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A STUDY OF PARENT-TEACHER COMMUNICATION: THE SOCIAL/COGNITIVE AND EFFICACY BASES OF TEACHERS' COMMUNICATIVE STRATEGIES

by

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A dissertation submitted to the Graduate Faculty in Educational Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, the City University of New York

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Abstract

A STUDY OF PARENT-TEACHER COMMUNICATION: THE SOCIAL/COGNITIVE AND EFFICACY BASES OF TEACHERS' COMMUNICATIVE STRATEGIES

by

Laura G. Rolnick

Adviser: Professor Marian Fish

The present investigation seeks to identify and understand individual differences in teachers' messages to parents during conferences about children's learning and behavior problems. The study draws upon the methodology, constructs, and message coding systems developed within the constructivist approach to the study of communication (Applegate & Woods, 1991; Delia, 1987; O'Keefe & Shepherd, 1989).

Elementary school teachers (n=84) were drawn from 24 schools in three urban school districts. Each participant completed a written questionnaire and produced messages for two types of hypothetical simulated

situations -- explanatory and persuasive -- during a face-to-face interview. In explanatory situations, teachers responded to a parent's assertion that the teacher had failed to fulfill a professional obligation (e.g., solve a child's peer relationship problem). Explanations were ranked on a five-point scale ranging from highly defensive to highly supportive message content. In persuasive appeal situations, teachers responded to a parent who was opposing the teacher's request for assistance in solving a child's school-related problem. Persuasive appeals were ranked on a five-point scale ranging from positional to person-centered communication. Both sets of messages were ranked for relational development (effort to pursue a relationship with a difficult parent). Multiple goal management scores were assigned to messages for strategy choices in issuing demands and/or criticism.

Data were examined through path analyses to assess the role of construct differentiation (a measure of *a priori* social/cognitive achievements), teacher efficacy, and communication efficacy. Teacher efficacy was measured with the two-factor Gibson Teacher Efficacy Scale. Personal teaching efficacy -- teachers' beliefs in their instructional performance capabilities -- had a significant direct influence on all variables. Construct differentiation had a sig-

nificant influence on explanation and relational development scores, but not on persuasive appeal scores. A portion of the influence of construct differentiation was transmitted through personal teaching efficacy and communication efficacy. Highly differentiated and efficacious teachers were more likely than others to address multiple communicative goals when issuing directives and expressing criticism. General teaching efficacy was not a significant source of variance for any of the communication measures.

Directions for future research and implications for staff development are discussed.

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To my parents, Betty and Bernie

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Introduction

Parent-teacher relationships are important to the achievement of satisfactory educational outcomes. When parents and teachers communicate well, students do better academically, teachers experience greater job satisfaction, and parents are happier with their children's school experience. The importance of the parent-teacher relationship has been well documented through several lines of research. Numerous studies have demonstrated the benefits of parent involvement and home interventions programs (Henderson, 1987; Herman & Yeh, 1980; Reynolds, 1989; Tizard, Schofield & Hewison, 1982; Walberg, Bole & Waxman, 1980). Differences in achievement associated with home environment factors point to the need for educators to work with families (Christenson, 1990; Christenson, Rounds & Gorney, 1992; Hess & Holloway, 1984; Iverson & Walberg, 1982). Hanson (1986) has shown the importance of continuity between the home and school concerning rules of interpersonal behavior and interaction.

Collaborative relationships between parents and teacher are not easily achieved. Numerous philosophical, attitudinal, and logistical factors impede parent-

teacher cooperation (Fish, 1990). The belief that the school and family are separate spheres of influence, for example, each with its own area of responsibility, supports a posture of distance and non-interference (Epstein, 1990). Attitudes of respect and trust are easily compromised by cultural differences, attributions of blame, competitiveness, and conflicting agendas arising from different roles and responsibilities (Lightfoot, 1978; see also Parsons, 1959). According to Lightfoot (1978), the presence of a disparity in power between parents and teachers makes conflict between the home and the school virtually inevitable. As if these impediments were not sufficient, parents and teachers often lack sufficient time to work through disagreements and realize mutual respect and understanding. Whether taken together or individually, the logistical, philosophical, and attitudinal factors are formidable barriers to the development of cooperative parent-teacher relationships.

The parent-teacher conference is regarded as an important tool for strengthening parent-teacher relationships (Canady & Seyfarth, 1979). Face-to-face meetings between parents and teachers, whether formal or informal, provide an opportunity for exchanging information, sharing perceptions, developing common

goals, and building trust and mutual respect. Yet the parent-teacher conference is a delicate instrument -- one that can damage as well as strengthen relationships.

The success of a conference is evaluated according to its outcomes. From the perspective of the educational community, a successful conference produces four outcomes: the parent "departs with a positive attitude toward the school and a willingness to continue to work cooperatively with the school staff"; the teacher and the parent have acquired more trust in each other; the teacher and the parent have each acquired more knowledge about the child; and the parent and teacher have "a better understanding of what [the] other is trying to do" (Canady & Seyfarth, 1979, pp. 9-10) In sum, a successful conference is one in which information is exchanged and mutual respect emerges.

The success of a parent-teacher conference depends upon the communicative skills of both participants. Yet the teacher carries the greater share of responsibility for achieving successful outcomes. The parent is allowed greater latitude in expressing his/her feelings, while the teacher is expected to conform to professional standards of conduct. The educational literature is filled with recommendations for

conducting a successful conference. This literature may be viewed as an informal compendium of the profession's standards of conduct for parent conferences. The gist of the advice is that teachers should make a favorable impression on parents by demonstrating respect and a professional demeanor.

Making a favorable impression sometimes involves overcoming difficult obstacles. Parents are not always ready to cooperate with teachers when they arrive for a conference. They may be feeling defensive and ready to interpret negative judgments about their child as indirect threats to their own self-worth (Prichard, 1977). They may enter the conference with "preconceived negative perceptions of teachers and fail to see the positive qualities of individual teachers" (Hamaschek & Romano, 1984). They may bring their anger and defensiveness into conferences as reactions to their own personal failures and disappointments as students.

Teachers and parents often disagree about the causes of children's problems. Based upon interviews with parents and teachers, Vernberg and Medway (1981) found that parents tended to attribute children's school-related problems primarily to the child's teacher, while teachers attributed responsibility to

family factors. In addition to the tendency to hold each other responsible for problems, parents and teachers have differing perceptions of their own and each other's competence. Reporting the results of an attitude questionnaire, Power (1985) found that "parents and teachers each viewed their own group as more competent than they were perceived to be by the other." Power concluded that the parent-teacher relationship is "highly competitive" (p.75).

To deal with a parent's negative expectations, teachers need to overcome the obstacle of distrust and focus upon common ground. This may not be an easy achievement, for teachers, like parents, bring their own set of preconceived ideas and expectations into meetings with parents. Teachers may expect parents to show respect for their position, to demonstrate that they value education, and to approve of and support their decisions. Teachers, acting in line with their expectations, may assert their authority in ways that leave parents feeling demeaned and belittled.

Rich (1987) suggests that a "teacherish" style of communication may be "an occupational hazard." She advises teachers to talk to parents like the adults they are. Drawing upon Knowles' conception of adults as self-directed and problem-centered learners, Rich

advises teachers to engage parents in the problem-solving process; avoid telling them what to do; avoid shaming them for past failures and short-comings; demonstrate appreciation for their contributions to their children's development; show an understanding of their problems and perspective; and focus on the strengths, rather than the deficits, that families possess. Cooper, Maier, and Karges (1977) advise teachers to avoid causing parents embarrassment, guilt, or anger; let parents know that they are appreciated and that their privacy will be respected; and be honest and truthful.

According to Canady and Seyfarth (1979), there are three general rules of conduct for teachers to adopt in their dealings with parents: they should be supportive; they should avoid defensiveness; and they should avoid authoritarian solutions to conflict. Drawing upon the ideas of Jack Gibbs, they describe supportive behavior in contrast to defensive behavior. Supportive behavior is characterized by non-judgmental descriptions of children, a problem-solving orientation, an empathic understanding of the child, honesty and sincerity, and a respectful attitude toward an equal partner. By contrast, defensive behavior is characterized by judgmentalism, manipulativeness, the assumption of a

position of superiority, and a control orientation toward solving problems. As Canady and Seyfarth advise, teachers should emphasize supportive behaviors and avoid defensive ones. The compendium of advice distills to two basic principles of self-presentation: demonstrate respect for oneself and show considerateness toward others (Goffman, 1959).

Teachers differ in their ability to realize the profession's guidelines for successful parent-teacher conferences. Differences are seen in the level of "teacherish" (authoritarian and superior) behavior; in the extent to which "realistic parental constraints" are recognized and accommodated (Fine, 1992); in their understanding of their responsibility for children's school-related problems; and in the degree to which they describe children's problems with candor, clarity, and tact while also protecting their relationship with the parent. From an intuitive perspective, teachers' beliefs about the value of their service and about the knowledge and skills they bring to their students, would seem to have a direct effect on their communications with parents. Teachers' efficacy beliefs have been associated with many other educational outcomes; it is reasonable to assume that these beliefs would be relevant to their communicative behavior when talking with parents.

To examine this intuition systematically, the present investigation draws upon the constructivist approach to the study of communication. This approach has several advantages. It provides a research paradigm that facilitates the laboratory-controlled study of discourse. It has measures with documented predictive power and reliability. Its constructs and principles are planted in a strong tradition of psychological research and theory. And its theoretical position integrates many important lines of research on communication and social interaction.

The constructivist orientation makes certain assumptions about the nature of knowledge and the nature of human behavior.[1] Its fundamental epistemological assumption is its rejection of logical-empiricism and its concomitant commitment to a *"Weltanschauungen philosophy of science,"* which maintains that the real world is not directly perceived, but rather is perceived through cognitive structures that interpret and selectively attend to experience. Reality exists independently of cognitive processing and interpretation, but reality cannot be known until

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[1]This discussion of the theory of constructivism relies heavily upon the writings of Delia, O'Keefe and O'Keefe (1982) and Delia and Clark (1977).

it is perceived through processes of selection and interpretation.

Constructivism views the individual as an active agent in determining the course of events. Rather than reacting to events, each person generates his or her own interpretation and meaning of events which guide actions accordingly. Meaning, as constructed by the individual, is central to explanation in constructivist theory. "Such an orientation to psychological theory makes the meanings individuals give to events a necessary part of understanding their actions.... The way individuals structure and give meaning to objects and events is a necessary part of explanation or understanding" (Delia, 1977, p. 73).

Applied to the study of communication, the constructivist approach emphasizes the role of impression formation in understanding persons and situations and in guiding communicative behavior according to this understanding. Constructivists maintain that the way individuals process and structure information in the social environment influences their communicative behavior with respect to the production of messages that are adaptive and sensitive to the listener's perspective; the recognition of implicit goals embedded within communicative situations; and the adequacy of

managing multiple and incompatible goals within communicative situations.

Constructivists regard communication as an activity that depends upon processes of interpretation and coordination for the construction of shared meaning. They regard communication as a situated activity which cannot be understood (or profitably examined) outside of context. Constructivist research, therefore, relies upon hypothetical or naturally-occurring situations to understand communicative behavior. Constructivists also regard communication as a pragmatic activity involving the production of messages to achieve one or more communicative goals. Intentions may not be adequately realized, but intention underlies and motivates communicative behavior.

Within the present investigation, these processes and associated cognitive structures underlying message production were analyzed with reference to their influence on teachers' explanations and persuasive appeals to parents. The method of gathering communicative behavior derives from the constructivist research paradigm in which people are presented with hypothetical situations and asked to report what they would say. For this study, teachers were presented with two types of hypothetical situations. In the first type of

situation, they were presented with a parent who challenged a decision or action they had made. These situations involved teachers in the task of explaining their decision or action. Messages for these situations varied along a continuum from defensive to supportive communicative behavior. The second type of situation presented teachers with a need to encourage a resistant parent to support the child's success in school. These situations called for persuasive appeals. Messages were evaluated for the level of autonomy granted to the parent in recognizing the problem and joining with the teacher in solving it.

Within the present investigation, influences on message production were examined at three levels of causation within a path analysis. At the most distal and general level, the variable of construct differentiation -- a key developmental variable in constructivist research -- is assumed to provide a foundation for and to set the limits of communicative behavior. At a more specific level, the constructs of role-bound construing and teacher efficacy are assumed to have a relatively direct effect on communicative behavior -- each variable representing an aspect of situated knowledge and beliefs. At yet a more specific level, a task-specific variable -- communication efficacy -- has

been derived from the efficacy literature and communication research. Communication efficacy is assumed to have the most direct effect on communicative behavior. These variables are defined in Table 2.

The next chapter discusses the theoretical foundations of the constructivist approach to the study of communication. The discussion elaborates upon the methods of observing, predicting, and indexing communicative behavior. Chapter 2 also reviews constructivist research showing the importance of power discrepancies, efficacy beliefs, perceived benefits, and attributions of blame in influencing communicative behavior. Chapter 3 introduces the construct of teacher efficacy and reports on research documenting its importance in educational outcomes. At the conclusion of Chapter 3, a path model is proposed suggesting the direct and indirect influences of constructivist variables and efficacy beliefs on communication.

Chapter 4 presents the methodology of this investigation. Causal variables and communication indices are operationalized, along with a description of the hypothetical situations used as stimulus materials for message production. The chapter sets forth the series of structural equations used to test the path model. Chapter 5 presents the results of statistical analyses.

Results include (a) descriptive statistics of causal factors and communication indices; (b) an examination of the relationship between demographic variables and path model variables; (c) path analyses for three communication indices; and (d) correlations between multiple goal management strategies and causal variables. Chapter 6 elaborates upon the results of this research, including its theoretical and practical significance. The chapter reconsiders the reasons why and how efficacy beliefs and antecedant social/cognitive developments are important influences on teachers' message production. Chapter 7 discusses the limitations of this investigation, proposes directions for future research, and considers the implications of this study for staff development programs.

Chapter 2

Constructivist Theory and Research

The present investigation examines the role of sociocognitive variables in understanding individual differences in communicative behavior in the context of parent-teacher conferences. The framework for this investigation is provided by the constructivist approach to the study of communication. This approach is described in the following theoretical discussion and literature review. The theoretical discussion addresses the foundations of the constructivist approach and examines its central explanatory construct. The theoretical discussion is followed by an examination of constructivist measures, a description of the research paradigm, and a review of the literature.

Theoretical Foundations

Constructivism is an organismic/developmental approach to the study of communication. It emphasizes the development and maturation of cognitive processes and structures underlying communicative behavior. This orientation has been elaborated through the personal construct theory of George Kelly (1955) and the organismic/developmental theory of Heinz Werner (1957).

Following Kelly, constructivists assume that individuals interpret experience through the prism of their own cognitive structure, which Kelly called the personal construct system. The personal construct system is understood to consist of domain-specific sub-systems. In the domain of social and interpersonal events, constructs are grouped within a structure called the interpersonal construct system (Crockett, 1965). The interpersonal construct system, like other sub-systems, consists of a set of bi-polar constructs (e.g., friendly-unfriendly; cheerful-glum) that guide interpersonal behavior and communication. Interpersonal constructs are considered "the basic cognitive dimensions through which persons interpret, evaluate, and anticipate the thoughts and behaviors of others" (Burleson, 1985, p.263).

Crockett (1965) suggested that the interpersonal construct system develops in accordance with Werner's Orthogenetic Principle. The Orthogenetic Principle states: "Wherever development occurs it proceeds from a state of relative globality and lack of differentiation to a state of increasing differentiation, articulation, and hierarchic integration" (Werner, 1957, p. 126). Using Werner's Orthogenetic Principle, it becomes possible to describe the development of the interpersonal

construct system as a process moving toward "increasing differentiation, articulation, and hierarchic integration"-- a system moving toward greater complexity. It also becomes possible to describe the individual's interpersonal construct system as more or less differentiated, abstract, articulated, and organized.

The structural properties of the interpersonal construct system are assumed to undergo a developmental process and to arrive at a level of relative stability. Structural properties include its differentiation or the number of constructs in the system, and the abstractness, organization, and permeability of its constructs. The stability of the structural properties of the interpersonal construct system has afforded constructivist research a reliable index of construct system development and a reliable predictor of communicative behavior.

Impression Formation and Communicative Behavior

Construct system properties are believed to influence communicative behavior through their impact on the processes and structures underlying impression formation. One of the most well-researched and widely-used properties of the interpersonal construct system is its size -- that is, the number of constructs within the system. When the system contains a large number of

constructs, it is referred to as highly differentiated. Degree of differentiation is relevant to many aspects of impression formation. Highly differentiated communicators have a greater number of constructs to draw upon in developing their understanding of other people and situations. A larger number of constructs facilitates a greater number of inferences from observed information and hence, a better opportunity of developing a more integrated overall impression from observed stimuli. Construct differentiation is related to the differentiation of and reliance on situational cues in making causal attributions about unfulfilled obligations (Wilson & Lang, 1991) and the differentiation of factors used in formulating judgments about people (Shepherd & Rank, 1986, cited in Wilson and Lang, 1991). Crockett (1965) reviewed the relationship between impression formation and cognitive complexity. He reported evidence that construct differentiation is associated with judgments of people which are less skewed, less biased, and more ambivalent; with fewer assumptions about the similarity between self and other; with the integration of contradictory information through dispositional/motivational constructs; and with a greater concern for "the inner substance" as opposed to the "surface dimensions" of people (p.77).

Qualitative (non-structural) characteristics of constructs contained in the interpersonal construct system have implications for impression formation and communicative behavior. They contribute to the organization and permeability of construct systems. Other qualitative characteristics that are likely to influence communicative behavior include a propensity toward psychological construing suggested by the relative number of motivational/dispositional constructs; and a propensity toward role-bound constructs suggested by the relative number of role-determined attributes and behaviors (Applegate, 1978).

