

DOCUMENT RESUME

ED 324 731

CS 507 306

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TITLE Instructor Communication Behavior as a Factor
Influencing the Class Participation of Classroom
Communication Apprehensives.
PUB DATE Nov 90
NOTE 26p.; Paper presented at the Annual Meeting of the
Speech Communication Association (76th, Chicago, IL,
November 1-4, 1990).
PUB TYPE Speeches/Conference Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Classroom Communication; Classroom Environment;
*Communication Apprehension; *Communication Skills;
Higher Education; *Instructional Effectiveness;
Student Participation; *Teacher Effectiveness;
Undergraduate Students
IDENTIFIERS *Communication Behavior

ABSTRACT

A study investigated instructor communication behavior as a factor mediating classroom apprehensives' (CA) perceived discomfort with class participation. Respondents were 142 female and 85 male undergraduates enrolled in speech communication courses during the 1988-1989 academic year. Respondents were provided a packet of survey materials containing the communication apprehensive measure and dependent measures. The survey was administered during the final 20 minutes of class at the end of the first week of the semester. Findings revealed that classroom apprehensives rated several instructor communication behaviors as decreasing perceived discomfort about participation. Results indicated that instructors may directly contribute to remedying the discomfort level of high CA's by utilizing communication that reduces their anxiety. Future research should focus on identifying additional instructor behaviors that function as either situational causes of anxiety or those which mediate situational anxiety. (One table of data and one figure are included, and 31 references are attached.) (MG)

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ED324731

Instructor Communication Behavior as a Factor Influencing the Class Participation of Classroom Communication Apprehensives

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A Paper Presented to the Speech Communication Association
November 1-4, 1990
Chicago, Illinois
Sponsor: Commission on Communication Apprehension & Avoidance

The study investigated instructor communication behavior as a factor mediating classroom apprehensives' perceived discomfort with class participation. Findings revealed that classroom apprehensives rated several instructor communication behaviors as decreasing perceived discomfort about participation. These behaviors are interpreted within the context of situational factors that have previously been identified as factors contributing to anxiety level of high communication apprehensives.

CS507306

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Instructor Communication Behavior as a Factor Influencing the
Class Participation of Classroom CA's

Several studies have recently examined classroom apprehension (CA) associated with class interaction. A consistent finding to emerge from these studies is that the high CA's prefer to isolate themselves from class interaction and often select seating locations to ensure their minimal interaction (McCroskey & Sheahan, 1976; McCroskey & McVetta, 1978). Other studies also have observed that CA's perform verbal and nonverbal behaviors that minimize their interaction involvement (Burgoon & Hale, 1983; Burgoon & Koper, 1984; Burgoon, Pfau, Birk, & Manusov, 1987). For instance, reticents are described by peers as speaking less frequently (Burgoon & Aho, 1982) as well as offering fewer relevant contributions to discussion (Phillips & Metzger, 1973; Sorensen & McCroskey, 1977). CA's also appear to use less intense language when expressing themselves and encode messages that are more difficult to decode as well as verbalizing less disclosing, information-seeking, and information-giving statements (Arnston, Mortensen, & Lustig, 1980; Freimuth, 1976; McKinney, 1982; Mortensen & Arnston, 1974).

The impact of apprehension in the classroom is more clearly demonstrated in studies examining the effects of CA on academic achievement. For instance, apprehensives are more likely to receive lower grades in smaller classes than they are in mass lecture classes (Hurt, Preiss, & Davis, 1976; McCroskey & Andersen, 1976; Scott & Wheelless, 1975). Furthermore, CA's have been found to average one-half point lower cumulative grade point averages in their college work despite no apparent differences in intelligence level

(McCroskey, 1977). Still other research reveals that apprehensives often fail to speak even when needing a point of clarification (Neer, 1987) and that, by their failure to ask questions, report they do not learn needed information (Bowers, 1986) perhaps explaining why several studies have found that apprehensives earn lower course grades than low apprehensives.

These studies indicate that apprehension impacts on both classroom communication behavior and class performance, yet they do not reveal the means by which anxiety may be reduced. However, two recent studies have examined classroom conditions contributing to classroom CA. In the first of these studies, Bowers and his students (1986) identified the instructor's classroom communication behavior as a contributor to CA. They found that instructors of comfortable classes were perceived as friendly, noncritical, student-oriented, and addressed students by first-name. Their findings are similar to a second study (Neer, 1987) which found that CA's reported discomfort with instructors who challenge them to defend an answer and with instructors who expect a certain answer to a question.

