Immediacy Scale Represents Four Factors:
Nonverbal and Verbal Components Predict Student Outcomes

Janie H. Wilson
GEORGIA SOUTHERN UNIVERSITY, USA

Lawrence Locker, Jr.
GEORGIA SOUTHERN UNIVERSITY, USA

ABSTRACT

Immediacy communicates psychological availability and warmth. In the classroom, instructor immediacy is traditionally measured with ratings of nonverbal and verbal behaviors. Although nonverbal immediacy has been accepted as a legitimate measure of immediacy, the validity of verbal items has been questioned. In the present study, we examined face and construct validity of the verbal immediacy scale. Based on factor analysis and prediction of student outcomes, we concluded that both verbal and nonverbal items offer valid measures of immediacy. However, we recommend a new iteration of the immediacy scale, omitting some items and focusing on those most strongly related to immediacy.

INTRODUCTION

Immediacy is defined as psychological availability (Mehrabian, 1969) and has been studied as a useful component of the classroom milieu (Andersen, 1979). A traditional immediacy scale measures specific nonverbal and verbal behaviors (e.g., Gorham & Christophel, 1990) that can be implemented as best practices for establishing rapport in the classroom.

The earliest measures of immediacy were nonverbal, including items such as "smiles," "gestures," and "looks at the class while talking" (Andersen, 1979). More recently, Gorham (1988) created verbal items by asking advanced undergraduates to describe their "best teachers," which she labeled as effective teacher behaviors, and slight variations of the scale have followed (Gorham & Christophel, 1990). Based on Gorham's methodology, Robinson and Richmond (1995) argued that verbal items do not measure immediacy; they measure instructor effectiveness, the extent to which a teacher effectively communicates knowledge. In support of their claim, they found weak to moderate correlations between the accepted nonverbal immediacy composite score and individual verbal items. (The exception was "uses humor in class," which correlated above .50 across several data sets.) The authors assumed that instructor effectiveness would correlate with verbal items, although this was not assessed in their study.

Mottet and Richmond (1998) subsequently offered a different version of the immediacy scale that is not limited to a specific set of verbal behaviors. The new scale assesses a wealth of verbal strategies used to create and sustain relationships. Unfortunately, the final 14 approach/avoidance items are cumbersome and ambiguous; for example, "Use communication that includes him/her talking about things we have in common or talking about things we have done together or by saying such things as 'Do you want to go with us,' and 'We should go out sometime.'" In addition, some of the items might not be appropriate in an instructional setting (see prior example). Finally, the authors argued that approach-avoidance and immediacy are separate constructs, although verbal approach may serve to enhance immediacy. Indeed, Richmond later referred to this attempt to create a verbal immediacy scale as "unsuccessful" (Richmond, McCrosky, & Johnson, 2003). In the same article, Richmond and colleagues asserted that "there currently is no measure of verbal immediacy and…it is better to think of immediacy simply as a nonverbal construct" (p. 506).

Taken together, the original verbal immediacy scale (Gorham, 1988) is assumed to measure teacher effectiveness rather than immediacy, and a subsequent attempt to create a new verbal immediacy scale was not successful. However, we suggest that the question of whether or not the verbal immediacy scale measures teacher effectiveness is an empirical one. Therefore, the first goal of the present study was

to quantify relationships between verbal items and a measure of instructor effectiveness. Strong relationships would provide evidence for convergent construct validity. If verbal items indeed measure instructor effectiveness, the currently used verbal immediacy scale should be abandoned in favor of a scale that measures student perceptions of psychological availability. Or, as Richmond and colleagues (2003) suggest, the verbal scale might be abandoned altogether. After all, an instructor who is good at his or her job is not necessarily warm and caring. However, lack of strong relationships with teacher effectiveness might indicate that students who created the scale were in fact describing immediate teachers (Gorham, 1988). Further, if immediacy and instructor effectiveness are indeed different constructs, nonverbal immediacy items should not correlate strongly with instructor effectiveness. In the present study, this possibility was also examined to illustrate divergent construct validity.

To further examine the verbal scale, we inspected the items themselves. "Addresses students by name," "praises students' work," and "gets into conversations with individual students" seem to logically assess an aspect of immediacy, warmth, or psychological availability. As such, several verbal items might yet be useful as measures of immediacy. However, the face validity of other items is not directly apparent. For example, "invites students to telephone or meet outside of class if they have a question or want to discuss something" may indicate to students that the instructor will not entertain questions during class. Further, several verbal items seem to assess whether or not the instructor is willing to stray off-topic during lecture, and this does not seem to characterize immediacy. As a group, "off-topic" items might also be explained as ambiguous instructor behaviors. That is, examination of these items reveals behaviors that could easily be construed as positive or negative by students, depending on the instructor's delivery. Finally, one item asks students to report how often the instructor "has invited students to use his/her first name," an item that would be questionable for many instructors. It seems clear that the verbal scale would benefit from a new iteration. Exploratory factor analysis using a large data set would tell us which items are useful when measuring immediacy and how many factors are assessed in the scale. Therefore, a second goal of the present study was to reduce data from the immediacy scale to meaningful factors using factor analysis.