Cognitive complexity is not considered a personality trait (Crockett, 1965). The degree of differentiation and integration within the system varies across domains, events, and people. This variance reflects the frequency of interaction and the functional significance of the domains for the individual. The novice-expert distinction is relevant in this regard. People who have expertise in a given domain are likely to have a more complex construct system with regard to that domain than those who lack expertise in that particular domain. The process of acquiring expertise involves the increasing differentiation and organization of the system through more abstract con-

ceptual linkages between constructs. Changes in these structural features occur more or less in tandem with increases in the actual contents or knowledge (a non-structural feature) contained in the system.

A large number of constructs tend to be found in systems that are hierarchically integrated and contain a relatively large number of abstract/dispositional and permeable constructs. Therefore, the number of constructs is considered a general index of the developmental status of the interpersonal construct system development. A majority of constructivist studies, including this one, have used construct differentiation to assess construct system development. These studies have reported that the variance observed in construct differentiation is accompanied by variance in communicative behavior. A large body of evidence supports the claim that construct differentiation is a measure of the processes of impression formation which are associated with and underlie communicative behavior. Degree of differentiation has been associated with the number and quality of persuasive appeals (Applegate, 1982; Delia, Kline & Burleson, 1979; O'Keefe, et al., 1989); the production of sensitive comforting messages (Burleson, 1982, 1985); and sensitivity in regulating the behavior of others (Applegate, 1978). In addition,

construct differentiation has been associated with metacommunicative knowledge (O'Keefe, 1988; O'Keefe & McCornack, 1987) and with the management of multiple incompatible goals within the same message (O'Keefe & Shepherd, 1987). Constructivist theory concludes that these associations result from the constraints imposed on communicative behavior by limits within the interpersonal construct system. The establishment of these associations depends upon a foundation of reliable, valid instrumentation in the assessment of social/cognitive variables and the indexing of communicative behavior. The next section addresses these issues.

Constructivist Measurement

Constructivist measurement involves the use of free response data to assess the developmental status of the interpersonal construct system and the development of indices of communicative behavior that are guided by cognitive/developmental principles. The following sections address validity issues involved in constructivist measurement.

Construct Differentiation.

The validity of construct differentiation as a measure of impression formation has been established through its differentiation from potentially confound-

ing variables and its consistent associations with impression formation variables and communicative indices. Critics have suggested that construct differentiation is no more than a measure of verbal ability and general intelligence. However, the facts do not support this view. Applegate (1978) reported a nonsignificant correlation (r = .11) between cognitive complexity and the vocabulary subtest of the WAIS. Crockett summarized a number of studies saying that "the relationship of interpersonal cognitive complexity and measured intelligence has not differed significantly from zero" (Crockett, 1965, p.55).

Powers, Jordan, and Street (1979) argued that measures of cognitive complexity are confounded by subjects' verbal loquacity because subjects who scored higher on cognitive complexity measures also produced lengthier protocols. Burleson, Applegate and Neuwirth (1981) responded with the observation that use of the same data base to assess cognitive complexity and loquacity would be likely to produce such a finding. They produced evidence showing that independent tests of cognitive complexity and loquacity were not correlated. Hale (1986), using a statistical procedure, found that the correlation between message quality and

cognitive complexity remained significant (r = .30, p = .01) when message length was controlled.

The validity of construct differentiation has also been established by its consistent associations with communication indices and by studies showing that it is more strongly associated with communication than its potential confounds. In a study of teachers' classroom discussion skills, the Role Category Questionnaire was significantly associated with teachers' communicative behavior during class discussion. The authors found that "highly complex individuals ask more questions and express more objective information, while less complex individuals convey more interpretations and slightly more reflections" (Kline, Hennen-Floyd & Farrell, 1990, p. 357). Applegate (1978), in a study of mothers' regulative and interpersonal appeals to their children, found that two measures of verbal intelligence (vocabulary and fluency) were unrelated to any of 8 communication indices; and a measure of construct abstractness was significantly associated with five to seven communicative indices when verbal ability was controlled.

Rubin and Henzl (1984) in a study of college students' communication competence reported that Crockett's measure of cognitive complexity, the Role

Category Questionnaire, was unrelated to total scores on a 19-item inventory of communication competence (CCAI). However, specific aspects of communicative competence were related to cognitive complexity. Discriminant analyses showed that several CCAI items were good discriminators between high and low cognitive complexity groups. These were use of voice, recognizing understanding, distinguishing facts from opinions, and using appropriate facial expressions and tone of voice. One of these items -- recognizing when a listener does not understand your message -- is particularly relevant to the constructivist interest in listener adaptiveness. Discriminant analyses also showed that several CCAI items were good discriminators between high and low verbal ability groups. These were pronunciation, articulation and speech clarity, message organization, and appropriate facial expressions and tone of voice. These findings suggest that verbal ability and cognitive complexity may be associated with different aspects of communicative competence.

In conclusion, a large body of evidence supports the claim that construct differentiation measures what it purports to measure -- individual differences in impression formation and the structures which underlie impression formation and communicative behavior. Con-

struct differentiation, as measured through the Role Category Questionnaire, is a direct sampling of the number of interpersonal constructs available for such observation and understanding, as well as a general index of the developmental status of the interpersonal construct system. For these reasons construct differentiation has been found to be a reliable predictor of communicative behavior. Degree of differentiation has been associated with the number and quality of persuasive appeals; the production of sensitive comforting and sensitive compliance-gaining strategies; and the number of communicative goals addressed and reconciled in messages. These differences result because differences in the interpersonal construct system either support or constrain flexibility and understanding of people and interpersonal situations. Such differences influence speakers' sensitivity, adaptiveness, and attention to multiple communicative goals. The research supporting these claims is reviewed in the next section.

Constructivist Coding Systems.

Constructivist coding systems evaluate messages in relation to developmentally-ordered principles. This method of evaluation reflects the basic assumption that competence in communication is a function of

social/cognitive development. The connection between developmental principle and message features has an important advantage. By relying on cognitive/developmental principles to develop message coding systems, the criteria of judgment are relatively objective. As Burleson (1984) explained, "Strategies not only can be differentiated on the basis of specific message features, but it is also possible to assert that one strategy is 'better' (more sophisticated, adaptive, sensitive, and so on) than another on the basis of its hierarchical placement" (p.73). The objectivity of the method has been supported by good inter-rater reliability, often exceeding .70. Hierarchical coding systems are assumed to establish a ceiling or capacity level. Burleson (1984) observed that constructivist coding systems are similar to Guttman scales because "the use of a particular strategy level implies the capacity to use all strategy levels lower on the hierarchy" (p.73). The following literature review provides examples of constructivist coding systems and their use in research. The research paradigm used to examine the associations between construct system properties and communicative behavior is described in the next section and is followed by a review of the literature.

The Research Paradigm

The research paradigm for constructivist studies facilitates the laboratory-controlled observation of communicative behavior. The methodology involves eliciting messages to hypothetical, but realistic situations, tape-recording the simulation or interview, and coding responses according to cognitive/developmental principles. The paradigm is elaborated in the following sections on the definition of the situation, the unit of analysis, and constructivist measurement.

Defining the Situation for Research.

To provide a standardized set of stimulus materials, constructivist researchers analyze communicative situations and identify their common features. The standardized situation is designed to elicit a finite set of responses that range along a bib-polar construct of interest to the investigator. For example, the studies of persuasion have presented research participants with situations in which they were expected to persuade another person to engage in a specific behavior or to grant a specific request. Comforting situations were designed to present a person in distress about a specific event. For example, the situation may involve a person in distress about just

having learned that he or she failed an important test (Burleson, 1985). Messages produced in response to this situation were examined along a continuum from positional to person-centered communication. Other situations have involved producing a message to regulate the behavior of another person. In regulatory or compliance-gaining situations, the range of message variance reflects a continuum from the level of autonomy the message recognizes.

The distinction between regulation and persuasion may reflect the role relationship between the speaker or message producer and the other person. In regulatory situations, the person regulating the behavior of another is recognized as having the legitimate authority to make the request or demand. In persuasive situations, there is no such recognition. However, both regulatory and persuasive situations leave room for variance resulting from the speaker's interpretation of the task. One person may regulate by coercive threats and demands, while another may employ persuasive appeals in the same situation. Similarly, variance in persuasive situations is observed to range from coercive demands to persuasive appeals which recognize the listener's perspective and personal autonomy. Among the subsidiary aims present in persua-

sion situations is the goal to avoid the appearance of self-interest. Thus, there is an inherent strain or incompatibility between the dominant goal of the situation and a subsidiary aim connected to the achievement of that goal.

Explanatory situations have not been studied by constructivist researchers. However, sociological researchers have studied variance in and influences on the offering of explanations. The gist of explanatory situations, according to this research, is the presence -- real or perceived -- of an unfulfilled obligation. The offering of accounts or explanations is precipitated by a request to explain "the gap between actions and expectations" (Scott & Lyman, 1968). When an accounting is requested, the situation has become a predicament in which the identity of either or both participants is damaged. Situations involving an unfulfilled obligation vary in ambiguity (Wilson & Lang, 1991). In some situations, the compulsory nature of the obligation is clear whereas in other situations it is questionable. Furthermore, what is clearly an obligation to one person may not appear obligatory to another. Ambiguity regarding whether or not the situation involves a real obligation is likely to produce a relatively high amount of variability between people in

their accounts. Explanatory situations provide a relatively narrow range of options to the speaker. These options are limited by reality constraints -- that is, by the truth of the situation. However, truth can be bent, ignored, and reconstructed to fit the needs of the situation. The request for an explanation may be rebuffed or respected. While the options for offering an account are limited by reality constraints, a standard set of situations is expected to reveal individual variability in the acknowledgement of responsibility and in the credibility of the explanations.

The Message as a Unit of Analysis.

Constructivist research defines a communicative situation as a time-bounded event in which messages are exchanged and coordinated. A message is one side of the exchange. It is defined as a functional unit that is produced with the intention "to make publicly available some mental state (such as wants, beliefs, or ideas) of the message producer, or.... to accomplish some other purpose through making mental states publicly available" (O'Keefe & Delia, 1982, 47). Although some attention has been given to the coordination of messages during interaction, most constructivist research, as this one, has studied the message as the unit of observation.

Message production, according to constructivist theory, is inherently a functional enterprise -- strategic and purposeful (Applegate, 1990). Communication is intended to do something. Constructivist theory is predicated on the assumption that in producing a message, a speaker considers the response his or her message will elicit and is guided by these expectations. Expectations influence the editing and censoring of messages (O'Keefe & Delia, 1982). Intentions and purpose generate the production of a message and are implicit within the message. Therefore, the analysis of messages involves examining the features of adaptiveness and sensitivity, as well as the intentions which are implicit within the message. The same message can serve several purposes, reflecting the multiple goals of the communicator.

A Review of Constructivist Research

Early constructivist research investigated the relationship between listener adaptiveness and persuasive appeals. Listener adaptive speech -- the ability to adapt messages to attributes of a specific listener -- was considered a central feature of communicative competence. Applegate (1978) extended the construct of listener-adaptiveness to incorporate a speaker's sensitivity to and psychological orientation

toward the listener's perspective. He called the revised construct "person-centered communication." Person-centered communication was applied in studies on regulating behavior (Applegate, 1978) and comforting communication (Burleson, 1985). More recently, attention has shifted to the role of purpose in the genesis of messages, the reconciliation of competing communicative goals (O'Keefe & Shepherd, 1987), and the manner of achieving subsidiary communicative goals (Hale, 1986; Applegate & Woods, 1991). The sequence of the following literature review conforms to the progression of constructivist research interests over the last two decades.

Listener Adaptiveness

Listener adaptive communication is defined as the production of messages that focus on and adjust to the perspective of the listener to achieve the goals of communication. The value of listener-adaptive speech is relative to contextual variables and to the goals of the speaker in specific contexts. Listener adaptiveness is particularly important when the success of communication is measured by the emergent quality of the relationship between the speaker and the listener. In other contexts, such as the need to ensure safety in an emergency, the value of listener-adaptive speech takes second place to the efficiency and clarity.

The ability to produce messages that focus on and adjust to the listener's perspective is evident in messages that address attributes of the listener which are relevant to the communicative goal. This does not necessarily require a deep and complex understanding of the other (O'Keefe & Delia, 1982). It does require a recognition of the perspective of the other in terms that are relevant to the goals of the communication as defined by the speaker. In the tasks of persuasion and compliance-gaining, attributes of the listener that are relevant to the communicative situation include anticipating the listener's objections and recognizing the advantages to the listener of granting the request. The ability to recognize obstacles and advantages follows a developmental continuum.

In developmental studies on persuasion, listener adaptiveness has been observed in the quality and number of children's appeals and has been associated with age and with measures of construct system development. For example, in an early study by Delia, Kline and Burleson (1979), children were asked to persuade their mother to allow them to have a sleepover party. A sample of 211 students, ranging in grade from kindergarten through 12, participated in the study. The authors predicted that children's arguments would

show an increasing adaptiveness to the perspective of the target with age and that these changes would be associated with increasing cognitive differentiation and abstractness. Results supported the authors' predictions. Older children used more adaptive strategies than younger children. The correlation between age and strategy level was significant ($r=.63$, $p \leq .01$). With age partialled out, the correlation between cognitive complexity and highest level strategy was still significant ($r=.45$, $p \leq .01$). Thus, cognitive complexity predicted the level of persuasive appeal independently of age.

Listener adaptiveness of the children's messages was evaluated through a hierarchical coding system consisting of three major levels: No recognition of or adaptation to the target's perspective; implicit recognition of and adaptation to the target's perspective; and explicit recognition of and adaptation to the target's perspective. Within each level, there were three subdivisions reflecting varying levels of elaboration of reasons, awareness of counter arguments, and awareness of target's perspective. Comparing the children's actual messages, the face validity of the coding system is evident. A low level request consisted of merely stating the desire for a sleepover

party ("I want a party. Can I have one?) whereas a high level strategy considered the potential benefits to the parent ("You've been saying you wanted to get to know my friends better. If you let me have a party, you can get to know them.")

More recently, O'Keefe and associates (1989) sought to determine if differences in messages were a function of children's failure to recognize the relevance of using listener adaptive strategies or of the children's lack of strategies. The investigators used the same persuasion task of asking children to persuade their mother to allow them to have a sleepover party. In an experimental treatment group, children were primed through inquiry to consider the mother's objections and the advantages to the mother of allowing them to have the party. The result was clear: children in the priming group did not differ from children in the non-experimental group; and level of cognitive development continued to constrain children's ability to take the other's perspective. The reason for this result was also clear: a low degree of construct differentiation similarly constrained children's recognition of the other's perspective during the priming questions. The researchers concluded that recognizing obstacles to compliance and the advantages to the other person is a

prerequisite for the production of listener adaptive messages.

In summary, the production of listener-adaptive persuasive appeals requires recognition of listener attributes that are relevant to the specific communicative situation. In most situations, and certainly those used in constructivist research, listener-adaptiveness does not require an in-depth knowledge of the individual, but rather a recognition of what is contextually relevant. The relevance of specific and idiosyncratic listener attributes (motives, goals, preferences, beliefs) varies with situations. One universal need, however, is the need to be recognized and acknowledged as an individual worthy of consideration and respect. The extent to which speakers produce messages that adapt to the psychological needs of others has been examined through the construct of person-centered communication. This construct is examined in the next section.

Person-Centered Communication

Applegate (1978) re-conceptualized the construct of listener adaptiveness to incorporate a psychological orientation toward communicating with others. Within this conceptualization, listener adaptiveness is understood to vary along a continuum ranging from

person-centered to position-centered communication. The distinction between person-centered and position-centered communication was based on Bernstein's sociolinguisitic analysis of speech codes associated with different social classes and derivative of two distinctive "types of role systems." In a departure from Bernstein's work, Applegate disputed the explicit connection Bernstein made between role systems and individual thought and speech. Bernstein believed that individual thought and speech are determined by social class and vary with social class differences. According to Applegate, culture does not determine thought and speech, but it can limit its development.

> The coding principles embodied in the institutional orders of the culture must be conceptualized, not as determinants of the character of psychological structure and communication, but rather as constraints influencing the development of social cognitive and communicative abilities along the axes of development (p.38).

Applegate departed from Bernstein on another issue. Rather than characterize speech code as a dichotomous variable, Applegate suggested that speech codes and their bases in role systems be construed to reflect a developmental continuum.

At one end of this continuum, person-centered communication was defined as communication in which the

speaker shows awareness of the listener's perspective and encourages the elaboration of the listener's perspective. Person-centered communication is evident in messages that are sensitive to the uniqueness of the individual and that focus on contextually-relevant motivations. Person-centered communication directly or implicitly acknowledges the relevance of the listener's perspective to the situation at hand, recognizes and values the listener's perspective, and avoids assumptive statements. Person-centered communication is identified by a number of theoretically discrete characteristics. These include responsiveness to the listener's "aims and utterances"; adaptiveness to the unique and "specific characteristics and needs of a particular listener"; content reflecting concern for the "psychological and affective qualities" of people; messages designed to protect and "enhance interpersonal relationships"; messages designed to protect the social identity of the participants in the interaction; and messages that stimulate reflection about the situation (Applegate, 1990, p. 208).

At the opposite end of the continuum, position-centered communication is characterized by messages which either dismiss or ignore the perspective of the listener as irrelevant and focus on the role-determined

aspects of overt behavior and expectations. Position-centered communication is characterized by messages that take the listener's perspective for granted. Position-centered communication is further evident in discounting, refuting, or ignoring the implications of the listener's feelings, motives, and psychological needs.

The extent to which communication manifests a person-centered orientation depends upon qualitative features of the interpersonal construct system. A high proportion of abstract/dispositional and psychologically-oriented constructs influences communication toward person-center messages; a high proportion of role-bound constructs influences communication toward position-centered messages. Role bound constructs a high proportion reflects attention to outward behaviors -- whether or not a person acts in accordance with role requirements. Suggests person is ignoring individual motives, feelings, psychological attributes and needs that underlie and influence behavior. Limits the individuals ability to meet person's needs in communication and in other contexts. Therefore, measures of the number of role-bound and psychologically-oriented constructs employed in an individual's descriptions of others are likely to predict communicative behavior.