These findings are of potential value to instructors because they suggest that classroom CA may be mediated in part through instructor communication behavior. Furthermore, findings in the Bowers and Neer studies are consistent with situational causes of anxiety identified by Buss (1980) and McCroskey (1984). Buss defines subordinate status as expectations accompanying behavior as set by those of higher status or power. Instructors, by virtue of their authority role in the classroom, may be perceived by students as holding higher status. Also, because instructors set performance criteria and evaluate subsequent performance, students may experience additional anxiety triggered by evaluation apprehension (McCroskey, 1984). The Bowers and Neer instructor

communication behaviors therefore appear to function as a means by which to reduce both subordinate status (i.e., addressing students by first-name) and evaluation potential (i.e., not challenging students to defend an answer).

The purpose of the present study was to identify additional instructor communication behaviors that may increase classroom CA's class participation without further increasing their level of discomfort. Two sets of communication behaviors were investigated. The first set examined instructor-initiated discussion questions designed to draw students into class discussion. The instructor who encourages participation through various prompting-type questions, in essence, structures the type of response expected from students. At the very least, prompter questions help to direct the type of interaction that students may engage. The high CA student may benefit the most from questions that structure an appropriate response, particularly since accumulated research supports a generally low interaction profile for the high CA. A recent study by Booth-Butterfield (1986), for instance, indicates that CA's exhibit fewer communication disfluencies (i.e., fewer pauses, less gaze avoidance) when the interaction they engage is highly structured and they understand the type of interaction that is required.

The second instructor communication behavior examined in this study was teacher interaction style. Interaction style has been identified as a component of teacher competence and has received considerable research attention (see for example: Andersen, Norton, & Nussbaum, 1981; Rubin & Feezel, 1986; Spitzberg & Hurt, 1987). Collectively, studies in teacher competence indicate that the communication effectiveness of teachers is characterized by both task competence (e.g., verbal and nonverbal fluency, organizational skills) and social or relational competence, especially those factors conducive to

establishing a supportive classroom climate (e.g., teacher self-disclosure, openness, and listening).

Hypotheses and Rationale

Extant literature in CA and situational factors contributing to state anxiety support testing of the following hypotheses:

- H1. High classroom CA's will report a preference for low interaction questions that minimize the duration of their verbal responses while low classroom CA's will report a preference for answering questions that maximize both the duration and the importance of their contributions (e.g., expressing personal opinions).
- H2. High classroom CA's will report a preference for participation in class discussion when the instructor demonstrates communication competence while low CA's will participate regardless the instructor's competence.

The hypotheses are rooted in the theoretical work of Buss (1980) and McCroskey (1984). Low interaction questions should function to reduce conspicuousness that results from occupying the center of attention. Instructor interaction style holds the potential to reduce subordinate status since the instructor is able to reduce perceived or actual status difference through open and friendly interaction. The instructor's task competence also may function to reduce anxiety associated with task difficulty. That is, students may feel less anxious if they perceive the instructor as able to structure and organize a discussion that helps them provide relevant responses -- one difficulty frequently experienced by reticents (Phillips & Metzger, 1973).

Respondents

Respondents were 142 female and 85 male undergraduates enrolled in speech

communication courses during the 1988-1989 academic year (Age range = 17 - 35, Medium = 19.5). Respondents were provided a packet of survey materials containing the CA measure and dependent measures. The survey was administered in class during the final 20 minutes of class at the end of the first week of the semester.

The present study was not concerned with free-choice to communicate but with forced-compliance participation. Thus, the condition of instruction for responding to the dependent measures informed respondents that if they did not volunteer to participate they would be called on by the instructor. This testing condition was selected since accumulated research shows that apprehensives generally avoid class discussion or maintain a low interaction profile when they participate. The purpose in testing forced-compliance participation was to determine whether classroom CA's may be mainstreamed into discussion with minimal discomfort and if the instructor's communication behavior played a significant role in decreasing their perceived discomfort with participating.

