varimax rotation indicated the measures factored similarly. However, both analyses identified four, rather than three, factors, with items in the competence subscale splitting into two factors.

Results

Means of the two samples were compared using independent-samples t tests (see Table 1). Results revealed that, although Brazilian and U.S. students did not report significantly different amounts of nonverbal immediacy and trustworthiness, U.S. students rated their instructors higher on competence and caring than did Brazilian students.

H1 predicted positive relationships in the U.S. sample between nonverbal immediacy and the three dimensions of credibility. To test the hypothesis, we split the data file by country and conducted correlational analyses between nonverbal immediacy and the three dimensions of instructor credibility. As indicated in Table 2, nonverbal immediacy was positively correlated with trustworthiness (.51; p < .01) and competence (.42; p < .01) but not with caring (.15; p > .10).

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
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<td></td>
<td></td>
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<tr>
<td>Brazil</td>
<td>66</td>
<td>15.05</td>
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<tr>
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<td>18.86</td>
<td>14.28</td>
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<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>59</td>
<td>5.51</td>
<td>1.19</td>
<td>-1.48</td>
<td>154</td>
<td>.142</td>
</tr>
<tr>
<td>United States</td>
<td>97</td>
<td>5.77</td>
<td>.97</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Competence</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>58</td>
<td>5.59</td>
<td>1.01</td>
<td>-3.49</td>
<td>154</td>
<td>.001</td>
</tr>
<tr>
<td>United States</td>
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<td>.85</td>
<td></td>
<td></td>
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<tr>
<td>Caring</td>
<td></td>
<td></td>
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<tr>
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<td>1.13</td>
<td>-5.47</td>
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<td>.000</td>
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<td>1.11</td>
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</table>
immediacy was correlated with all three dimensions of credibility in the U.S. sample, accounting for 5%, 5%, and 18% of the variance of competence, trustworthiness, and caring, respectively. Therefore, H1 was supported. In answer to RQ1, we found that, in the Brazilian sample, nonverbal immediacy was significantly correlated with competence and caring, explaining 31% and 29% of the variance, respectively, but it was not correlated with trustworthiness.

RQ2 asked how relationships between nonverbal immediacy and dimensions of instructor credibility would differ between U.S. and Brazilian students. Fisher’s r to z transformation procedure enabled us to determine whether the differences in correlation coefficients between the two samples were statistically significant. Correlations for trustworthiness and caring were not significantly different between the two samples (trustworthiness: $z = -.49, p = .62$; caring: $z = .86, p = .39$). However, the association between nonverbal immediacy and competence was significantly greater among Brazilian students than U.S. students ($z = 2.35, p = .02$).

Discussion

Although some scholars have asserted that the immediacy construct is a distinctly American one, and that higher scores in immediacy across a number of cross-cultural studies should raise concerns about its transferability to other cultures (Zhang, 2006), it is worth noting that, in this study, no significant differences emerged between levels of immediacy reported by Brazilian and U.S. students.

However, that does not mean that Brazilian students understand nonverbal immediacy in the same way that their American counterparts do. Although some previous studies of Latino American students (Sanders & Wiseman, 1990) and Puerto Rican students (McCroskey et al., 1995) found correlations between nonverbal immediacy and attitudes toward instructors to be a little different, or even lower than, among U.S. students, Brazilian students in our study indicated a significantly greater association between instructor immediacy behaviors and their perceptions of instructor expertise than did American students. This was the case, despite the fact that Brazilian students rated their instructors lower overall in both competence and caring than did U.S. students. In fact, among Brazilian students, nonverbal

<table>
<thead>
<tr>
<th>Variable</th>
<th>NVI</th>
<th>Trustworthiness</th>
<th>Competence</th>
<th>Caring</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>0.54***</td>
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<tr>
<td>Trustworthiness</td>
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<td>1.00</td>
<td>0.35**</td>
<td>0.26*</td>
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<tr>
<td>United States</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence</td>
<td>0.23*</td>
<td>0.55**</td>
<td>1.00</td>
<td>0.02</td>
</tr>
<tr>
<td>Caring</td>
<td>0.43***</td>
<td>0.63***</td>
<td>0.48***</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. NVI = nonverbal immediacy.  
*p < .05. **p < .01. ***p < .001.
immediacy explained nearly one-third of the variance for both instructor competence and caring. This makes sense when we consider that as members of a high-context culture, Brazilian students may be more highly dependent on nonverbal cues like immediacy behaviors to derive information about their instructors. This finding is especially important if credibility mediates the effect of immediacy on learning in Brazilian cultures, as Schrodt et al. (2009) suggested it does in American culture. If so, Brazilian instructors who employ nonverbal immediacy behaviors may not only enhance student perceptions of their competence, but also facilitate increased student learning.

Some findings in this study were unexpected and call for further study. In particular, among Brazilian students, levels of instructor nonverbal immediacy were not associated with how trustworthy they considered their instructors to be. Perhaps in the collectivist Brazilian society, where individuals are attuned to preserving social harmony (Hofstede & Hofstede, 2005), use of nonverbal immediacy can just as readily be expected to cover over negative motivations as to communicate positive ones. In contrast, individualistic American students, who place a cultural value on forthrightness and directness, might more readily connect expressions of psychological closeness, such as nonverbal immediacy, with instructors’ underlying motives. Finally, this study was not designed to determine which behaviors Brazilian students construed as being highly immediate, or how intensely these behaviors need to be performed by instructors. As Neuliep (1997) remarked, “Although it may be universally valid to argue that teacher immediacy facilitates learning, the operationalization of immediacy may vary considerably across cultures” (p. 449). Future research that identifies these behavioral norms could provide a helpful resource for instructors moving between the two countries.

Three limitations of this study should be mentioned. First, questionnaires such as ours rely on participant memory of behaviors that may not typically be noticed consciously and may, therefore, differ from actual nonverbal immediacy behaviors (Andersen, 1979). Future cross-cultural studies should employ observation in addition to self-report of immediacy behaviors. Second, we adapted a U.S.-originated instrument, rather than developing a Brazilian equivalent. Although reliability for the NIS was acceptable in both cultures, it is nevertheless possible that some behaviors that convey nonverbal immediacy for Brazilian students were not included in the scale. Finally, through an unanticipated circumstance, all students in the Brazilian sample were engineering students. They and the instructors they referenced could have differed in some aspects from instructors in other disciplines.

References