Nonverbal immediacy has served as an excellent predictor of student outcomes, including motivation (Christophel, 1990; Christophel & Gorham, 1995; Christensen & Menzel, 1998; Frymier, 1993), perceptions of learning (Christensen & Menzel, 1998; Witt, Wheeless, & Allen, 2004), and both attitude toward the course and the instruc-

tor (Andersen, 1979; Andersen et al., 1981; Christensen & Menzel, 1998). Instructor verbal immediacy also has been associated with student motivation (Frymier, 1993), perceptions of learning (Menzel & Carrell, 1999; Witt, Wheeless, & Allen, 2004), and both attitude toward the course and the instructor (Moore, Masterson, Christophel, & Shea, 1996). Although at least one study suggested that nonverbal and verbal items represent only one factor to be used in prediction (Gorham, 1988), the majority of immediacy research separates nonverbal and verbal items into two separate measures (e.g., Frymier, 1993; Menzel & Carrell, 1999; Moore et al., 1996). In the present study, we expected at least two separate components to emerge from factor analysis of a large data set, and we hypothesized that verbal items would represent more than one distinct factor. After factor analysis of the entire immediacy scale (including nonverbal and verbal items), nonverbal items were expected to continue as an excellent predictor of student outcomes. Verbal items with strong face validity were expected to predict as well as nonverbal items.

METHOD

Participants

Forty-four instructors from a liberal-arts university in the southeast agreed to allow their students to participate in this study, and 1572 students completed the survey after agreeing to do so. The 61 courses in which students were surveyed were undergraduate courses across a wide range of levels. Instructors were evaluated by 679 males, 886 females, and 7 students not reporting gender. Students' ages ranged from 17 to 48 ($M = 20.15$, $SD = 3.15$).

Procedure

In the final two weeks of the term, students reported their current grade in the course. In addition, they rated their response to the statements: "The instructor motivates me to do my best work" on a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*); "Rate the course as a whole" from 1 (*Poor*) to 5 (*Excellent*); and "Rate the overall effectiveness of your instructor" from 1 (*Poor*) to 5 (*Excellent*). Participants also rated their attitude toward the professor on a scale from 1 – 7, with 7 indicating a "strong positive attitude toward the professor." Next, students completed the 23-item immediacy scale (Gorham & Christophel, 1990), with responses ranging from 0 (*Never*) to 4 (*Very Often*). The immediacy questionnaire contained 17 verbal and 6 nonverbal items. Items 19 and 22 were reverse scored, such that higher numbers indicated more immediacy.

TABLE 1

*Immediacy Items, Instructor Effectiveness Correlations, and
Principle Component Analysis with Varimax Rotation*

Components

Survey Items	Instructor Effectiveness	Individual Friendliness	Flexibility During Lecture	Nonverbal	First Name
1. Uses personal examples or talks about personal experiences.	.22	.089	.662	.154	-.153
2. Asks questions or encourages students to talk.	.50	---	---	---	---
3. Gets into discussions based on something a student brings up even when it doesn't seem to be part of the lecture plan.	.27	.157	.809	.038	.002
4. Uses humor in class.	.50	.260	.505	.524	-.045
5. Addresses students by name.	.44	.798	.059	.251	-.073
6. Addresses me by name.	.37	.856	-.032	.102	-.061
7. Gets into conversations with individual students before or after class.	.38	.612	.309	.196	.059
8. Has initiated conversations with me before, after, or during class.	.38	.727	.200	.078	-.108
9. Refers to class as "our" class or what "we" are doing.	.42	---	---	---	---
10. Provides feedback on my individual work through comments on papers, oral discussions, etc.	.37	.686	.224	.040	.200
11. Calls on students to answer questions even if they have not indicated that they want to talk.	.27	.594	.271	.076	-.270
12. Asks students how they felt about an assignment.	.44	.574	.260	.196	.101
13. Invites students to telephone or meet outside of class if they have a question or want to discuss something.	.38	---	---	---	---
14. Asks questions to solicit viewpoints or opinions.	.36	.338	.646	.167	.228
15. Praises students' work, actions, or comments.	.51	.650	.318	.274	.063
16. Will have discussions about things unrelated to class with individual students or with the class as a whole.	.25	.308	.689	.002	-.133
17. Has invited students to use his/ her first name.	.13	.157	.287	.043	-.599
18. Gestures while talking to class.	.30	.094	.329	.530	-.236
19. Uses a monotone/dull voice while talking to the class.	.43	.235	-.025	.688	.039
20. Looks at the class while talking.	.33	.070	.236	.528	.346
21. Smiles at the class as a whole, not just a few select students.	.54	.318	.202	.608	.165
22. Has a tense body position while talking to the class.	.30	.126	-.074	.639	.095
23. Moves around the classroom while teaching.	.28	.007	.113	.645	-.194