Test Measure

Classroom apprehension was measured with the Classroom Apprehension Participation Scale (CAPS). The instrument is a 20-item inventory employing scaling procedures similar to the PRCA (Neer, 1987). The CAPS differs from the PRCA in that it exclusively measures classroom-specific apprehension. The present study generated similar reliability (Cronbach's alpha = .95) and factor analysis statistics initially reported by Neer. Specifically, all 20 items loaded between .46 and .79 on the unrotated factor with twelve items loading above .50 and only two loading under .50 (Eigenvalue = 9.90, %Variance = 49.50). The CAPS was selected over the PRCA because, as Beatty and Andriate (1985) state, situation-specific measures offer a more accurate

assessment than generalized measures when the target audience has accumulated sufficient experience with the stimulus situation at hand.

Scaling

The hypotheses examined if instructor communication behavior influenced perceived comfort with required participation in class discussion. Comfort was defined within the instructions accompanying each instructor communication behavior set in the following manner: assume that you are enrolled in a course in which class participation is required, would you feel more comfortable voluntarily participating before being called on to participate by the instructor communicated in each of the ways described below. Comfort was operationalized within the instructions to respondents as feeling less tense and nervous about discussion while feeling more calm, relaxed, and at ease. These adjectives were selected for operationalization of comfort since each is a stimulus item on the short-version (O'Neil, Spielberger, & Hansen, 1969) of the Spielberger, Gorsuch, and Lushene (1970) STAI (A-State) anxiety scale. A direct measurement of anxiety was decided against because of the large number of dependent measures examined in this study. That is, considerable fatigue may have been generated by requiring respondents to rate their anxiety level on the five-item anxiety scale after reading each of the nineteen instructor communication behavior items examined in this study. A recent study (Neer, 1989) testing two of the same instructor behaviors examined in this study yielded significant differences between low and high CA with the STAI short-form. The operationalization of comfort therefore appears to function as intended in assessing anxiety level. All items were dichotomously rated (i.e., "yes" or "no") on the basis of whether the perceived comfort that respondents attributed to each instructor behavior would increase their

estimated participation (i.e., I would feel comfortable about participating before being called on if the instructor communicated in the manner described above). Dichotomous rating was selected to commit respondents to a particular behavioral predisposition either for or against class participation. These ratings were therefore considered more appropriate than attitudinal ratings for examining the mainstreaming argument advanced in this study.

Dependent Measures

The instructor questioning behavior set (Split-half = .77) consisted of eight author-generated questions that respondents rated they would or would not feel comfortable answering in a class discussion before being called on to participate (i.e., questions requiring only a factually-based response, questions of interest to the class, questions that raise interesting issues about a topic, questions not requiring absolute or specific answers, questions that encourage the expression of personal opinion, questions that allow students to answer any way they wish, questions for which a student has expertise or sufficient knowledge to answer, and questions that encourage students to express how much they know about a topic).¹

Factual-based questions and questions not requiring absolute or specific answers are hypothesized to increase comfort level of the high CA. One of Buss' (1980) situational factors, conspicuousness, suggests that standing out in one's environment increases anxiety. Thus, these questions should reduce conspicuousness since each requires less time to answer. Each also should decrease evaluation potential or anticipated negative feedback from others (McCroskey, 1984) since they do not require statements of personal opinion. The third question that high CA's may feel more comfortable answering are questions for which they have sufficient information to answer. These

questions should reduce subordinate status, not only between student and teacher, but among students. As Beatty (1988) suggests, students consider other students as "critics" if they are perceived as superior.

The instructor interaction style set consistend of eleven communication behaviors. The items selected for testing were derived from research in teacher communication competence (Split-half = .79). For instance, openness and friendliness have each been found to be a component of teacher competence (see for example: Andersen, Norton, & Nussbaum, 1981; Spitzberg & Hurt, 1987). Several of the items (see Figure 1 items 3, 4, 6, 8, and 11) examined whether CA's would participate if they perceived their instructors as open and friendly. Rubin and Feezel (1986), in evaluating teacher competence, also report that competent teachers are perceived as organized, able to summarize, and able to listen attentively to students. Remaining items therefore examined whether classroom CA's would participate in discussions in which they perceived their instructors as competently performing task-oriented classroom communication behaviors. ²

Within the context of Buss' (1980) situational factors, the task competence behaviors should function to reduce audience anxiety or appearing disorganized in front of others. However, audience anxiety may only hold true for high CA's whose apprehension may be precipitated by a communication skills deficit. The social dimension behaviors, on the other hand, should function to reduce subordinate status between student and teacher. These same behaviors also should decrease perceived dissimilarity (i.e., amount of difference between speaker and audience) since informal and out of class interaction may increase acquaintance level or familiarity between student and teacher.