Applegate (1978) applied his conceptualization of person-centered communication to interactive situations involving adult-to-child communication. In one study, he developed a set of hypothetical situations involving the regulation of a child's behavior. He asked mothers (N=42) what they would say to their child to regulate the child's behavior. The coding systems consisted of three superordinate categories with some overlapping and some differentiated features. The central distinguishing characteristic involved the relevance of autonomy to determinations of person-centered communication in regulatory contexts. At the lower level of regulative appeals, messages contained directives, commands, and coercive appeals. Explanations, if given, were statements of fact and grounded in the status of the child (i.e. "All children must go to school.").

The second level of regulatory appeals contained messages that recognized the child's perspective and feelings, but failed to elaborate upon them. Messages implicitly acknowledged the child's perspective and growing autonomy. Acknowledgement of the child's perspective as an individual with growing autonomy to determine his or her own actions was evident in the mother's efforts to persuade the child through

reference to consequences, rational arguments, or an underlying general principle. At this level, appeals fell short of encouraging the child to consider his or her own perspective (motives, feelings, intentions) and the perspective of others as guides to behavior.

Within the highest major level of the hierarchy, regulative appeals not only recognized the child's feelings and perspective, but helped the child gain an enhanced perspective on the situation. Regulatory appeals within this level "explicitly elaborated the subjective feelings, motives, and/or intentions of specific individuals (including the child) as the basis for the child's understanding of what constitutes appropriate behavior in such situations" (p.93). In sum, the highest level of person-centered communication was understood to involve the provision of support and elaboration of the listener's perspective with the purpose of enhancing the listener's perspective on the situation. Psychological construing and construct abstractness were related to almost all communication indices employed in the study. However, construct differentiation was unrelated to regulative appeals. This nonsignificant relationship needs to be viewed in the context of a large body of research documenting a significant relationship between construct differentiation

and message quality (Clark & Delia, 1977; Leichty & Applegate, 1991; O'Keefe & Delia, 1979, 1981; O'Keefe & Shepherd, 1987, 1989; O'Keefe, et al., 1989; Sypher & Applegate, 1984; Waldron & Applegate, 1994).

In a second study involving adult-to-child communication, Applegate (1978) posed hypothetical situations to student-teachers regarding the regulation of student behavior and the offering of assistance with an interpersonal problem. Interpersonal construct system properties were measured through indices of construct abstractness and role-bound construing. Role-bound construing was indexed by comparing the number of role-bound constructs in student-teachers' descriptions of the ideal student to the total number of constructs. The two measures of interpersonal constructs were negatively and non-significantly associated with each other ($r=-.29$). Construct abstractness was positively associated with the student-teachers' regulative and interpersonal appeals ($r=.72$, $p\leq.001$; $r=.70$; $p\leq .001$, respectively). Abstractness was also associated with a measure of relational development -- the importance of preserving the relationship with the student that was implicit in the message ($r=.42$, p=≤not given). Teachers with a greater proportion of abstract constructs, compared to those with a lower proportion of

abstract constructs, used appeals which were less coercive and more sensitive to the student's feelings and perspective; and in situations involving the regulation of student behavior, their communications were more sensitive to preserving the relationship with the student.

Role-bound construing was negatively associated with regulative and interpersonal relational goal scores ($r=-.60$, $p\leq.001$; $r=-.54$, $p=.01$, respectively). Teachers who used a high proportion of role-bound constructs showed less attention to preserving or improving the relationship with the student in their efforts to gain compliance and support the student in an interpersonal problem. Teachers' role-bound constructs did not relate systematically to their appeals. Applegate concluded that role-bound construing "may mitigate the relationship between the general ability to engage in abstract construing and the character of communicative behavior" (p. 202).

In summary, person-centered communication is communication which is sensitive toward the perspective of others. Person-centered messages demonstrate an interest in the needs, feelings, and motives of others, thereby addressing more than one goal in the communicative situation. Efforts to persuade or regulate are

accompanied by efforts to enhance self-esteem or improve a relationship. In other words, person-centered messages are produced through attention to the goals of face protection and relational maintenance (Delia, O'Keefe & O'Keefe, 1982; Leichty & Applegate, 1991).

Functional Methods of Message Analysis

Constructivist researchers identify three theoretically discrete types of communicative goals. These are called instrumental goals, face goals, and relational goals. Instrumental goals are defined as the dominant purpose of the encounter. Face goals refer to the objective of protecting the public and social identities of the participants in the exchange. Relational goals are the objective of developing and maintaining a relationship through building or preserving trust and cooperation. Face goals and relational goals are usually subsidiary goals in communicative situations; they are not usually the purposes for which people initiate communication. People communicate to achieve an instrumental objective (Applegate & Leichty, 1984). However, face and relational goals are present, implicitly, in all communicative situations. They are pursued routinely through politeness and deference forms, through the demonstration of praise, demeanor,

and respect. When face and/or relational goals become the focus of the communication, there is usually some kind of predicament in the encounter. The failure to address subsidiary, implicit goals present in a communicative situation results when there is a failure to recognize their relevance to the situation, when the speaker is indifferent toward them, or when the pursuit of instrumental goals takes precedence.

Situational variables may heighten or attenuate the salience of face and relational goals. While relevant to understanding within-individual variability across situations, they do not explain the propensity shown by some people, as compared with others, to regularly define communicative situations in complex ways (Delia, O'Keefe & O'Keefe, 1982). In other words, situational variables do not account for why some people have a more complex understanding of a given situation than do others. According to constructivist theory and research, the recognition and pursuit of multiple communicative goals is associated with construct system development. According to O'Keefe and Delia (1982),

> Construct differentiation and abstractness influence message production primarily through influencing the kind and number of goals a communicator construes as relevant in a situation; people who represent social situations in a more multidimensional fashion design messages addressing more goals simultaneously. (p. 396).

In other words, construct differentiation and abstractness influence communicative behavior at its source -- at the way people think about communication and translate their metacommunicative knowledge into action (O'Keefe 1988). Differences in reasoning about communication and in recognizing the goals implicit in the task structure of a given communicative situation are manifested in two ways during any given message display. First, they are seen in the goals that either are addressed or ignored. Second, they are seen in the manner in which subsidiary goals are addressed and reconciled with the instrumental objective of the situation. Research about individual differences in the recognition and pursuit of multiple communicative goals is reviewed in the next section.

Multiple Goal Management.

Approaches to the study of multiple goal management have drawn upon Goffman's writings about interpersonal interaction (1967; 1959) and the sociolinguistic analysis of politeness rituals by Brown and Levinson (1978). The recognition and pursuit of multiple communicative goals is studied through situations that are inherently complex -- that is, through situations in which the dominant and subsidiary goals of the situation are

incompatible. Goal incompatibility makes these situations inherently more difficult or "complex" than others (O'Keefe & Shepherd, 1987; O'Keefe, 1988). These situations present "communicative dilemmas" -- the need to choose among competing goals or to find a way of reconciling them (Tracy, 1989). The ability to address multiple incompatible goals simultaneously is important across a range of situations and is often recognized as tact or diplomacy. O'Keefe and Shepherd (1987) have operationalized tactful communication in their study about multiple goal management.

Applying the work of Brown and Levinson (1978) and Goffman (1969), O'Keefe and Shepherd (1987), developed a message analysis system that classifies messages by the manner in which they address multiple incompatible communication goals. This system of message analysis consists of three types of goal management strategies. These are called the strategies of selection, separation, and integration. Selection was defined as efforts to resolve "conflict between competing aims or between aims and obstacles by selecting (giving priority and expression to) one outcome or situation feature and ignoring the other...." (p.400). Selection may take the form of either explicitly rejecting the other person's position or explicitly accepting the

other person's position. The distinguishing feature of this strategy is that its message is straightforward and difficult to misinterpret because the language is not confounded by mitigators, hedges, and other politeness forms. Therefore, selection is likely to produce clarity and the impression either of honesty or lack of consideration.

Unlike selection, the strategy of separation "resolves conflict by dealing with competing situation features in temporally or behaviorally separated aspects of a message display...."(p.400). In other words, the message includes mitigators or other politeness forms designed to protect the relationship and save face. The inclusion of face-saving and/or relational maintenance devices may confound the message and bring attention to the speaker's discomfort. Thus, there may be a cost in the form of loss of clarity of the message and accentuating that aspect of the situation that the speaker is trying to conceal or avoid -- the negative implications for face and relational development.

The third goal management strategy avoids the potential costs associated with selection and separation and is considered the most developmentally advanced of the three strategies. The third strategy

is called integration. Possibly the most difficult to define, integration is described as a "true reconciliation of competing aims, through message designs which simultaneously accomplish multiple aims or advance aims and remove obstacles...." (p.401) In other words, integration involves "redefining the social situation (the task, the roles of the respective participants, etc.) in such a way that a conflict is genuinely resolved...." (p.401).

O'Keefe and Shepherd (1987; 1989) examined the relationship between this system of multiple goal management and communicative behavior during arguments. A sample of 58 college students were paired into dyads to discuss a topic which had previously been identified as controversial among a sample of college students. The students were asked to discuss the topic for up to 15 minutes. Their interactions were videotaped and analyzed. The authors predicted that strategies of multiple goal management would be related to construct differentiation. The analysis supported the authors' prediction. Subjects with high construct differentiation scores, in contrast to subjects with low construct differentiation scores, made more frequent use of the strategies of separation and integration and less frequent use of the strategy of selection. In fact,

"participants high in differentiation produced about twice as many integrative strategies as those low in differentiation" (p. 412). This result supports the assumption that selection is a lower level strategy than separation and integration. The observed relationship between construct differentiation and message strategy also supports the view that construct differentiation gives rise to more complex understandings of communicative situations and greater efforts to address the subsidiary goals implicit in complex situations.

Relational Maintenance and Development.

Applegate (1978) developed a five-level hierarchical system to codify teachers' rationales for their messages to assess the extent to which teachers were influenced by the goal of protecting or enhancing the relationship with the student. At level one, the teacher is not concerned about the relationship and escalates conflict. At level two, the teacher is aware of the negative relationship, but takes no action to improve the situation. At level three, the teacher does not recognize the relevance of relational issues to the situation with the student. Levels four and five manifest increasing efforts to protect and improve the relationship with the student.

Face Protection and Identity Management.

Hale (1986) studied messages produced in the face-threatening situation of asking a professor to extend a deadline for an important project. The message coding system was a three-level hierarchic system which evaluated messages in terms of the priorities given to the instrumental versus the face goals implicit in the situation. At the lowest level of the hierarchical coding system, face protection goals are not pursued; attention is given to the instrumental goal in the form of a simple request or a request embellished by face-saving efforts for the speaker. At level two, messages displayed greater sensitivity to the face needs of the other person, but reasons still emphasize why the request is needed. At the third and highest level, messages show sensitivity to the face needs of both participants in the interaction. Emphasis shifts from why the request is needed to why the request should be granted.

The data on a sample of 61 college students (26 men, 35 women) was subjected to a multiple regression analysis with gender, construct differentiation, and length of message as predictor variables and message quality as the criterion variable. Controlling for length of message and gender, construct differentiation

remained a significant factor in explaining message variance ($r=.30$, $p\leq.01$).

Applegate and Woods (1991) studied two discrete aspects of face protection. Drawing upon the sociolinguistic analysis of politeness by Brown and Levinson (1978), they distinguished between positive and negative face support. The pursuit of positive face goals involves validating the self-image of the other person. Negative face goals are seen in respect for the rights and wants of the other person to be free from imposition and intrusion. Negative face goals are achieved by recognizing and/or granting autonomy to the other person in the situation.

Applegate and Woods examined the relationship between interpersonal construct system variables and three communication indices: quality of positive face support strategies; quality of autonomy-granting strategies; and rationales for strategies used. They presented college students (N=101) with two face-threatening persuasive situations. In one situation, the students were asked to imagine that their roommate was "entertaining excessively" and thereby "interfering with your studies, privacy, and social life." In the second situation, students were asked to imagine that they were an assistant manager in an office and were

expected to correct another employee, also a personal friend of theirs, who comes late to work frequently. In both situations, students were asked to write down "exactly what you would say" in the situation.

Positive face support strategies were coded on a five-level hierarchy. At the lowest level of positive face support, strategies threatened "the positive public identity of the persuadee" through the use of "criticisms, reprimands, accusations, contempt, ridicule, and/or insults." At the highest level, strategies supported the persuadee's public identity through "explicit expressions of approval, praise, liking, etc." (p. 201).

Autonomy-granting strategies were also coded on a five-level hierarchical scale. At the lowest level, strategies employed threats and sanctions which denied "the autonomy of the persuadee through the overt display of power inherent in the speaker's role..." At the highest level, strategies supported autonomy by encouraging the persuadee to use reasoning to arrive at his or her own conclusions. At this level, speakers sometimes explicitly stated that they did not want to coerce, impose on, or impinge on the rights of the persuadee.

Simple correlations showed that construct differentiation and abstractness were significantly asso-

ciated with positive face support strategies (*rs = .42 and .45, ps .001, respectively)* and with autonomy-granting strategies *(rs = .51 and ,53, ps.001, respectively)*. A hierarchical regression model was employed and showed that gender and construct system variables accounted for 31% of the variance in positive face support. Gender explained 20% of the variance in autonomy-granting strategies in the predicted direction (females using higher level autonomy-granting strategies) and construct system variables accounted for an additional 23 percent of the variance in autonomy-granting strategies.

Summary of Constructivist Research

Constructivist research supports the conclusion that developmental variables have a relatively stable and extensive influence on communicative behavior. Properties of the interpersonal construct system, such as degree of differentiation and the abstractness of the constructs within the system, have been associated with an array of communicative behaviors, including the number and adaptiveness of persuasive appeals, the sensitivity of compliance-gaining messages, and the integration of incompatible communicative goals in face-threatening situations. These associations have been supported by developmental studies controlling for

age and by non-developmental studies controlling for potentially confounding variables, such as verbal ability and loquacity.

As seen, speakers with more advanced, as compared to those with less advanced, interpersonal construct systems were more effective in addressing face protection and relational maintenance/development goals. Constructivist studies have demonstrated consistent associations between construct system properties and communicative behavior across a range of communicative situations and populations. These relationships are summarized in Table 1 on page 55.

Having established the importance of social cognition in communicative behavior, constructivist research efforts have also sought to determine the boundaries of these associations. A sample of the literature concerning situational constraints and incentives and their interactions with construct system properties is reviewed below.

Within the highest major level of the hierarchy, regulative appeals not only recognized the child's feelings and perspective, but helped the child gain an enhanced perspective on the situation. Regulatory appeals within this level "explicitly elaborated the subjective feelings, motives, and/or intentions of

Table 1
Attributes Characterizing High and Low
Construct Differentiation Communicators

Low Complexity	High Complexity
Construct System Properties	
▸ Undifferentiated	▸ Differentiated
▸ Concrete & global constructs	▸ Abstract constructs
▸ High proportion of role-bound constructs	▸ Low proportion of role bound contructs
▸ Low level of organization	▸ High level of hierarchical organization
Impression Formation Characteristics	
▸ Biased judgments	▸ Relatively unbiased, more ambivalent judgments
▸ Low number of inferences from observed stimuli	▸ High number of inferences from observed stimuli
▸ Attentive to the surface dimensions of objects, people, events	▸ Inclined to reconcile contradictory information
Communicative Behavior	
▸ Non-adaptive to the needs, feeings, perspective of others	▸ Adaptive to the needs, feelings, perspective of others
▸ Lacking sensitivity	▸ Sensitive toward and supportive of others
▸ Unifunctional	▸ Multifunctional

specific individuals (including the child) as the basis for the child's understanding of what constitutes appropriate behavior in such situations" (p.93). In sum, the highest level of person-centered communication was understood to involve the provision of support and elaboration of the listener's perspective with the purpose of enhancing the listener's perspective on the situation. Psychological construing and construct abstractness were related to almost all communication indices employed in the study. However, construct differentiation was unrelated to regulative appeals. This nonsignificant relationship needs to be viewed in the context of a large body of research documenting a significant relationship between construct differentiation and message quality (O'Keefe & Shepherd, 1987, 1989; Sypher & Applegate, 1984; Waldron & Applegate, 1994; O'Keefe & Delia, 1981).

Situational Influences on Communicative Behavior

Situational variables contribute to message production, influencing the attitudes and motives of communicators. Understanding the incentives and constraints present in any given communicative situation can enhance an understanding and prediction of message features. Studies have examined the influence of domain-specific knowledge (Applegate, 1978), self-interest (Clark, 1979), power differential (Leichty &

Applegate, 1991), and attributional biases (Sillars, 1980). This body of research documents the importance of these variables in understanding variance in communication. These studies are reviewed below.

Self-Interest and the Desire for Liking

An early study on the role of situational variables was conducted by Clark (1979). She manipulated the variables of self-interest and desire for liking in a study about regulating behavior. She found the not-surprising result that incentives arising from the situation significantly influence the choice of communicative goals and the manner of achieving them. For example, subjects in the high self-interest group used more pressure than those in the low self-interest group. Among the high self-interest communicators, 64% used direct threats compared to 11% among the low self-interest group. In the low self-interest group, 52% failed to make an explicit statement expressing what action he or she wanted taken. Differences in strategies to achieve interpersonal objectives and to manage identity were most evident in the desire for liking groups. Communicators in the high desire for liking group used more positive interpersonal strategies and more positive identity management strategies than communicators in the low desire for liking group. In the low desire for liking group, com-

municators used more negative interpersonal strategies and more "strategies which directly challenged a positive image of the message recipient" (p.269).