RESULTS

Instructor Effectiveness

Students' ratings of their instructor's effectiveness were moderately related to most verbal items, with all correlations $p < .001$ (see Table 1). Interestingly, instructor effectiveness was also moderately correlated with most nonverbal items (all $p < .001$; see Table 1).

Immediacy Data Reduction

Principle component analysis with a varimax rotation of immediacy items revealed four significant components with Eigenvalues above 1.00. The rotated component matrix was used to omit items that did not reach a minimum value of .50; these included items 2, 9, and 13. Remaining items loaded at a minimum of .50 on one of four factors as indicated in Table 1. An Eigenvalue of 7.782 was found for the first component and revealed high loadings for items 5-8, 10-12, and 15. Component 1 was labeled "individual friendliness" for items such as "addresses students by name," "provides feedback on work," and "asks students how they felt about an assignment." Based on the face validity of these items, "individual friendliness" should be considered the best representation of immediacy. Component 2 had an Eigenvalue of 1.864, with high loadings for items 1, 3, 4, 14, and 16. Item 4, "uses humor in class" loaded with a .505 on component 2 and .524 on component 3; therefore, this item remained as an item on both factors. Component 2 was labeled "flexibility during lecture" based on items such as "uses personal examples" and "will have discussions about things unrelated to class." Component 3, with an Eigenvalue of 1.711, revealed high loadings on items 18-23, all of which address nonverbal behaviors such as "looks at the class while talking" and "moves around the classroom while teaching." Component 4, "first name," was characterized by item 17: "has invited students to use his/her first name." The Eigenvalue for Component 4 was 1.087.

Items on each immediacy component were averaged to provide a composite score for further analysis. "Individual friendliness" contained 8 items with an alpha reliability of .88. "Flexibility during lecture" was defined by 5 items (alpha .80). "Nonverbal immediacy" included 7 items with a Cronbach's alpha of .76. First name contained only one item.

Regression Analyses

Table 2 presents descriptive statistics and correlations among all variables: the four immediacy components, motivation, projected course grades, attitude toward the course, and attitude toward the instructor.

All four immediacy factors were entered using forward regression, whereby the factor with the most predictive value is entered into the equation first, followed sequentially by less predictive factors. Separate regression equations were

TABLE 2

Descriptive Statistics and Correlations Among Variables

Variable	M	SD	2	3	4	5	6	7	8
1. Individual Friendliness	2.32	1.05	.57	.50	.20	.58	.30	.48	.53
2. Flexibility During Lecture	2.43	.93		.53	.24	.44	.22	.43	.45
3. Nonverbal Behaviors	3.14	.69			.13	.54	.23	.53	.60
4. First Name	.68	1.23				.14	.10	.13	.14
5. Student motivation	3.85	1.02					.32	.67	.73
6. Projected grade in course	2.84	.82						.36	.33
7. Attitude toward the course	3.55	1.11							.78
8. Attitude toward the instructor	5.60	1.48							

run for each of the following student outcomes: motivation, projected grade in the course, attitude toward the instructor, and attitude toward the course (Wilson, 2006; Wilson & Taylor, 2001). All model *F*-tests were significant ($p < .001$; see Table 3 for significant predictors).

DISCUSSION

Nonverbal immediacy items have been used as a valid measure of the immediacy construct; however, based on the original scale construction (Gorham, 1988), verbal items were believed to assess instructor effectiveness (Robinson & Richmond, 1995). The present study revealed that verbal items do not measure teaching effectiveness. In fact, nonverbal items were just as related to teaching effectiveness

as verbal items were. Effectiveness correlated with verbal and nonverbal items moderately, with an average of 13% in common. Although teacher effectiveness is clearly a separate construct based on only moderate overlap with immediacy items, it is reasonable that effectiveness would be somewhat associated with immediacy. An effective teacher might not be immediate, but an immediate teacher likely would be seen as effective by his/her students. Lack of strong correlations with effectiveness provides a rationale to dismiss this criticism of the verbal immediacy scale.