Analysis

The CAPS was completed first followed by the dependent measures in the order described. Data were analyzed with chi-square and Kendall's-tau test of relationship between cross-tabulated data. Chi-square was conducted by assigning CAPS raw scores to one of three range levels. Respondents were classified into one of three range levels (i.e., Low = 20 - 40, n = 42; Moderate = 41 - 64, n = 135; and High = 65 - 94, n = 44). Classroom CA was defined as the lower and upper 20 percent of classified raw scores in order to ensure adequate cell sizes for analysis.³

RESULTS

Findings for type of interaction required (i.e., questioning behavior) yielded only one significant result: high CA's preferred to answer questions that only require factual-based responses ($\chi^2 = 14.95$, 2df, tau = .24, $p < .001$; Low = 14%, Moderate = 38%, High = 45%). This finding provides only limited support for H1 and fails to confirm that low CA's more consistently prefer questions that place them at the center of classroom interaction. However, it should be noted that nearly two-thirds of both CA groups reported they would more likely participate when responding to questions that raise interesting issues about the topic and questions of interest to the class. All other questions were rated by respondents as influencing their participation between one-third to one-half the time. Thus, despite limited support for H1, these additional findings demonstrate that instructors are able to selectively facilitate discussion through the type of participation they attempt to solicit from a class.

Nearly half of the instructor interaction style behaviors yielded significance. As these results indicate, low CA's report more comfort than high CA's with participating when instructors demonstrate a grasp of the

material, ability to summarize, and an ability to disclose. However, high CA's report more comfort participating when the instructor visualizes the discussion topic and demonstrates enthusiasm for class participation. All findings were significant beyond the .05 level except for demonstrating enthusiasm ($X^2 = 5.13$, 2df, $\tau = .11$, $p < .08$; Low = 16%, Moderate = 18%, High = 33%). These results are generally opposite of those predicted in H2; that is, low CA's more consistently reported a preference for participation than high CA's when instructors demonstrate communication competence (see Table 1).

Table 1 here

Analysis of High Classroom CA's

Several studies have reported that the classroom communication patterns of high CA's and reticents do not consistently differ from low CA's and reticents (see for example: Burgoon, Pfau, Birk, & Manusov, 1987). These studies suggest that some or, indeed, several high CA's may participate in class discussion prior to being called on. Respondents were therefore instructed to select one of five behaviors that best characterized their most often preferred method of entry into class discussion. Results indicated that 38% and 0% of high and low CA's, respectively, waited to be called on to participate. On the other hand, 33% and 78%, respectively participated whenever they wished. Another 12% and 16% entered discussion after one or two other students had already participated while 17% and 0% waited until a half-dozen students had first participated. Finally, 0% and 6% of high and low CA's, respectively, participated before anyone else in class ($X^2 = 95.88$, 8df, $\tau = .14$, $p < .001$). The analyses that follow examined significant

high CA's who volunteer to speak ($n = 27$) versus those who wait to be called on to participate by the instructor ($n = 17$).

The initial analysis examined whether CA's who voluntarily discuss participated in a different manner than CA's who wait until called on by the instructor. Findings revealed that high CA's who volunteer to speak preferred to answer questions that permit them to respond however they wished [$\chi^2 = 3.86$, 1df, $p < .05$, $\tau = .35$ ($p < .01$); Volunteer = 41%, Called on = 14%]. The second analysis examined whether the two instructor communication sets interacted to influence the participation of CA's who volunteer or wait to be called on to participate. Findings demonstrated that CA's who volunteer to discuss reported nearly twice as much expression of how much they know about a topic as CA's who wait to be called on (76% vs. 40%) when the instructor establishes a close and warm relationship with students out of class [$\chi^2 = 7.37$, 1df, $p < .01$, $\tau = .41$ ($p < .001$)]. Two additional findings approached significance ($p < .08$); CA's who volunteer feel more comfortable expressing personal opinions when the instructor spends time out of class with students and also prefer questions that permit them to express how much they know when the instructor is easy to talk with in class.