Causal Attributions and Arguments

Causal attributions are an important situational variable in understanding variance in communicative behavior across different situations. Sillars (1980) demonstrated that choice of conflict strategies depends upon the speaker's "attributions about the partner's intent to cooperate, the locus of responsibility for conflict, and the stability of conflict" (p.182). He used a message classification system consisting of three super-ordinate categories: passive-indirect; distributive; and integrative. In this scheme, passive-indirect strategies were defined as "strategies which minimize explicit acknowledgment of and communication about conflicts" (p.181). Distributive strategies are those which promote individual over mutual outcomes by seeking concessions or expressing a negative evaluation of the partner; conflict is openly acknowledged and discussed. Integrative strategies are those which promote information exchange, neutral or positive affect, and mutual actions which sustain a neutral or positive evaluation of the partner.

Sillars predicted that "biases in the attribution process" would be associated negatively with integra-

tive strategies. His first study relied upon retrospective accounts of conflict situations gathered through a questionnaire. His second study used videotaped conversations between roommates engaged in discussing a conflict. The questionnaire data yielded the following results. Perceptions of stability were significantly associated with strategy choice. Conflicts which were seen as stable were more likely to be handled through avoidance (a passive/indirect strategy) and less likely to be handled through integrative strategies. Attributions of responsibility to self were positively associated with the use of integrative strategies and negatively related to avoidance and coercive strategies. Attributions of responsibility to the roommate were positively associated with avoidance and distributive strategies and negatively associated with integrative strategies.

Interaction Effects Between Situations and Cognitive Complexity.

The relationship between construct differentiation and communicative behavior may be altered by situational variables. Leichty and Applegate (1991) found that construct differentiation does not consistently affect the use of face-saving and autonomy-granting strategies across a range of persuasive situations. Level of intimacy, magnitude of the request, and legit-

imate power to exert compliance were important variables affecting the relationship between construct differentiation and strategy choice. For example, regardless of level of construct differentiation, a person does not routinely go to great lengths to protect face when asking for a small favor. Excessive face-saving measures would be inappropriate and call attention to the possibility that more was involved in the request than it seemed on the surface. Wilson and Kang (1991) found that the relationship between situational variables and attributions is moderated by individual differences in construct differentiation. Highly differentiated individuals are more sensitive to situational variables in compliance-gaining situations, resulting in greater cross-situational variability among highly differentiated communicators.

Summary of Situational Influences on Communicative Behavior.

Communicative behavior occurs within specific contexts. These contexts -- and the way they are perceived -- are important sources of influence in message production. Perceptions of power, causal attributions, the perceived need for cooperation, and the perceived magnitude of the request are examples of situational influences on communicative behavior. The present investigation does not directly investigate the rela-

tionship between communicative behavior and situational variables. The role of situational variables is indirectly examined through the constructs of teacher efficacy and communication efficacy. These constructs encompass teachers' beliefs about their own professional competence and the value of parent-teacher cooperation in the resolution of children's school-related problems. The constructs of teacher efficacy and communication efficacy are examined in the next chapter.

Chapter 3

Efficacy Beliefs and Communicative Behavior

Self efficacy is defined in the literature as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). The literature reports significant differences between high and low efficacy individuals in the goals they set, the amount of stamina they exhibit, their application of problem-solving strategies, and the goals they actually achieve. Bandura (1993) suggested that high and low efficacy individuals differ in the types of scenarios they anticipate and rehearse:

> Those who have a high sense of efficacy visualize success scenarios that provide positive guides and supports for performance. Those who doubt their efficacy visualize failure scenarios and dwell on the many things that can go wrong. It is difficult to achieve much while fighting self-doubt. (p. 118)

Self-efficacy beliefs are an important source of power and control in the achievement of cognitive tasks and in the pursuit of interpersonal goals. As a motivational variable, efficacy beliefs enable the mobilization of resources to achieve goals. People regulate their own behavior on the basis of what they

think they can accomplish and the resources they believe are available to them.

The efficacy-communication literature supports the claim that competent communication in difficult situations requires skill *and* the confidence to execute those skills. Among the findings, self-efficacy has been negatively associated with social anxiety and inhibition through the mediating effect of anxiety (Maddux, Norton & Leary, 1988) and with treatment interventions for social anxiety (Lee, 1983). Self-efficacy has been positively associated with the outcomes of assertiveness training programs (Kazdin, 1979, 1983); the use of negotiation techniques to achieve high salaries (Stevens, Bavetta & Gist, 1993); the differential effectiveness of goal-setting versus self-management training programs in negotiation tactics (Gist, Stevens & Bavetta, 1991); and the reduction of gender differences in negotiated salaries (Stolte, 1983).

Efficacy beliefs are related to outcome expectations and beliefs about personal control over outcomes. However, outcome expectations are differentiated from efficacy beliefs (Bandura, 1986). Outcome expectations refer to the perception of action-outcome contingencies. Efficacy beliefs refer to judgments of

individual capacity to perform. The distinction arises from the recognition that it is possible to believe in one's ability to perform the necessary actions to achieve a designated goal, while nonetheless believing that the performance of these actions will not produce the desired outcome.

Bandura recognized that belief in one's own competency is sometimes insufficient to produce the behavior -- particularly when the action-outcome connection has been or seems to be broken. When outcome expectations are weak, there is little incentive to work perform the behaviors that could realize the goal. The discrepancy between efficacy beliefs and outcome expectations is exemplified in gender differences in salary negotiations. According to Stevens, Bavetta and Gist (1993), differences in salary expectations underlie gender differences in the amount of effort expended to negotiate a salary increase and in the salary goal used to begin negotiations.

A number of studies linking communication skills with efficacy beliefs have used outcome expectations as a measure of efficacy beliefs. For example, in studies of salary negotiations, Gist and associates (Gist, Stevens & Bavetta, 1991; Stevens, Bavetta & Gist, 1993) asked subjects to estimate, on a ten-point scale, their

confidence in obtaining specific salaries. The authors justified this procedure by linking outcomes to specific negotiation tactics: the use of specific tactics produced salary increases in the simulated negotiation contexts. Since subjects had previously been trained in using these tactics, the use of outcome expectations as a measure of efficacy beliefs had some merit.

The distinction between efficacy beliefs and outcome expectations has significant ramifications for the concept and measurement of teacher efficacy. In educational settings, where outcomes are multiply determined and the source of responsibility is well-confounded, efficacy beliefs and action-outcome contingencies are both important determinants of teacher behavior. In the following sections the conceptualization and measurement of teacher efficacy are described with a focus on the distinction between efficacy beliefs and outcome expectations.

The Construct of Teacher Efficacy

The construct of teacher efficacy provides a basis for examining teachers' perceptions of their individual professional competence across a range of situations and their beliefs about the limits of their influence on educational outcomes. The construct is grounded in

the research traditions of Albert Bandura's Cognitive Social Learning Theory (1977, 1986, 1993) and Julian Rotter's Social Learning Theory (1966). This conceptual lineage emphasizes the cognitive determinants of action and affect and views the individual's capacity to control outcomes as influenced by the individual's *perceptions* of control. Within this framework, there is agreement that perceptions of control arise from two inter-related sources: judgments of personal capacity and assessments of the resources and constraints within the environment. The dual lineage has been a source of confusion and disagreement regarding the conceptual and operational definition of the term (Guskey & Passaro, 1993). However, Bandura's two-factor efficacy model gained ascendancy in educational research programs (Ashton, Webb & Doda, 1982; Gibson & Dembo, 1984).

Teacher Efficacy: Operational Definition

Gibson (1983) applied Bandura's two-factor model to the development of a Likert-scale to assess teacher efficacy. Factor analysis verified the two-dimensional construct (Gibson & Dembo, 1984). One group of 9 items clustered on a dimension called personal teaching efficacy. This dimension was defined as "the belief that one has the skills and abilities to bring about

student learning." For example, item 12 states: "When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level." This factor accounted for 18.2% of the total variance.

A second group of 7 items, accounting for 10.6% of the variance, clustered around the issue of constraints on educational outcomes. This factor was designated "teaching efficacy" and was defined as "belief that any teacher's ability to bring about change is significantly limited by factors external to the teacher, such as the home environment, family background, and parental influences." Teaching efficacy was understood to represent teachers' beliefs about the educability of students (Ashton, Webb & Doda, 1982) or "the general relationship between teaching and learning" (Gibson & Dembo, 1984, p.574). From this, it became known as "general teaching efficacy" and is henceforth referred to as such. Item 6 on the general teaching efficacy factor states: "If students are not disciplined at home, they aren't likely to accept any discipline."

The Gibson Teacher Efficacy Scale has been studied and applied in numerous investigations since its development and has attained the status of a general measure of teacher efficacy. However, the meaning of the factors has not gone unchallenged. Woolfolk and Hoy (1990)

questioned whether the distinction between personal efficacy and teaching efficacy fits veridically with Bandura's distinction between efficacy expectations and outcome expectations. They argued that "The question of whether teachers can override the effects of adverse background influences... is an efficacy expectation, not an outcome expectation, because it involves the potential to perform" (p.82). Guskey and Passaro (1993) challenged the interpretation of the factor structure, suggesting that the factors are more consistent with a locus of control interpretation. Although conceptual issues are unsettled, the factor structure of the Gibson-Dembo scale has been substantially supported by other studies (Woolfolk & Hoy, 1990).

The Importance of Teacher-Efficacy

Teacher Efficacy is expected to influence teachers' communication strategies during parent conferences. There are several reasons for this expectation. First, low efficacy teachers are not as likely as high efficacy teachers to value parent involvement and appreciate opportunities for parent-teacher conferences (McCarthy, 1988). Second, low efficacy teachers are more likely than high efficacy teachers to exhibit a defensive bias: they are more likely to attribute poor student behavior and achievement to home and family

characteristics rather than to their own attitudes and behavior (Hall, Hines, Bacon & Koulianos, 1992). Third, low efficacy teachers are likely to experience more stress than high efficacy teachers (Greenwood, Olejnik & Parkay, 1990) and to have fewer methods of coping with stress and solving problems (Chwalisz, Altmaier & Russell, 1992; Grafton, 1987; Grafton & Wilcox, 1987). This research is reviewed in the next section.

Teacher Efficacy Research

The literature reports an extensive array of behavioral and attitudinal variables associated with teachers' judgments of their professional competence. Among the indirect and recursive effects of teacher efficacy on parent-teacher interactions, teachers' disciplinary practices are a potential source of variance in parent-teacher friction. Rohrkemper and Brophy (1983) studied teachers' practices of communicating with low-achieving and disruptive students. They found that teachers make greater use of coercive measures and threats when interacting with students who elicit feelings of their own inefficacy, while they demonstrate more supportive behaviors when interacting with students whose problems seem more manageable to them. While Rohrkemper and Brophy did not manipulate or measure teacher efficacy, there is evidence that low-

achieving students are differentially treated by low and high efficacy teachers.

Ashton, Webb and Doda (1982) reported differences between high and low efficacy teachers in their attitudes toward low-achieving students and their interactions with low achieving students. Based upon hours of classroom observation, these authors state:

> High-efficacy teachers uphold relatively high academic standards for their low-achieving students...They enjoy such students and work to build friendly, non-threatening relationships with them. Low-efficacy teachers, on the other hand, experience frustration and sometimes anger over the attitudes and behaviors they think characterize most low-achieving, low SES pupils (p. 192).

These observations are consistent with correlational research. A study by Woolfolk and Hoy (1990) applied a quasi-experimental design to assess the role of teacher efficacy in practices of discipline. Relying upon questionnaire data, they found that high teacher efficacy scores were associated with a humanistic orientation toward pupil control while low teacher efficacy scores were associated with custodial control methods of maintaining order and discipline.

Teachers' efficacy beliefs are likely to impact parent-teacher relationships through their effects on teachers' attributions for educational outcomes. Hall

and associates (1992) found that teachers with low efficacy emphasize the importance of home influences on learning more than teachers with high efficacy; and teachers with high efficacy were more likely than teachers with low efficacy to accept responsibility for student failure. Among low efficacy teachers, a self-enhancement bias was operating so that these teachers accepted responsibility for student success, but not for student failure. Ames (1983) reported the same pattern: a self-enhancement bias occurred among low efficacy teachers, but not among high efficacy teachers. These studies suggest that low efficacy teachers are more likely to interpret poor student performance in ways that conflict with parents' interpretation. Differing perceptions about the causes of poor student performance are a potential source of either parent-teacher conflict or parent-teacher distance (Vernberg & Medway, 1981).

Lastly, the generative and mobilizing force of self-efficacy translates into significant differences between high and low efficacy teachers in their ability to manage the stresses of their profession and overcome obstacles to achievement. Greenwood, Olejnik, and Parkay (1990) reported a significant association between teacher efficacy and stress levels. Using the

Wilson Stress Profile and a two-item Likert-scale measure of teacher efficacy, they examined two dimensions of teaching efficacy -- belief in one's personal competence (personal teaching efficacy) and belief that teachers in general are capable of motivating students to learn (teaching efficacy). These authors found that teachers with the highest efficacy scores (high on both personal teaching efficacy and teaching efficacy) reported the lowest levels of stress. Teachers with the lowest efficacy scores (low on both the personal teaching efficacy and teaching efficacy) reported significantly higher stress levels than teachers with moderate efficacy scores (low on one dimension of efficacy, but not both). Contrary to expectation, stress levels were comparable among teachers who believe that other teachers are successful motivators of students, regardless of their perceptions of their own ability to motivate students. These results suggest that stress level may be attenuated by belief in the potential to achieve goals and accentuated by a sense of futility arising from the perception that the environment is unresponsive to anyone's efforts (Bandura, 1982).

High and low efficacy teachers have been found to differ in their management of stress. Chwalisz, Alt-

maier and Russell (1992) found that high efficacy teachers directed their efforts at resolving problems while low efficacy teachers tried to assuage their emotional distress without addressing the problem. Similarly, Grafton (1987) and Grafton and Wilcox (1987) found that high efficacy teachers were more likely than low efficacy teachers to engage principals in the process of problem-solving. High efficacy teachers, as measured by the Gibson Teacher Efficacy Scale, reported using solution-oriented strategies such as open discussion of alternatives and acceptance of compromises. Grafton (1987) also found that teacher efficacy enhanced the connection between perceptions of the principle and use of problem-solving strategies among female teachers. In other words, teacher efficacy equalized the gender difference in the use of solution-oriented communication messages. Based upon these findings, teacher efficacy is expected to impact parent-teacher interactions through numerous mediating variables, including teachers' attributions, disciplinary orientation, stress level, and problem-solving approaches.

Two studies have provided direct empirical evidence of an association between teacher efficacy and parent-teacher relationships. Hoover-Dempsey, Bassler and

Brissie (1987) studied the effects of several organizational variables, including teacher efficacy, on parent involvement. Teacher efficacy scores were averaged for schools and correlated with teachers' reports on five parent involvement variables: number of parent-teacher conferences; teachers' perceptions of parent support; use of parents as classroom volunteers; home instructional programs; and home tutoring. Multiple regression analyses showed that teacher efficacy, at the organizational level, made a significant contribution to each of these parent involvement variables.

High teacher efficacy scores have been associated with more favorable attitudes toward communicating with parents. McCarthy (1988), using the two-factor Teacher Efficacy Scale by Gibson and Dembo (1984), conducted a path analysis on a questionnaire completed by a sample of 63 master teachers and 40 student teachers. The questionnaire was a 21-item scale containing items about "general teaching efficacy, personal teaching efficacy, beliefs about home influence and attitudes towards communication with parents..." (p.48) The study concluded that personal teaching efficacy had a direct influence on teachers' attitudes toward communication with parents, but general teaching efficacy had only an indirect effect through its influence on

teachers' beliefs about home influence. This pattern of causation is anticipated in the present study.

In summary, teacher efficacy -- and particularly, personal teaching efficacy -- is expected to directly influence teachers' commuunicative behavior during difficult parent-teacher conferences. Teachers with low efficacy are expected to use lower level communicative strategies than teachers with high efficacy.

Proposed Path Model

The path model proposed for this study presents a one-way causal flow of influence initiated in antecedent social/cognitive developments and culminating in message production. Social/cognitive developments were assessed through the variable of construct differentiation which is thought to have a broad influence on interpersonal interaction and social understanding in a large number of contexts. It was assumed that these developments play an important role in teachers' classroom management preferences and instructional behavior. Some research lends support to this assumption. For example, Reynolds (1970) reported different classroom verbal interaction patterns among college instructors as a function of cognitive complexity. Cognitively simple instructors relied upon lecture and drill, and showed relatively little respect for stu-

dents' ideas. Cognitively complex instructors were relatively accepting of students' ideas and more tolerant of brief periods of silence or confusion in the classroom.

In other words, it was reasonable to assume that highly differentiated and less differentiated teachers would differ on a number of behaviors and attributes that might influence teachers' communicative behavior. These behaviors and attributes include the frequency and quality of interactions with students and parents (Hoover-Dempsey, Bassler & Brissie, 1987); level of respect for students' and parents' ideas and feelings (Reynolds, 1970); valence and level of differentiation of teachers' impressions of children and parents (Crockett, 1965); and recognition of the complexities and difficulties involved in discussing children's school-related problems with parents (O'Keefe, 1988). These attributes were expected to have both a direct and indirect influence on the quality of teachers' messages to parents.

Part of the influence of construct differentiation was expected to occur through teachers' knowledge of children as individuals which was assessed through a measure of role-bound construing. Highly differentiated teachers were expected to see children as

individuals and to form more differentiated and less role-bound impressions of them. Therefore, it was expected that the level of role-bound construing, arising from an inverse relationship with construct differentiation, would be a direct source of variance in teachers' messages.

Part of the influence of construct differentiation was expected to be transmitted through teachers' efficacy beliefs -- their judgments of their own capabilities for instructional activities within the classroom and their judgments of the potential for parent conferences to resolve children's school-related problems. Construct differentiation was expected to influence teachers' efficacy beliefs because judgments of performance capability are formed through personal experience, attributions for prior performance, and assessments of personal and situational resources and constraints (Gist & Mitchell, 1992). Interestingly, both construct differentiation and teaching efficacy have been associated with variance in teachers' control orientation (Reynolds, 1970; Woolfolk & Hoy, 1990). It was assumed that construct differentiation would facilitate experiences that contribute to efficacy in teaching children and communicating with parents. To the extent that highly differentiated teachers appreciate

the ideas of their students and are relatively flexible in their classroom management, they could be expected to have experiences with their students that contribute to their own and their students' efficacy. To the extent that highly differentiated and efficacious teachers are secure in their ability to communicate effectively with parents, they could be expected to engage in relatively frequent interactions with parents and to strive to work with parents in overcoming children's school-related problems.