Further, although students who helped to compose the verbal immediacy scale indeed were asked to describe behaviors of their "best teachers," it is unlikely that students limited their comments to instructors who effectively communicated knowledge to them. Instead, they may have fo-

TABLE 3

Regression Analyses to Predict Student Outcomes from Immediacy Factors

	ΔR2	B	Std. Error	β	Sig.
Motivation					
Friendliness	.332	.380	.025	.390	.000
Nonverbal	.087	.477	.037	.320	.000
Flexibility	.002	.058	.029	.052	.044
Projected Grade					
Friendliness	.095	.192	.023	.246	.000
Nonverbal	.009	.130	.035	.109	.000
First Name	.003	.035	.017	.052	.046
Rate Course					
Nonverbal	.286	.581	.042	.358	.000
Friendliness	.063	.264	.028	.249	.000
Flexibility	.006	.121	.033	.101	.000
Toward Instructor					
Nonverbal	.370	.992	.050	.459	.000
Friendliness	.070	.431	.032	.304	.000

cused on all aspects of teaching that might be seen as positive or aspects they themselves appreciated in a teacher. In fact, the word "effective" was not found in the instructions to students who helped to create the scale; "effective teacher" was used only by Gorham (1988) when she labeled the behaviors offered by students. Our data indicate that students who described their best teachers included a wide range of instructor behaviors, including several that appear to tap into psychological availability.

Immediacy is likely a multidimensional construct that can be assessed via nonverbal as well as verbal items. In support of this claim, Teven and Hanson (2004) found that verbal indications of caring should be used in conjunction with nonverbal immediacy behaviors to communicate teacher competence and trustworthiness to students. Based on written scenarios of teacher behaviors, students rated teachers as less competent and trustworthy even when teachers exhibited high levels of nonverbal immediacy behaviors. The authors assert that "faculty could do well by developing the skills and behaviors that communicate caring and immediacy both verbally and nonverbally" (p. 51). Therefore, it is important for researchers to continue to use verbal immediacy items in conjunction with nonverbal items to assess the multidimensional construct of immediacy.

The idea that immediacy may be multidimensional is supported by factor analysis in the present study. Verbal items with strongest face validity loaded on one factor; verbal items relating to the instructor's willingness to stray off-topic during lecture (or engage in ambiguous behaviors) represented a second factor; the third factor was nonverbal; and using a professor's first name represented its own factor. Although the current analysis supports a multidimensional interpretation of the immediacy construct, it should be noted that the fourth factor was based on a single item (i.e., "first name") and should be treated with some caution. Despite this limitation, it is likely that all of these factors represent aspects of the immediacy construct.

We should note that humor loaded on two factors, allowing "Uses humor in class" to define flexibility during lecture (ambiguous behaviors) and nonverbal immediacy. These high loadings are intuitive, with humor potentially leading the class off-topic or offering ambiguous information to students. Gorham and Christophel (1990) pointed out that associations between humor and immediacy depend on the type of humor used and how often humor is employed. Further, humor is not exclusively defined by verbal jokes and can easily be nonverbal, with body language commu-

nicating humorous behaviors. Finally, recall that Robinson and Richmond (1995) also reported humor as the single item to correlate strongly with both verbal and nonverbal immediacy.

All factors in this study served to predict valuable student outcomes. As would be expected based on the immediacy literature, nonverbal items and "individual friendliness," the factor most obviously linked with psychological closeness, were the best predictors for all positive student outcomes. Although the remaining two factors did significantly improve prediction, effect sizes were small, and results should be interpreted with caution, particularly given the large sample size in our study. Flexibility during lecture also can be interpreted as ambiguous instructor behaviors; these behaviors must occur in a positive way in order to be interpreted by students as immediate. For example, "Asks questions to solicit viewpoints or opinions" will be interpreted as verbally immediate only if the instructor does not make students uncomfortable or angry. Finally, using the instructor's first name does not have much predictive power when examining positive student outcomes. Specifically, only students' projected grades were influenced by using the instructor's first name, and the amount of additional variability explained was merely .3%.

The present study indicates that the verbal immediacy scale is a valid measure of the construct of interest. However, a new iteration of the scale is in order. Based on factor analysis of a large data set, items 2, 9, and 13 should be omitted from the scale. Further, the highest face validity is found in items 5-8, 10-12, and 15, all of which coalesce on one factor: "individual friendliness." This factor as well as the nonverbal factor offers a useful, streamlined approach to measuring immediacy and predicting valuable student outcomes.

Valid immediacy items allow instructors to focus on verbal and nonverbal behaviors that have the most impact on student outcomes and provide information on best practices for building rapport with students. In fact, Keiper and Evans (1994) proposed that teachers should rehearse immediate behaviors. Based on the present study, instructors could practice nonverbal behaviors and focus on being verbally friendly to students; however, they should not be overly concerned with flexibility during lectures or inviting students to call them by their first names. As teachers continue to build classroom rapport, they are likely to find many additional verbal and nonverbal ways to communicate a positive attitude toward their students.

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