Discussion

Recent research has documented the importance of interpersonal context on apprehension. Booth-Butterfield (1988) reports that as level of formality in the classroom increases, anxiety level of CA's also increases. Similar findings were observed in a study on classroom CA (Neer & Kircher, 1989). In that study, classroom apprehensives reported increased comfort when discussion was informally structured (i.e., small group discussions conducted prior to discussion before the entire class) and if discussion was engaged

after students have had an opportunity to first meet other students in class. Thus, an interpersonal climate factor may better explain CA's level of comfort and perceived classroom behavior than the type of participation solicited by the instructor. That is, only the factual-based question tested in this study was preferred by high CA's. However, high CA's voluntarily participating also reported increased participation when they perceived their instructors able to interact informally both in and out of class. Thus, a supportive classroom climate is not only a function of the interpersonal context established within the classroom but is also nurtured through an instructor's ongoing communication with students outside the classroom.

Findings in this study further demonstrate that apprehension level inconsistently impacts on high CA's perceived communication behavior. That is, over one-third of high CA's participate whenever they wished while only one-third wait to be called on. Additional research would appear particularly important in helping to identify those factors that explain why the communication behavior of low and high CA's differs in degree rather than in kind. Future research should therefore focus more attention on identifying the classroom participation patterns of high CA's rather than focusing solely on differences between low and high CA's.

Support for this conclusion may be found in findings for questioning style which revealed that both low and high classroom CA's were generally more comfortable about participating when the instructor used particular questions (i.e., questions of interest to the class and questions that raise interesting issues about the topic) to prompt class discussion. Findings for instructor interaction style further confirm that low and high classroom CA's perceived comfort with participation differs only in degree.

That is, one-half of the low CA's report they are more likely to participate when the instructor is a competent communicator; however, one-quarter of high CA's report a similar preference. Thus, it appears that the situational factors tested do not consistently impact on the classroom behavior of either low or high CA's. Nonetheless, reducing subordinate status more consistently contributes to the development of a supportive classroom climate, especially for the high classroom CA. Furthermore, a reduction in subordinate status also appears to increase familiarity and acquaintance level between student and teacher.

Given the inconsistent impact of situational factors in this study, research should reexamine the influence of these factors on high CA's who do not participate until called on. For these students, structuring a supportive classroom climate to reduce situational causes of anxiety may prove insufficient to increasing their class participation. However, until this issue is directly assessed through observation of actual classroom behavior, it would be speculative to conclude that situational factors do not mediate either situational anxiety of these high CA's or their classroom participation if actually called on to discuss. Research has not yet established that the CAPS functions exclusively as a state or trait CA measure. The CAPS correlates between .77 and .82 with the PRCA-24a; thus, the CAPS may more strongly measure trait-CA levels for high classroom CA's who do not participate until requested than for high CA's who voluntarily participate. Should future research confirm that the CAPS functions as an accurate trait measure for the former group of high CA's, the role of situational factors may then be seriously questioned as effective mediators of state anxiety.

In fact, a recent study (Beatty, Ballfantz, & Kuwabara, 1989) reports

that situational factors may not be situational at all. The researchers demonstrated that high CA's reported similar ratings to two sets of situational factor measures separated by a five-week time frame. They argue that if these factors were situational (e.g., conspicuousness, dissimilarity, subordinate status, and familiarity) then the second set of ratings should not have been rated similarly to the first set. Thus, they conclude that situational factors, with the exception of novelty, are dispositional in nature and therefore function as stable reactions across situations. However, it also may be argued that if the original classroom conditions (i.e., situational factors) causing anxiety are not remedied in the classroom, then initial anxiety reactions should not be expected to be reduced. Findings for subordinate status in this study (i.e., informal interaction both in and out of class) may, indeed, be one way to remove situational causes of anxiety.

In summary, this study has demonstrated the potential of instructors' questioning style and their interaction style in the classroom to mediate perceived discomfort associated with participation in class discussion. While this study did not directly test the effects of instructor communication behavior on classroom participation, it has confirmed that select instructor behaviors function in a manner consistent with Buss (1980) and McCroskey's (1984) theoretical conceptualizations of situational factors. Despite the lack of behavioral support for findings in this study, they indicate that instructors may directly contribute to remedying the discomfort level of high CA's by utilizing communication that reduces their anxiety. Research should next focus on identifying additional instructor behaviors that function as either situational causes of anxiety or those which mediate situational anxiety. Once additional behaviors have been identified,

behavioral verification of actual classroom communication patterns of low and high CA's may begin with those behaviors that have demonstrated sufficient theoretical support consistent with situational causes of anxiety.