In summary, it was expected that much of the influence of construct differentiation on teachers' messages would be transmitted through domain- and task-specific efficacy variables. The role of construct differentiation was expected to occur directly, but also through its influence on the quality of teachers' classroom experiences and the quality and quantity of parent-teacher interactions. Teachers with advanced social/cognitive development could be expected to experience relatively high levels of efficacy for teaching and communication which would be reflected in relatively person-centered and supportive communications with parents. The specific paths of influence among these variables are set forth in the research hypotheses of this investigation. Table 2 presents a summary of the causal variables in this study.

Table 2
Summary of Path Model Variables

Variable	Definition	Type
	Constructivist Variables	
Construct Differentiation	the number and accessibility of constructs in the interpersonal construct system.	developmental
Role-Bound Construing	the proportion of role-determined constructs (role-determined aspects of behavior) in relation to the total number of constructs in the interpersonal construct system.	domain-specific
	Efficacy Variables	
Personal Teaching Efficacy	belief that one has the skills and abilities necessary to achieve good educational outcomes.	domain-specific
General Teaching Efficacy	belief that a teacher's ability to bring about student learning is constrained by external factors, such as home environment, family background, and parental influence.	domain-specific
Communication Efficacy	belief in one's skills and determination to to overcome obstacles to cooperation during difficult parent conferences.	task specific

Research Hypotheses

A path model was proposed to examine the causal relationships among the constructivist and efficacy variables. The model was developed to conform to a fully recursive system with one exogenous (independent) variable and five endogenous (dependent) variables. These relationships were assumed to be linear and additive. The model is presented in Figure 1 on page 81.

The model shows that personal teaching efficacy, role-bound construing, communication efficacy, and communicative behavior depend upon the exogenous variable of construct differentiation. In other words, construct differentiation has direct antecedent effects on all variables in the system and indirect effects on communicative behavior through its influence on the dependent variables. The model further shows that communication efficacy depends upon the influence of personal teaching efficacy and general teaching efficacy. The direct and indirect effects of construct differentiation are stated as follows:

H1 Construct differentiation has a direct linear effect on efficacy.

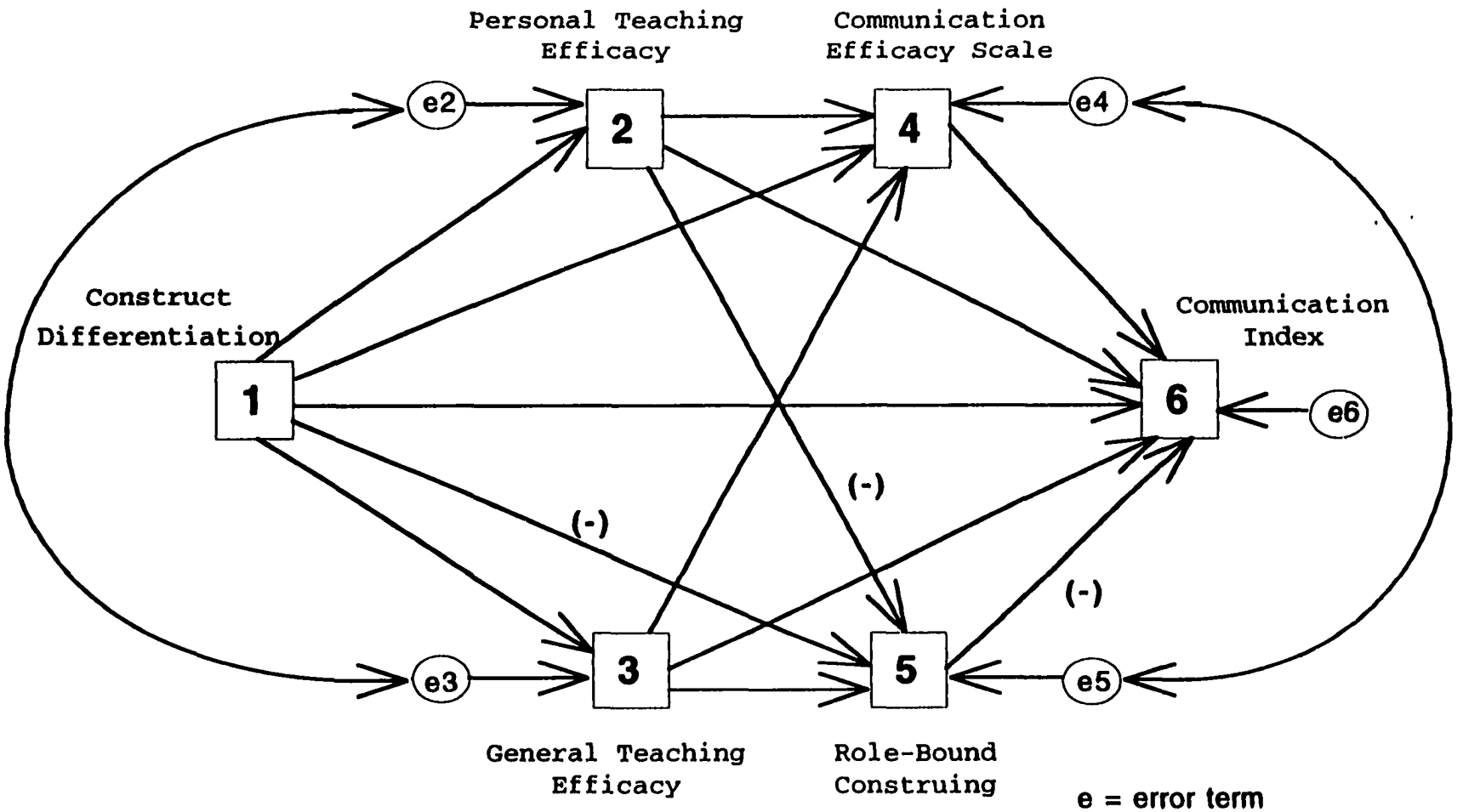


Figure 1. Proposed Path Model. The model is a fully recursive, just-identified system with one exogenous and four endogenous causal variables.

H1a. Construct differentiation has a direct linear effect on personal teaching efficacy and an indirect effect on communicative behavior through personal teaching efficacy.

H1b. Construct differentiation has a direct linear effect on general teaching efficacy and an indirect effect on communicative behavior through general teaching efficacy.

H1c. Construct differentiation has a direct linear effect on communication efficacy and an indirect effect on communicative behavior through its influence on communication efficacy.

H1d. Construct differentiation has a direct inverse linear effect on role-bound construing efficacy and an indirect effect on communicative behavior through its influence on role-bound construing.

The model shows further that personal teaching efficacy and general teaching efficacy are expected to influence communicative behavior both directly and indirectly through their influence on communication efficacy and role-bound construing and their relationships with general teaching efficacy. These relationships are expressed as follows:

H2a Personal teaching efficacy has a direct linear effect on communicative behavior and an indirect effect

through its influence on communication efficacy and role-bound construing and its association with general teaching efficacy.

H2b General teaching efficacy has a direct linear effect on communicative behavior and an indirect effect through its influence on communication efficacy, and its relationship with personal teaching efficacy.

The remainder of the model specifies the direct effects on communicative behavior by role-bound construing and communication efficacy. These variables are assumed to depend upon antecedent variables. These relationships are expressed as follows:

H3 Role-bound construing has a direct linear effect on communicative behavior.

H4 Communication efficacy has a direct linear effect on communicative behavior.

Three specific features of the model need to be elaborated. First, construct differentiation is expected to have a direct influence on personal teaching efficacy. Second, a relationship between construct differentiation and general teaching efficacy is *not* expected. Third, the relationship between personal and general teaching efficacy is expected to represent a correlation rather than a causal relationship. This model is applied to three indices of communicative

behavior -- explanations, persuasive appeals, and relational development scores.

Teachers' preferred strategy for managing multiple incompatible communicative goals are expected to correlate with the same causal variables employed in the path model. The following hypotheses are proposed:

H5 Explicit and implicit selection percentage scores are negatively associated with construct differentiation, personal teaching efficacy, general teaching efficacy, and communication efficacy.

H6 Explicit separation is the preferred strategy choice.

The next chapter describes the instruments, procedures, and statistical analyses employed in this study. The measurements include the proposed causal variables and four communication indices to assess teachers' explanations, persuasive appeals, relational development, and multiple goals management strategies. The methods section describes the procedures used to identify a sample and to elicit communicative behavior.

Chapter 4

Methodology

The study was conducted in two phases and employed a methodology conforming to the constructivist research paradigm. During the first phase, participants completed a written questionnaire to assess the causal variables in the model and to gather background information. During the second phase, participants were provided with hypothetical, but realistic communication situations to elicit their messages to parents. The messages were coded according to hierarchical coding systems, guided by cognitive/developmental principles. The data were examined through a two-stage path model.

Sample

A total of 108 elementary school teachers completed the Phase I Questionnaire. Nearly 80%, or a total of 84 teachers, completed both the questionnaire and the interview phase of the study. Teachers were drawn from 24 different schools in three urban school districts in a major metropolitan area. These schools serve communities with diverse socioeconomic status and cultural identification.

Teachers reported a diversity of personal background and teaching experience. As expected, the sample consisted of significantly more women than men, reflecting the ratio of elementary school teachers. Nearly half of interviewed teachers reported their age as younger than 40 and slightly less than half reported having their own children. About half of the teachers were Caucasion; 32% of the sample were African American; 9% were Hispanic; 4% were Asian; and 6% reported another ethnic identification.

Nearly half of the sample reported holding a Master's Degree plus additional credits. Twenty-nine teachers (slightly more than a third) reported having fewer than five years' teaching experience. Another third or 24 teachers reported a moderate level of teaching experience (5 to 11 years); and the remaining third (28 teachers) reported having more than 12 years' experience.

More than two-thirds or 57 teachers were holding regular classroom teaching positions at the time of the study. Eleven teachers or 13% held cluster positions in which they taught many classes during the week. Nearly 20% reported holding some other type of teaching position in their school.

Nearly two-thirds of the sample (53 teachers) were teaching children in regular education classes. Nine

were teaching in a program for gifted children, while 19 teachers or 23% of the sample were teaching children with special needs. Fifty percent were teaching children in grades pre-kindergarten through grade 3; 27% or 22 teachers were teaching children in grades 4, 5, or 6; and 23% or 19 teachers reported teaching more than one grade. (See Appendix A for a summary of demographic data.)

Phase I Questionnaire

The Phase I Questionnaire (see Appendix F) assesses teachers' level of cognitive complexity and efficacy. Cognitive complexity variables were assessed through the Role Category Questionnaire and a measure of role-bound construing. Teacher efficacy was measured with selected items from the Gibson and Dembo Teacher Efficacy Scale (1984). Communication efficacy was measured with a scale designed for this study. Information about teachers' personal and professional background were gathered through a Demographic Data Sheet. Reliability coefficients for each of these causal variables is found in Table 3 (see p. 88).

Role Category Questionnaire.

The Role Category Questionnaire (Crockett, 1965) is a constructivist measure used to assess structural and content properties of the interpersonal construct

system. In this study, the Role Category Questionnaire was used to assess construct differentiation -- that is, the number of constructs contained within the individual's interpersonal construct system. This measure is interpreted as a general index of social/cognitive development. Construct differentiation (CD) was measured by counting the number of constructs in teachers' descriptions of a liked and disliked peer. The number of constructs in each description was counted and summed across both descriptions.

Directions for administration and scoring criteria followed procedures set forth by Burleson and Waltman (1988). Elements were counted as constructs when they complied with the criteria in the directions.

Qualifiers were not counted as separate constructs unless the qualifier constituted a separate attribute. For example, if the person described someone as "an intensely serious person," one construct was scored. However, if the person described someone as "having a propensity to lie to others (and at times to himself)," two constructs were scored. Synonyms were counted as separate constructs, but repeated words and phrases were counted as only one construct. High scores are expected to be associated with high scores on the communication indices.

Inter-rater reliability was evaluated with a Pearson correlation. The correlation between observations of 20 protocols by the principal investigator and a trained rater was .91 ($p \leq .001$, df 18).

Role-Bound Construing.

Role-bound construing (RBC) is a construct derived from constructivist research. It refers to the relative number of role-bound constructs in comparison to generic constructs in an impression of a person in a designated social role, such as student. Following Applegate (1978), teachers were asked to describe a child whom they regard as an "ideal student." The proportion of constructs conforming to "the behavioral requirements of the 'student' role" was taken as the measure of role-bound construing (p. 192). Role-bound constructs included attributes associated with study skills, academic achievement, and appropriate social behavior (i.e., "intelligent" "motivated"). Non-role-bound constructs included attributes associated with non-academic skills, interests, talents, and behavioral characteristics that are not specific to the performance of the student role (i.e. "cheerful" "optimistic"). A high percentage of role-bound constructs was expected to have a negative association with construct differentiation and the communication

indices because a high level of role-bound construing reflects a constricted range of interpersonal constructs (individual motives, needs, feelings) and places emphasis on concrete behavior that either conforms to or violates role expectations. A Pearson correlation was used to evaluate consistency of coding. Inter-rater reliability, based upon 20 protocols rated by the principal investigator and one trained rater, was .65 ($p \leq .01$, df 18).

Teacher Efficacy Scale.

Fifteen items from The Teacher Efficacy Scale (Gibson, 1982) were included in the Phase I Questionnaire. Responses to the 15 Likert-type items ranged on a 6-point scale from strongly disagree (1) to strongly agree (6). Based upon prior research (Gibson & Dembo, 1984), the items were expected to reflect a two-factor structure. The two-factor structure was substantially supported by a principal-components analysis in the first extraction. Nine items clustered on a dimension called personal teaching efficacy. This factor accounted for 20.7% of the total variance. Six items clustered on a dimension called general teaching efficacy, accounting for 17.6% of the variance. (See Appendix B for factor loadings.)

The first factor, personal teaching efficacy, is defined as "the belief that one has the skills and

abilities to bring about student learning" (Gibson & Dembo, 1984, p. 573). For example, item 12 states, "When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level."

The second factor, general teaching efficacy, refers to teachers' beliefs "that any teacher's ability to bring about change is significantly limited by factors external to the teacher, such as the home environment, family background, and parental influences" (Gibson & Dembo, 1984, p. 574). For example, item 6 states, "If students are not disciplined at home, they aren't likely to accept any discipline." General teaching efficacy items were recoded so that high scores reflect the belief that a teachers' performance is *not* significantly constrained by external factors.

Cronbach's alpha was employed to measure internal consistency. Based upon a sample of 85 participants, coefficient alpha was .65 for the total scale; .71 for personal teaching efficacy; and .70 for general teaching efficacy.

Communication Efficacy Scale.

Teachers' efficacy beliefs about their conferencing skills, their expectations of achieving successful outcomes from parent conferences, and their expectations of difficulty in communicating with parents during

problem situations were evaluated through 37 Likert-type questions. The resulting scale -- the Communication Efficacy Scale -- contained three areas: expectations of success, and expectations of difficulty, communicative skills.

Teachers' beliefs about their expectations of success were measured with a 12-item scale. Teachers were asked to rate their expectations of success across a range of situations. Items were scored on a four-point scale ranging from 1 (No Success) to 4 (Great Success). An example (item 6) states, "How successful would you expect to be in calming a parent's anger about being called to school to discuss her child's behavior?"

Teachers' expectations of difficulty during parent-teacher conferences were measured with a 12-item scale which asked teachers to rate how much difficulty they expected to have in a variety of situations. For example, item 1 asks, "How much difficulty would you expect to have when dealing with a parent who blames you for her child's lack of interest in school?" Items were scored on a four-point scale ranging from 1 (No Difficulty) to 4 (Great Difficulty). Scores on the difficulty factor were reverse coded. High scores represented a *low* expectation of difficulty.

Teachers' assessments of their conference communication skills were evaluated by questions covering

a range of situations and affective reactions. For example, item 12 states, "When a parent is in denial of his or her child's behavior problems, I know what to say to help the parent recognize that the child has a problem." Item 11 states, "I am not easily intimidated by parent." Responses were on a six-point scale ranging from Strongly Disagree to Strongly Agree. The scale initially ranged from 1 (strongly disagree) to 6 (strongly agree), but was collapsed to a four-point scale to maintain consistency with the other sub-scales.

Reliabilities were computed for each of the three sub-scales and for the total measure of 37 items. The alpha coefficient for Success was .87 (n=91); for Skills, .76 (n=87); and for Difficulty, alpha was .82 (n=89). For the total 38 items, the alpha coefficient was .89 (n=80).

Teachers' expectations of success and skill estimates were combined to produce a measure of teacher confidence. The communication efficacy score was derived from a ratio between confidence level (skills + expectations of success) and expectations of difficulty. With reverse coding on the difficulty items, high scores on the ratio measure represent a high level of teacher confidence *and* a high awareness of the dif-

ficulties involved in communicating with parents. Teachers who reported expecting little difficulty during parent conferences were not able to achieve high efficacy scores. (See Appendix G for a discussion of the development of the Communication Efficacy Scale.)

Tables 3 below summarizes the reliability data for the causal variables.

Table 3

Reliability Coefficients for Causal Variables

	CD[a]	RBC[a]	PTE[b]	GTE[b]	CES[c]
Pearson r	.91	.65	--	--	--
Cronbach's alpha	--	--	.71	.70	.89

Note. CD = construct differentiation; RBC = role bound construing; PTE = personal teaching efficacy; GTE = general teaching efficacy; CES = communication efficacy scale.

[a]Inter-rater reliability coefficients (n = 20 pairs). [b]Internal consistency coefficients (n = 85). [c]Internal consistency coefficient (n = 80).

Demographic Data Sheet.

Teachers completed a data sheet reporting personal and professional information (i.e., gender, race,

parental status, educational background, years of teaching experience, grade level, and type of program). This information is reported in Appendix A.

Phase II

Phase II materials consisted of a series of eight vignettes for eliciting messages and a validity check that was administered after each hypothetical conference. There were two types of vignettes corresponding to coding systems for level of supportiveness and person-centered communication, respectively. In addition, all vignettes were scored for relational development and multiple goal management. Reliability coefficients for each of the communication indices are found in Table 4.

Elicitation Task: The Vignettes.

Teachers were presented with a series of eight hypothetical situations or vignettes developed for this investigation. Each vignette poses a challenge to the teacher to manage face protection and encourage cooperation. The disputed issues selected for this study were identified through a literature review showing that parent-teacher conflict frequently arises over assigning responsibility for causing and for correcting children's school-related problems (Canady & Seyfarth, 1979; Canter & Canter, 1991; Power, 1985; Rohrkemper &

Brophy, 1983). Specific behavioral problems included peer rejection, aggression, attendance, achievement, and defiance of adult authority. Situations were intentionally ambiguous to enable teachers to draw upon their own experiences in handling the situation. Prior pilot testing revealed that the inclusion of detailed background information limited teachers' options and turned the task into a memory exercise in which teachers tried to repeat the specific details presented in the vignette.

Four vignettes -- 1, 3, 7, and 8 -- elicited messages in response to a parent's complaint. These messages were scored for the level of supportiveness toward the parent in the teacher's explanation. The remaining four vignettes -- 2, 4, 5, and 6 -- were designed to elicited messages to encourage the parent to take a more active role in the child's education or to accept a teacher's recommendation.

Messages were also scored for level of relational development and type of message goal management. These coding systems are elaborated below in the section on Communication Indices. The vignettes and directions for administration are presented in their entirety in Appendix C.

Validity Check.

Teachers completed a rating sheet asking them to rate each of the eight communicative situations for its level of realism and difficulty; and to rate their own responses to each situation for naturalness. Teachers were also asked to indicate if they had a particular child in mind while engaging in the role-play. The Validity Check Rating Sheet and frequencies are presented in Appendix D.

Communication Indices.

Four indices of communication were employed to evaluate teachers' messages. These systems are described below and presented fully, with examples, in Appendix E. Coding was done by the principal investigator.

About 20% of the protocols were coded by an assistant and the principle investigator to establish reliability on the interpretation of the data, reported below. The unit of measure and the statistic employed to assess consistency and accuracy of coding varied. Composite scores for explanations, persuasive appeals, and relational development were evaluated with a Pearson correlation. This level of data was employed in subsequent analyses and was therefore considered most relevant (Hartmann, 1984). In addition, a finer gauge of reliability was conducted on the component units of

these variables using Spearman's rank order correlation.

Component scores were used to assess the reliability of multiple goal management. This level of measurement was selected because hypotheses concerned the distribution of data (Folger, Hewes & Poole, 1984). Unitizing reliability was calculated using Cohen's kappa. (Unitizing reliability was not considered necessary for the other communication indices because the total response, up to the prompt, was taken as the unit of measure.) Interpretive reliability was evaluated on component units with Spearman's rank order correlation.

Scale for Explanations.

The scale for coding teachers' explanations evaluates level of support to the parent in the context of parental intrusion and/or criticism. Designed for this study and adapted from Applegate and Woods (1991), the five-point scale for teachers' explanations ranges from 1 (Highly Defensive) to 5 (Highly Supportive). At the lowest level, teachers refuse to offer explanations and put the parent on the defensive. At the highest level, teachers' explanations show that their actions are guided by abstract principles and values and by their knowledge and understanding of the child. Using the

four vignettes for Explanations, the total range possible was 4 to 20 unless no role-play occurred. When the respondent failed to engage in the role-play, that vignette was dropped from the analysis and averaging was done on that item for that respondent.

Inter-rater reliability coefficients were .74 for the global (aggregated) measure (n = 20) and .43 for the unit measure (n = 80). Internal consistency across the 4 situations was evaluated with Cronbach's alpha. The set of four items examining teachers' supportiveness to parents during face-threatening situations was assessed yielded an alpha coefficient of .74 (n = 83).

Scale for Persuasive Appeals.

Adapted from Applegate and Woods (1991), the scale for persuasive appeals evaluates qualitative features of teachers' messages in encouraging cooperation from a resistant parent and empowering the parent to take action. The scale assesses person-centered communication (Applegate, 1978; Applegate & Delia, 1980; Burleson, 1989).

The 5-point scale ranges from 1 (Highly Positional) to 5 (Highly Person-Centered). Person-centered messages employ persuasive appeals which grant autonomy to the parent by encouraging reflection and addressing obstacles and incentives to compliance with sensitivity

and respect for the individual. Person-centered communication, directly or implicitly, acknowledges the relevance of the parent's perspective and avoids assumptive statements. Conversely, position-centered messages are characterized by denial of the parent's autonomy by aggressive demands for compliance and cooperation. The teacher either dismisses or ignores the parent's perspective as irrelevant and focuses on the role-determined aspects of overt behavior and expectations. Position-centered messages take the listener's perspective for granted and make assumptions about the listener's intentions and constraints. Each vignette received one score from 1 to 5 and each respondent received a total score ranging from 4 to 20, unless No Role-Play occurred on one or more vignettes.

The product moment correlation evaluating global (total score) inter-rater reliability was .74 (*df* 16, $p \leq .01$), while the Spearman rank order item correlation coefficient was .50 (*df* 74 $p \leq 01.$). Internal consistency for the set of four items examining teachers' persuasive appeals was assessed with Cronbach's alpha, yielding a coefficient of .49.

Relational Development.

The index of relational development assesses the degree to which teachers' messages aim to build rela-

tionships with parents. Adapted from Applegate (1978), this scale ranges from 1 (intensifies conflict) to 5 (actively seeks to enhance relationship). The relational development scale was applied to the total set of 8 vignettes. Each vignette received one score for relational development, yielding a sum score ranging from 8 to 45. Inter-rater reliability was calculated through a Pearson correlation on total scores (r = .42, df 13, $p \leq .10$) and the Spearman rank order correlation on items (r = .16, df 149, $p \leq 10$). Internal consistency was evaluated through Cronbach's alpha (r = .70).

Multiple Goal Management.

An index assessing the management of multiple communicative goals was adopted from O'Keefe and Shepherd (1978). The system employs five discrete categories -- three types of multiple goal management strategies (selection; separation; integration) and two levels of directness (explicit; implicit). These categories are defined and exemplified in Appendix E.

Messages were assigned a multiple goal management score when the message contained a criticism or issued a directive. Messages that did not contain a criticism or issue a directive did not receive a multiple goal management score. When the message contained more than

one criticism and/or directive, the message was assigned a single score on the basis of the first criticism or directive. Because some messages did not receive multiple goal management scores, proportion scores were used to compensate for missing data. Scores for each teacher were, therefore, derived by adding the number of times the teacher employed one of five specific strategies and dividing by the number of messages assigned a multiple goal management score. Therefore, teachers received five scores to show their proportionate use of each of five goal management strategies. The highest proportion was the teacher's preferred strategy.

Cohen's Kappa was employed to assess level of agreement in determining the presence of a criticism or directive. Coefficient Kappa was .64, based upon 80 observations. Inter-rater reliability on the interpretation of message content as a function of managing multiple goals was assessed through a Spearman rank order correlation coefficient (r_{ranks}=30, df 46, $p \leq .05$).

Table 4 summarizes the reliability coefficients for the communication indices.

Table 4

Reliability of Communication Indices

Statistic	n	EXP	PA	RD	MGM
Pearson r	20[a]	.74	.74	.42	--
Spearman r	80[a]	.43	.50	.16	.43[b]
Cohen's Kappa	80[a]	--	--	--	.64
Cronbach's alpha	83[c]	.74	.49	.70	--

Note. EXP = Explanation scores; PA = Persuasive appeal scores; RD = Relational development scores; MGM = Multiple goal management scores.

[a] Number of pairs of observations. [b]n = 48 pairs (not 80). [c]Cronbach alpha coefficients are based on 83 cases, expect for relational development scores which are based on 81 cases.

Research Design

This research applied a quasi-experimental design. All respondents received the same set of materials. After completing the Phase I Questionnaire which includes measures of teacher efficacy, communication efficacy, and construct differentiation, teachers participated in Phase 2, a series of eight hypothetical

communicative situations. Teachers' messages were tape-recorded, transcribed, and coded.

Procedure

Teachers attended a meeting at their respective schools where they were told about the purpose and methods of the present investigations, as well as its potential value to the educational community. Participation was voluntary. Participants who completed the study received a small gratuity to thank them for their time. Teachers were assured that their responses were confidential and would be used for the sole purpose of this investigation. Permission to work with teachers in their schools was obtained from the Board of Education, district superintendents, and principals. A small number of teachers were identified through private networking among public school teachers; and a small number of teachers were identified through graduate education courses.

At the orientation meetings, teachers interested in participating received the Phase I Questionnaire. The Phase I Questionnaire was presented in a booklet consisting of the Communication Efficacy Scale, the Teacher Efficacy Scale, the directions for the Role Category Questionnaire and Ideal Student Description, and the Demographic Background Data Sheet. Each part

of the Phase I Questionnaire was described and explained. Some teachers completed the questionnaire at this time; others chose to work on it later and return it by mail.

Within two to six weeks of completing the Phase I Questionnaire, teachers met individually and by appointment with the principal investigator to participate in the simulated parent-teacher conferences. Most interviews were held in the teacher's school during the teacher's prep period or lunch period. In a few cases, teachers chose to be interviewed on their free time at the investigator's home.

Teachers were given a notebook containing general directions, the parent-conference situations or vignettes, and the validity rating sheets which were placed behind each situation. The directions and the situations were read out loud while the teacher followed along in the notebook. The directions included the request to speak clearly and audibly because the interview was being recorded. The tape recorder was placed in view on the table. (The complete directions are in Appendix C.)

After the situation was read, the teacher was prompted with the question, "What would you say to this parent?" After the teacher answered the question, he

or she was prompted again. The second prompt was improvised to fit the teacher's initial response and to provide another communicative challenge. However, the messages generated by the second prompt were not coded.

Upon completing each situation, teachers filled out a validity rating sheet. Teachers were able to consult the text throughout the administration of the simulated interview and the completion of the validity rating sheet. The order of administration of the vignettes was randomly varied according to a table of random numbers (Winer, 1971). The simulated parent-teacher conferences were tape-recorded, transcribed, and coded.

Analysis of Data

Analyses of the questionnaire and communication data included (a) descriptive statistics of the causal variables and communication indices; (b) a series of one-way ANOVAs using demographic factors as independent variables; (c) three path analyses for teachers' explanations, persuasive appeals, and relational development scores; and (d) correlational analyses of multiple goal management scores.

Each path analysis required five regression equations to test the model in Figure 1 (page 81). Personal teaching efficacy was regressed on construct dif-

ferentiation. General teaching efficacy was regressed on construct differentiation. Communication efficacy was regressed on personal teaching efficacy, general teaching efficacy, and construct differentiation. Role-Bound construing was regressed on personal teaching efficacy, general teaching efficacy, and construct differentiation. Each communication index was regressed on communication efficacy, personal teaching efficacy, general teaching efficacy, and construct differentiation. These regression equations yielded the standardized regression coefficients or path coefficients for determining the direct and indirect effects of the causal factors and for testing the model.

The adequacy of the path model is not open to statistical validation. There are no degrees of freedom to test the fit of the model to the data. The model meets specific assumptions and restrictions conforming to criteria for a just-identified model: the causal flow is unidirectional; the residuals are not correlated with the variables or with each other; and the model is fully recursive in that the number of equations equals the number of parameter estimates (Pedhazur, 1982; Spaeth, 1975).

Preferred goal management strategies were examined through frequency distributions for each of five

categories. Chi-square statistics were used to compare the use of different multiple goal management strategies with a normal distribution. Correlations were computed to assess the relationship between each goal management strategy and the causal variables (construct differentiation, personal teaching efficacy, general teaching efficacy, and communication efficacy).

Chapter 5

Results

The results of the analyses conducted on the questionnaire and interview data include (a) descriptive statistics of the causal variables and communication indices; (b) a series of one-way ANOVAs examining the relationship between the demographic variables and path model variables; (c) correlations among the communication indices in the proposed path model; (d) path analyses for teachers' explanations, persuasive appeals, and relational development scores; and (e) descriptive statistics and correlations for multiple goal management strategies.

Descriptive Statistics: Causal Variables

The path model employed five causal variables -- construct differentiation (CD), personal teaching efficacy (PTE), general teaching efficacy (GTE), and communication efficacy (CES) -- to explain variance in communicative behavior. Descriptive data for these variables are presented below.

Variable 1: Construct Differentiation (CD).

Construct differentiation (CD) was measured by counting the number of constructs in teachers' descriptions of a liked and disliked peer. The number of con-

structs in the two descriptions was summed. Summed scores for the two descriptions ranged from a total of five to 36 constructs. The mean total number of constructs was 17.80 (n=84), with a standard deviation of 8.18. Consistent with prior research, teachers produced a greater number of constructs in their description of a liked, than disliked, person (t-value = 8.12, p = .01). The mean number of constructs in the descriptions of a liked and disliked person were 10.30 and 7.50, respectively; standard deviations for each description were 4.90 and 3.80, respectively.

Variable 2: Role-Bound Construing (RBC%).

Role-bound construing (RBC%) was measured as a proportion of role-bound constructs in teachers' descriptions of an ideal student. Teachers' descriptions of the ideal student contained a mean of 9.90 constructs, with a standard deviation of 3.96 and a range from 3 to 22. The mean number of role-bound constructs was 7.94 with a standard deviation of 3.68 and a range from 1 to 18. The average proportion of role-bound constructs was .81, with a standard deviation of .21.

Variables 3 and 4: Teaching Efficacy.

As expected, the Teacher Efficacy Scale (Gibson, 1982) comprised two factors (See Appendix B). Nine items clustered on the dimension of Personal Teaching

Efficacy (PTE) and accounted for 18.2% of the total variance. Based on the full sample of 85 teachers, the mean score for the nine-item variable was 41.07, with a range from 21 to 54, and a standard deviation of 5.94. General Teaching Efficacy (GTE) consisted of six items and accounted for 10.6% of the variance. The mean score for this six-item variable was 20.53, with a range from 8 to 33, and a standard deviation of 5.98.

Variable 5: Communication Efficacy.

The measure of communication efficacy was derived from a ratio between teachers' expectations of success and appraisals of their skills in comparison to their expectations of difficulty. Scores on the communication efficacy scale were converted to a ratio (Skills + Success / Difficulty). Scores ranged from 1.48 to 3.35 with a mean of 2.19 and a standard deviation of .33. (See Appendix G for the development of the Communication Efficacy Scale.)

Descriptive Statistics: Communication Indices

Descriptive data for each communication index (explanation scores, persuasive appeal scores, a composite score, and relational development scores) are reported. Correlations among the communication indices are reported.

Explanations Scores.

The mean score for teachers' explanations was 2.74 on the five-point scale, with a standard deviation of .73. The mean score indicates moderately defensive to mixed defensive/supportive messages. Total scale scores ranged from 4.0 to 17.0. The distribution of scores varied by vignette. Explanations for vignettes 1 and 3 were positively skewed. Nearly 50% of Vignette 1 messages and slightly more than 50% of Vignette 3 messages were classified at Levels I and II. In other words, about half of the teachers produced highly or moderately defensive messages for vignettes 1 and 3.

Persuasive Appeal Scores.

Teachers' scores for the set of four persuasive appeal items ranged from 3.0 to 19.00 with a mean score of 2.84 and a standard deviation of .80. The mean score indicates messages which are moderately positional to presumptive of solidarity with the parent.

Composite Index.

Table 5 shows the distribution of scores, means, and standard deviations for each vignette and for the set of eight vignettes.

Table 5

Frequency Table for Explanation and Persuasive Appeal Scores

			Communication Level					
	M	s.d.	I	II	III	IV	V	n[a]
Explanation Scores								
Vignette 1	2.6	.82	4	35	31	4	5	79
Vignette 3	2.5	.87	9	35	28	12	0	84
Vignette 7	2.9	.87	8	10	45	21	1	85
Vignette 8	3.0	1.1	6	21	28	22	7	84
Subtotal	2.8		27	101	132	59	13	332
Persuasive Appeal Scores								
Vignette 2	3.0	1.2	11	11	45	7	8	82
Vignette 4	2.7	1.0	7	32	31	6	5	81
Vignette 5	2.8	1.1	9	22	39	7	8	85
Vignette 6	3.3	1.2	7	16	25	20	17	85
Subtotal	3.0		34	81	140	40	38	333
TOTAL	2.9		61	182	272	99	51	665

[a]n = the number of messages assigned a score.

The sums of scores assigned to teachers' explanations and persuasive appeals ranged from 10 to 36 out of a possible range of 8 to 40. The mean composite index score across the set of eight vignettes was 23.0, with a standard deviation of 4.9. A t-test comparison of means indicated a significant difference by vignette type in the mean scores ($t=-2.01$, df 83, $p=.048$), favoring persuasive appeals.

Relational Development Scores.

Relational development scores for the set of eight vignettes were assigned on a five-point scale, yielding a range from 13 to 36 out of a potential range from 8 to 40. The mean score was 25.51, with a standard deviation of 4.50.

Relationships Among the Communication Indices

Correlations were computed to assess the relationships among the communication variables. Table 6 presents the Pearson r coefficients, showing associations among the communication indices. Each communication index was significantly associated with the other measures of message quality. Teachers' explanation scores and persuasive appeals were significantly associated with each other and with relational development scores. A composite of explanations and persuasive

appeals was significantly associated with relational development scores.