This study brings into focus the larger issue of the ability of apprehension measures in general and classroom apprehension in particular to predict the communication preferences of individuals whom we label as apprehensive. The failure of CA measures to consistently predict these preferences across all contexts need not call into question the validity of the measures themselves. Rather, measurement imprecision also may reflect the inability of the CA construct, largely through its narrowed focus, to identify a larger range of behaviors unrelated to apprehension. As findings in classroom CA continue to accumulate, one of the goals of research should be to identify both the range and the type of communication behaviors affected by, as well as those unaffected by, apprehension.

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Footnotes

¹It should be noted that these questions only represent student preferences for increasing comfort level. Thus, the questions are primarily concerned with opening the lines of communication in the classroom. Certain types of questions (e.g., answering however one wishes) may result in irrelevant and long-winded responses. However, in an open classroom, the instructor and, indeed, the students should each assume responsibility for focusing discussion on the content and the purposes of the course. Furthermore, these questions do not presume that students will provide better answers but rather encourage their participation in line with the mainstreaming argument advanced in this study.

²Although estimation of actual behavior was sought with the interaction style measures, it should be noted that respondents also may have responded to at least three of the items (see 1,3, and 10) as attitudinal preferences due to the verbal label of "easier" that appears in these items. However, the opening instructions accompanying these items clearly instructed respondents to provide behavioral estimations to each item. Findings in Table 1 demonstrate that high CA's reported lower estimated rates of participation to items 5 and 11 and higher rates to item 9, none of which include the "easier" label. These findings indicate that respondents rated the items as instructed. Thus, items 1,3, and 10 perhaps only differ from other items in level of behavioral commitment. That is, all items but these three reflect behavioral estimates rather than preferences regarding whether to participate.

³These ranges differ slightly from the conventional method of assigning range levels on the basis of mean deviation. That is, the low apprehension range was raised by three points above the mean deviate score while the high apprehension range was lowered by two points to accommodate the 20 percent breakpoint. Discriminant analysis examined the ranges against each CAPS item to ensure that low and high apprehensives rated each item differently. Results yielded one significant function (Eigenvalue = 3.57, %Variance = .96, $R_c = .88$, Wilks' = .188, $p < .001$). Univariate F-ratios were significant with all twenty items. F-ratios ranged from 43.64 to 135.0 with half over 70.0 and only two under 50. Classification results revealed that 100 percent of low and high apprehensives were correctly classified within their respective range level group while 82 percent of moderate apprehensives were correctly classified. Group centroids of -2.86, -.14, and 3.29 for the three range levels further demonstrates the reliability of the 20 percent breakpoint. In the interest of conserving space, factor loadings are summarized rather than detailed for each item. A copy of the factor loadings by items is available from the author. The CAPS also may be obtained from the author or by consulting the Neer (1987) study.

Table 1

Effects of Instructor Interaction Style

Instructor Style	Percent Participating		
	Low	Moderate	High
Grasp of Material:			
Yes	48	48	26
No	52	52	74
$(X^2 = 6.73, 2df, \tau = .15, p < .03)$			
Disclosing Ability:			
Yes	45	28	25
No	55	72	75
$(X^2 = 6.52, 2df, \tau = .12, p < .04)$			
Ability to Visualize:			
Yes	26	37	57
No	74	63	43
$(X^2 = 6.93, 2df, \tau = .14, p < .02)$			
Summarizing Ability:			
Yes	46	49	23
No	54	51	77
$(X^2 = 7.02, 2df, \tau = .14, p < .02)$			

Figure Caption

Figure 1. Instructor Classroom Interaction Style

1. I find it easier to participate if the instructor is able to keep the discussion focused and summarizes what the class is saying.
2. The instructor's non-verbal cues (e.g., lively gesturing, good eye contact, tone of voice, facial expressions) encourages me to participate in class.
3. I find it easier to participate if I am able to interact informally out of class with the instructor.
4. I participate more often when the instructor is open to viewpoints other than his or her own
5. I am more likely to take part in discussion when the instructor demonstrates a grasp of the material.
6. If the instructor is easy going or easy to talk with, I am more likely to participate in class discussion.
7. I am more likely to participate in class if the instructor spends time out of class with students.
8. Discussion is easier for me if the instructor establishes a close and warm relationship with students out of class.
9. I discuss more often when the instructor demonstrates eagerness for the class to participate and expresses enthusiasm when members of the class start talking.
10. Discussion is easier for me when the instructor can either tell a good story or is able to help visualize the discussion topic through examples that the class can relate to.
11. I talk more often in class if the instructor is honest and able to disclose his or her own experiences on a topic.

END

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Date Filmed

March 29, 1991