Table 6

Correlations Among Communication Indices

Index	2	3	4
1. Exp	.56***	.88***	.71**
2. PA	--	.89**	.53*
3. Composite[a]		--	.69***
4. RD			--

Note. Exp = Explanation scores; PA = Persuasive appeal scores; RD = Relational development scores. [a]The composite score combines explanation and persuasive appeal scores.

* p = .01; ** p = .001; *** p = .000.

Differences in Path Variables By Demographic Groups

One-way ANOVAs were performed to examine the relationship between the independent demographic variables and the path model variables. Two sets of demographic variables were considered. Personal status variables included variables of gender, age, parental status, and ethnicity. Professional status variables included

length of teaching experience, grade level of students, school, and program type.

Personal status variables.

None of the path model (causal and dependent) variables varied with gender, parental status, age or ethnicity. The sample consisted of nine men and 69 women -- too few men to show a systematic gender effect.

Professional status variables.

Years of teaching experience was not a significant variable in explaining construct differentiation or the communication indices, though a significant main effect was found for personal teaching efficacy (F (2, 73) = 3.349, p = .04). The more years of teaching experience the greater one's sense of personal teaching efficacy. The mean score for teachers with 12 or more years of teaching experience was 43.73, compared to those with 5-11 years (40.11) or 1-4 years (39.81). Communication efficacy scores, using the complete scale, were also significantly associated with level of teaching experience (F (2,73) = 5.570, p = .006). Teachers with twelve or more years of experience had greater communication efficacy scores ($\underline{M}$ = 123.23) than teachers with under twelve years of experience (5-11 years, $\underline{M}$ = 112.19; 1-4 years, $\underline{M}$ = 112.96).

Grade level was not a significant variable in teachers' scores on any of the path model variables. Program type (regular education, gifted & talented, special education, and all other programs) was also not a significant variable on any of the path model variables.

School was also examined as a professional status variable. Eight of the 24 schools, or those schools with at least four participants, were included in the following analysis. The comparisons showed a significant main effect for school on construct differentiation (F (7,58) = 4.595, $p \leq .00$) and personal teaching efficacy (F (7,56) = 3.16, p = .007), but not general teaching efficacy (F (7,56) = .933, p = .49) or communication efficacy (F (7,56) = .415, p = .89). Scores on the communication indices for teachers' explanations and teachers' persuasive appeals also did not vary as a function of school. The mean scores by school on construct differentiation ranged from 7.00 to 23.50. The mean scores by school on personal teaching efficacy ranged from 33.83 to 45.80.

Path Analyses - Introduction

Analyses were conducted to test and analyze the path model proposed earlier (See Figure 1 on page 81).

Five causal variables -- construct differentiation, role-bound construing, personal teaching efficacy, general teaching efficacy, and communication efficacy -- were analyzed through a series of hierarchical regression analysis. Role-bound construing was removed from the model because its associations with all variables, except construct differentiation, were nonsignificant. As predicted, role-bound construing and construct differentiation were negatively associated ($r = -.24$, $n = 83$, $p \leq .02$).

The model required four regression equations for the calculation of the path coefficients. Construct differentiation (CD), proposed as the primary or earliest influence on communicative behavior, was entered first. Since personal teaching efficacy was dependent on only one variable (CD), the path coefficient was identified by the correlation coefficient. Similarly, the path from construct differentiation to general teaching efficacy was its total association with construct differentiation. Communication efficacy was regressed on construct differentiation, personal teaching efficacy, and general teaching efficacy; and each communication index (explanations, persuasive appeals, and relational development) was regressed on construct differentiation, personal teaching efficacy, general teaching efficacy, and communication efficacy.

Analyses were conducted on three communication indices: explanation scores; persuasion scores; and relational development scores. Results showing the path coefficients from the regression analyses and decomposition of the correlates are reported separately for each communication index. The format for presenting the decomposition of the correlations is adapted from Spaeth (1975).

Path Analysis 1 - Explanation Scores

Figure 2 on page 120 shows the path coefficients for teachers' explanation scores. The model shows six causal paths leading from construct differentiation to the production of messages. Paths leading from construct differentiation to personal teaching efficacy and general teaching efficacy were nonsignicant. These low, nonsignificant correlations were not expected.

The paths leading from construct differentiation, personal teaching efficacy, and general teaching efficacy to communication efficacy were obtained from the first regression. The paths leading from construct differentiation, communication efficacy, personal teaching efficacy, and general teaching efficacy to the communication index were obtained from the second stepwise regression.

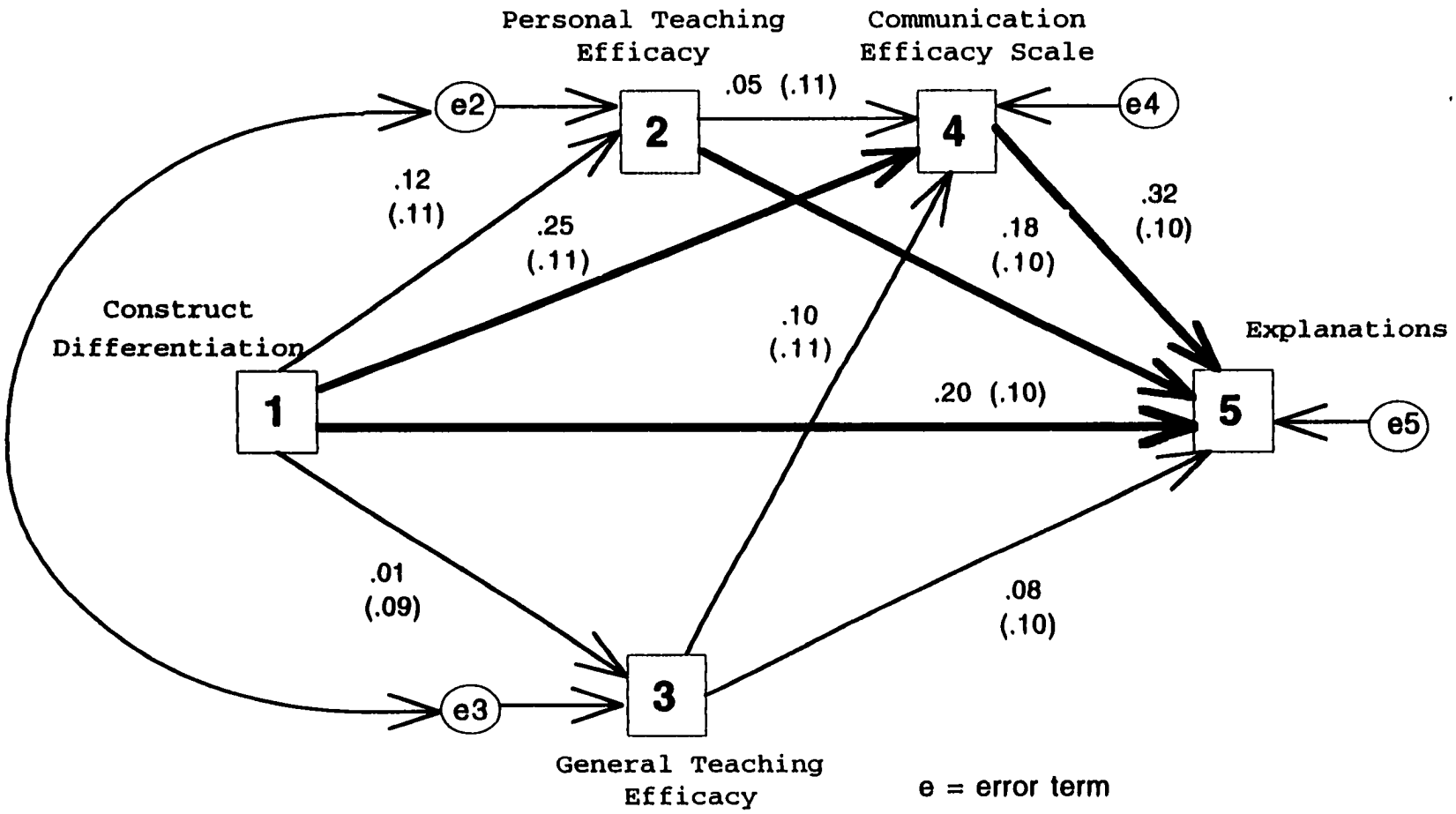


Figure 2. Path Model for Explanation Scores (n=83). Bold lines indicate significant paths. Standard errors are in parentheses.

Table 7 shows the path coefficients for different linear combinations of the independent variables regressed on teachers' explanation scores.

Table 7

Linear Combinations of Variables Regressed on Explanation Scores

Variables Regressed on Explanation Scores				
CD	PTE	GTE	CES	R^2
.303**				.09
.303**	.201*			.13
.278	.195	.108		.14
.198*	.180*	.076	.315**	.23
.197	.184		.324	.23
	.206*		.369***	.19
.214*			.335**	.20

Note. CD = Construct Differentiation; PTE = Personal Teaching Efficacy Scale; GTE = General Teaching Efficacy; CES = Communication Efficacy Scale.
* $p \leq .05$; ** $p \leq .002$; *** $p \leq .000$.

When all four causal variables were entered in the model they accounted for 23% of the variance in

teachers' explanations (see row four in Table 7). Construct differentiation, entered as a single independent variable, explains 9% of the total variance. Construct differentiation and personal teaching efficacy, taken together, explain 13% of the variance. General teaching efficacy contributes a meager 1%, but communication efficacy contributes an additional 7%, over and above the previously entered variables.

When construct differentiation is removed from the model, a substantial portion (19%) of variance in teachers' explanations is explained by personal teaching efficacy and communication efficacy. When personal teaching efficacy is removed, 20% of the variance in explanations is explained by construct differentiation and communication efficacy.

General teaching efficacy contributes little to the predictive power of the other variables. When general teaching efficacy is added to construct differentiation and personal teaching efficacy, R^2 increases by 1%; and when added to construct differentiation, personal teaching efficacy, and communication efficacy, general teaching efficacy explains virtually nothing.

In summary, the combination of construct differentiation, personal teaching efficacy and communication efficacy explains 23% of the variance in teachers'

explanation scores. General teaching efficacy adds virtually no additional information. When construct differentiation is removed from the model, about 3% of its predictive power is lost -- that is, R^2 declines from 23% to 20% when personal teaching efficacy is not included.

Direct and Indirect Effects

To understand the manner in which construct differentiation and efficacy variables influence teachers' explanations, decomposition of the correlations was undertaken. Table 8 shows the proportions of direct and indirect influence.

Direct effects for all variables were more substantial than indirect effects. For example, reading across the first row, construct differentiation showed a total association with explanation scores of .303 and a direct effect of .198, indicating that 66% of its influence (.198/.303) was direct. However, about one-third of its effects were indirect. Reading across the third row, indicating the path from construct differentiation through communication efficacy, it is seen that about 26% of its influence occurs through communication efficacy (.079/.303). Only 7% of its effects occurred through personal teaching efficacy (.022/.303).

Table 8

Decomposition of the Correlations

Explanation Scores (N = 83)

	Total Assoc.	Direct Effects	Indirect Effects	Proportion of Direct & Indirect to Total
1. CD	.303	.198		66%
→PTE			.022	7%
→CES			.079	26%
→PTE→CES			.000	--
2. PTE	.235	.180		77%
→CES			.015	6%
3. GTE	.121	.076		63%
→CES	--	--	.033	27%
4. CES	.390	.315		81%

Note. CD = Construct Differentiation; PTE = Personal Teaching Efficacy Scale; GTE = General Teaching Efficacy; CES = Communication Efficacy Scale.

Reading down the first column, under Total Associations, it is shown that communication efficacy had a slightly larger total association with explanation

scores than did construct differentiation; and personal teaching efficacy had a larger total association than did general teaching efficacy. Reading down the second column, under Direct Effects, it is seen that communication efficacy had a larger direct effect than construct differentiation (.315 versus .198). In fact, communication efficacy had the largest direct influence on teachers' explanation scores, with about four-fifths of its association representing a direct influence. Personal teaching efficacy had a substantial direct effect reflecting 77% of its total association (.180/.235). Only 6% of the influence of personal teaching efficacy is explained indirectly through its impact on communication.

Path Analysis 2 - Persuasive Appeal Scores

Persuasive appeal scores were analyzed through a path model. The results of this analysis differed from the results for teachers' explanation scores. Path coefficients for persuasive appeals are shown in Figure 3 and Table 9. Path coefficients (and correlations) leading to communication efficacy from construct differentiation, personal teaching efficacy, and general teaching efficacy are the same as those reported in the path analysis of teachers' explanations. However, path coefficients (and correlations) leading directly to persuasive appeal scores have changed and yield a different causal nexus.

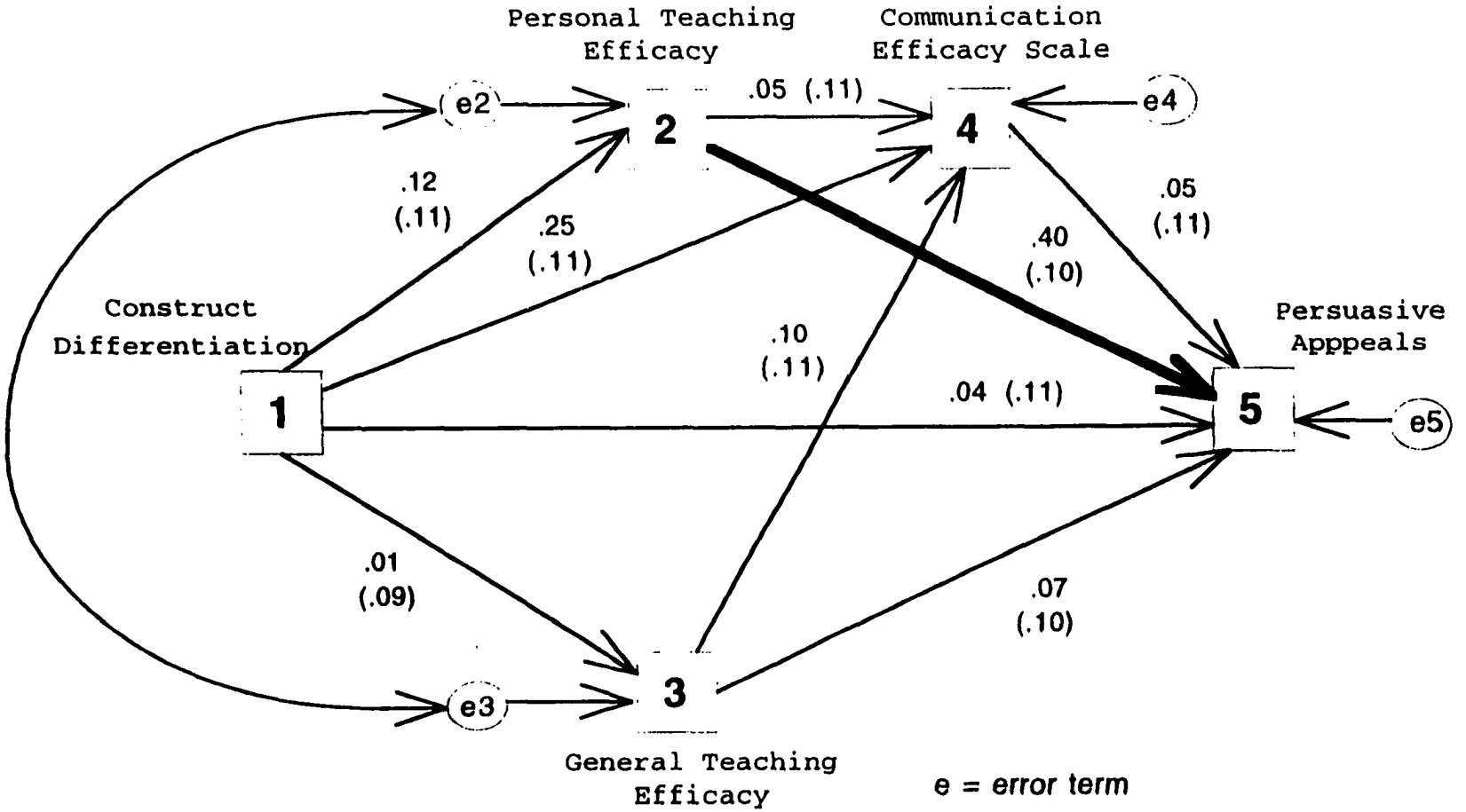


Figure 3. Path Model for Persuasive Appeal Scores (n=83). Bold lines indicate significant paths. Standard errors are in parentheses.

The single significant influence on teachers' persuasive appeals was personal teaching efficacy. Personal teaching efficacy, by itself, explains about 17% of the variance in teachers' persuasive appeals. In combination with the other path model variables, its explanatory power is enhanced by a meager 1%.

Table 9

Linear Combinations of Variables Regressed on Persuasive Appeal Scores

Independent Variables				
CD	PTE	GTE	CES	R^2
.100				.01
	.410*			.17
.073	.400*	.051		.17
.037	.397*	.068	.054	.18

Note. CD = Construct Differentiation; PTE = Personal Teaching Efficacy Scale; GTE = General Teaching Efficacy; CES = Communication Efficacy Scale.

* $p \leq .000$.

Direct and Indirect Effects

The decomposition of the correlations between persuasive appeal scores and the causal variables is shown in Table 10.

Table 10

Decomposition of the Correlations

Persuasive Appeal Scores (N = 83)

	Total Assoc.	Direct Effects	Indirect Effects	Proportion of Direct & Indirect to Total
1. CD	.101	.037		37%
→PTE			.048	47%
→CES			.014	14%
→PTE→CES			.000	--
2. PTE	.420	.397		95%
→CES			.021	5%
3. GTE	.096	.068		71%
→CES	--	--	.000	--
4. CES	.105	.054		51%

Note. CD = Construct Differentiation; PTE = Personal Teaching Efficacy Scale; GTE = General Teaching Efficacy; CES = Communication Efficacy Scale.

Personal teaching efficacy exerts a direct influence on teachers' persuasive appeals. Only 5% of its association with persuasive appeal scores occurs through its influence on communication efficacy while 95% of its influence occurs directly. To the extent that construct differentiation influences teachers' persuasive appeals, roughly two-thirds of its effects are indirect, occurring through its influence on personal teaching efficacy (47%) and communication efficacy (14%).

Path Analysis 3: Relational Development

Relational development scores were assigned to messages for the set of eight vignettes. Figure 4 on page 130 and Table 11 show the path coefficients for these scores. Relational development scores were influenced by construct differentiation and personal teaching efficacy. When the four model variables are included in the equation, they explain 18% of the variance in relational development scores. Although construct differentiation is no longer a significant independent influence, the combination of variables provides the greatest amount of information. By itself, construct differentiation is significantly related to relational development, but it explains only 6% of the total

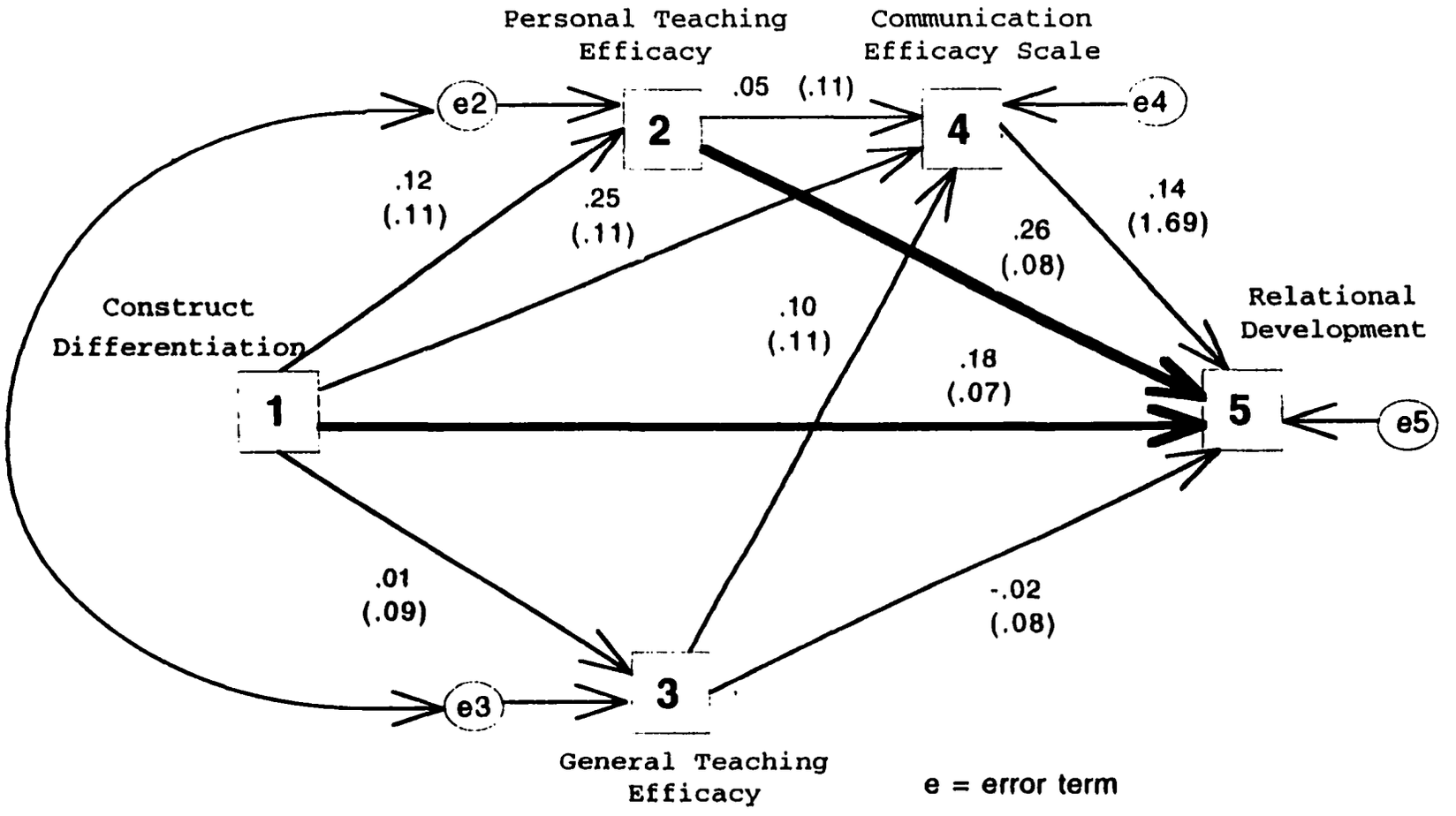


Figure 4. Path Model for Relational Development Scores (n=83). Bold lines indicate significant paths. Standard errors are in parentheses.

variance. Similarly, personal teaching efficacy, entered alone, explains about 6% of the variance in relational development scores. In combination, construct differentiation and personal teaching efficacy explain about 13% of the variance.

Table 11

Linear Combinations of Variables Regressed on Relational Development Scores

CD	PTE	GTE	CES	R^2
.245**				.06
	.243*			.06
	.227*		.176	.09
.212*	.268**	.000		.13
.177	.257**	-.021	.142	.18

Note. CD = Construct Differentiation; PTE = Personal Teaching Efficacy Scale; GTE = General Teaching Efficacy; CES = Communication Efficacy Scale.

* $p \leq .05$; ** $p \leq .01$.

Direct and Indirect Effects

Table 12 shows the direct and indirect effects of the causal variables on teachers' relational development scores.

Table 12

Decomposition of the Correlations

Relational Development Scores (n = 83)

	Total Assoc.	Direct Effects	Indirect Effects	Proportion of Direct & Indirect to Total
1. CD	.245	.177		72%
→PTE			.031	13%
→CES			.036	15%
→PTE→CES			.000	--
2. PTE	.294	.257		87%
→CES			.000	--
3. GTE	.012	-.021		--
→CES	--	--	--	--
4. CES	.216	.142		66%

Note. CD = Construct Differentiation; PTE = Personal Teaching Efficacy Scale; GTE = General Teaching Efficacy; CES = Communication Efficacy Scale.

Examining the column to the far right, it is seen that most of the influence on relational development

occurred through the direct effects of the causal variables. The direct effect of construct differentiation accounted for 72% of its total effect; and the direct effects of personal teacher efficacy and communication efficacy accounted for 87% and 66% of their total effects, respectively. Indirect effects were proportionally smaller. Roughly one-quarter of the influence of construct differentiation occurred indirectly through its influence on personal teaching efficacy and communication efficacy. The indirect effect of personal teaching efficacy through communication efficacy was virtually nil. About a third of the influence of communication efficacy can be attributed to its association with construct differentiation.

Summary of Path Model Analyses

A path model was proposed to examine the sources of individual variability in teachers' messages to parents. Three indices of message quality (explanation scores; persuasive appeal scores; and relational development scores) were examined through the path analysis. The results of these analyses were different for each communication index.

For teachers' explanations, three variables -- construct differentiation, personal teaching efficacy, and

communication efficacy -- explained 23% of the variance. Each of these variables showed a substantial direct effect on explanation scores. However, about a third of the influence of construct differentiation occurred indirectly through its effect on personal teaching efficacy (7%) and on communication efficacy (26%).

The figures change for teachers' persuasive appeals. Personal teaching efficacy was the single most important influence on teachers' persuasive appeals, explaining, by itself, about 17% of the variance and in combination with the other variables in the model, about 18%. Most of this influence occurred directly while only 5% occurred through its influence on communication efficacy.

Relational development scores were influenced by construct differentiation and personal teaching efficacy. By itself, each variable explains about 6% of the variance in relational development scores. Taken together, construct differentiation and personal teaching efficacy explain about 13% of the variance. With communication efficacy, the predictive power of construct differentiation and personal teaching efficacy is enhanced to 18% of the variance.

A consistent finding for the set of path analyses was the negligible influence of general teaching

efficacy. Its direct influence was meager; and its indirect influence, through communication efficacy or through its relationship with personal teaching efficacy, was virtually nonexistent.

Multiple Goal Management Analyses

A total of 399 messages were assigned a score for multiple goal management. These scores were analyzed for frequencies by vignette; for the relationship to teachers' explanations, persuasive appeals, and relational development scores; and for the relationship to the causal variables of the path model (construct differentiation, personal teaching efficacy, general teaching efficacy, and communication efficacy).

Frequency Distributions By Vignette.

Table 13 reports the frequencies of multiple goal management strategies by each vignette. Chi-square statistics indicate that strategy choices were not normally distributed. The most frequently employed strategy was explicit separation. Explicit separation occurred 149 times (37% of the total number of messages receiving a multiple goal management score). Sixty-seven of 85 teachers used this strategy at least once. The least frequently used strategy was integration. Integration was used a total of 25 times (6% of the total number of messages receiving a multiple goal

management score). Sixty-six of 85 teachers did not employ integration a single time.

Table 13

Frequency Table of Multiple Goal Management Strategies

		MGM Strategy					
Vig	n	E-Sel	I-Sel	E-Sep	I-Sep	Int	NS
1	44	9	11	14*	5	5	40
2	42	4	19*	7	8	4	35
3	63	40*	5	13	1	4	20
4	62	16	7	28*	7	4	21
5	53	10	17	20*	3	3	30
6	41	11	13	14*	2	1	40
7	35	1	12	28*	5	1	36
8	47	6	13	25*	0	3	35
Total	399	97	97	149	31	25	257

Note. E-Sel = Explicit Selection; I-Sel = Implicit Selection; E-Sep = Explicit Separation; I-Sep = Implicit Separation; Int = Integration; NS = No score assigned.

* Preferred strategy for each vignette.

Variability in strategy use across the set of eight vignettes was negligible. Explicit separation was the preferred strategy for six of the eight vignettes. For Vignette 2, implicit selection was the preferred strategy, occurring nineteen times or 45% of the total

number of strategies assigned to this vignette. For Vignette 3, explicit selection was the preferred strategy: forty responses (63% of the total for this vignette) were assigned this category.

Goal Management Correlations.

Two correlation matrices are presented. The first (Table 14) shows the associations between multiple goal management strategy preferences and teachers' explanations, persuasive appeals, and relational development scores. The second (Table 15) shows the associations between multiple goal management strategy preferences and the causal variables of construct differentiation, personal teaching efficacy, general teaching efficacy, and communication efficacy.

Correlations Between Goal Management Strategies and the Other Communication Indices.

Table 14 reports the correlations between goal management proportion scores and teachers' scores on the communication indices (explanation, persuasive appeal, and relational development scores). Selection strategies -- both implicit and explicit -- were inversely associated with the three other communication indices. In other words, a higher reliance on selection occurred among teachers with lower scores on explanations, persuasive appeals, and relational devel-

opment. Explicit separation strategies and integration strategies were significantly and positively associated explanation scores and relational development scores, but not persuasive appeals. Implicit separation was significantly and positive associated with persuasive appeals, but not with explanation and relational developmental scores.

Table 14

Correlations Between Goal Management Strategies and the Other Communication Indices (n = 83)

	Communication Indices		
MGM Strategy	Explain	Persuade	RD
E-Select	-.3795***	-.3240**	-.3055*
I-Select	-.3532**	-.2560*	-.3428**
E-Separate	.3568***	.1330	.2864*
I-Separate	.1695	.2738*	.1226
Integration	.3207**	.4035***	.3527*

Note. RD = relational development scores.

* p≤.01; ** p≤.001; *** p≤.000.

Correlations Between Goal Management Strategies and Causal Variables.

Table 15 reports the correlations between goal management strategies (proportions) and the causal variables (construct differentiation, personal teaching efficacy, general teaching efficacy, and communication efficacy.)

Table 15

Correlations Between Multiple Goal Management Scores and Causal Variables (n = 83)

	Causal Variables			
MGM Strategy	CD	PTE	GTE	CES
E-Select	-.1601	-.200*	-.0339	-.1019
I-Select	-.1310	-.0532	-.1168	-.0840
E-Separate	.1036	-.0243	.1258	.0979
I-Separate	.0598	.2009*	-.1033	.0014
Integration	.2021*	.2645**	.0826	.1055

Note. CD = Construct Differentiation; PTE = Personal Teaching Efficacy Scale; GTE = General Teaching Efficacy; CES = Communication Efficacy Scale.

* ps .05; ** ps .01.

Explicit selection was negatively associated with personal teaching efficacy ($r = -.20$, $n = 83$, $p = .035$). Implicit separation was significantly and positively associated with personal teaching efficacy ($r = .20$, $n = 83$, $p = .008$). Integration was significantly associated with construct differentiation ($r = .20$, $n = 81$, $p = .034$) and with personal teaching efficacy ($r = .20$, $n = 81$, $p = .008$).

Summary of Multiple Goal Management Strategy Analyses

Multiple goal management strategy preferences were associated with the other communication indices (explanation, persuasive appeal, and relational development scores) and with two of the causal variables (construct differentiation and personal teaching efficacy). Integration and implicit separation were used more often by teachers who scored high, rather than low, on measures of construct differentiation and personal teaching efficacy.

Chapter Six
Discussion

The following discussion reviews the results of the statistical analyses. The causal paths which were found to influence explanations and persuasive appeals are summarized and reasons underlying the observed causal patterns are examined. This section begins with a discussion of the path analysis of explanation scores, examining the relative importance of construct differentiation and communication efficacy in comparison to personal teaching efficacy. Next, the discussion of persuasive appeal scores examines the singular and substantial influence of personal teaching efficacy and explores reasons why other variables (construct differentiation and communication efficacy) were relatively insignificant in the production of persuasive appeals.

Explanations for Unfulfilled Obligations

Teachers were presented with four situations in which a parent implied or explicitly stated that the teacher had failed in the performance of a professional obligation. These situations called upon teachers to explain their conduct or to rebuff the parent's request

for an explanation. Teachers' explanations were ordered for competence along a dimension of face support ranging from highly defensive to highly supportive.

Supportive messages in explanatory situations were messages that validated the parent perspective, despite its face-threatening implications. Supportive messages acknowledged error and accepted responsibility, assuring the parent that corrective action would be taken. Through sensitivity toward the parent, a commitment to the well-being of the child and interest in the parent's point of view was evident. For example, when a parent reproached the teacher for calling the parent to complain about the child, a supportive response stated,

> Maybe it does seem like I call you -- or maybe I have been calling you when there's been a problem. Unfortunately, there's thirty children in the classroom and that's not the way we should do it, but sometimes it does seem like that is when we contact parents. Let me tell you the good things.... (Vignette 8)

Conversely, defensive messages were responses which challenged the parent's right to question the teacher's authority; denied accountability for a problem; disputed the parent's perception of a problem; or suggested that if there actually had been a problem, the teacher would have known about it and would have

already taken care of it. For example, when a parent complained that the teacher was not solving her child's peer relationship problem, a defensive teacher replied,

> Well, you know I never heard about [your daughter's peer relationship problem]. This is the first time I hear about her being harassed by other kids. You have to tell her the first thing she has to do, she has to come to me or to Mr. A--- or to Ms. C------. (Vignette 1)

In other words, defensive messages contained content that defended the teacher's territory from parental intrusiveness and limited the teacher's scope of responsibility. Defensive messages made virtually no effort to allay the parent's anger or reduce the parent's anxieties.

Path Analysis of Explanation Scores.

Teachers' explanation scores were directly associated with three causal variables -- construct differentiation, personal teaching efficacy, and communication efficacy. These three variables, taken together, explained 23% of the variance. However, the relative importance of each variable was not the same.

Construct differentiation was a significant direct influence on explanation scores. Its total association with teachers' explanation scores was represented in a correlation of .30. Independently of other variables, it explained 9% of the variance in explanation scores.

The importance of construct differentiation arises from its defining characteristic as a measure of antecedent developments in the interpersonal construct system. These developments have generic effects on social understanding, metacommunicative knowledge, and communicative behavior. To understand why construct differentiation was influential, it is important to consider its relationship to message production. Construct differentiation is a variable that reflects generic communicative abilities and the sources of communicative competence. Therefore, high construct differentiation teachers were more likely than low construct differentiation teachers to recognize and anticipate both the benefits of supportive messages and the potential risks of defensive messages. Having a more advanced social/cognitive understanding facilitated the production of messages that were relatively attentive to assuaging a parent's distress and relatively less attentive to defending the teacher's actions and feelings. One may say, cognitively advanced teachers showed a "protective" rather than "defensive" orientation (Goffman, 1967).

However, the relative importance of construct differentiation declined when other variables in the model were considered; a substantial portion of its effects

(26%) being conveyed through communication efficacy. From the standpoint of a predictive model, construct differentiation and communication efficacy combined to explain 20% of the variance in teachers' explanations, with communication efficacy enhancing the predictive power of construct differentiation by 11%.

These results indicate that teachers are most likely to employ supportive messages when they have a determination to succeed with parents, as well as *a priori* social/cognitive understanding and general communicative competence. In other words, the full influence of general communicative competence occurs, not surprisingly, when teachers believe in their abilities to overcome obstacles to parent cooperation. Therefore, the single most important direct influence on teachers' explanations to angry or upset parents may be their will to succeed with parents as reflected in their communication efficacy scores.

Teachers who reported strong belief in their conferencing skills, optimistic expectations of conference outcomes, and appreciation for difficulties involved in communicating with parents were most likely to produce supportive explanations. Most of the influence of communication efficacy (81%) represented a direct effect on explanation scores, while the remaining fifth

represented the association between communication efficacy and prior variables in the model (construct differentiation and to a lesser extent, personal teaching efficacy and general teaching efficacy).

The investigation predicted that personal teaching efficacy would have an important direct and indirect influence on teachers' explanations. Teachers with a high sense of personal teaching efficacy were expected to feel less threatened by, and therefore less defensive toward, parents who voiced complaints. This expectation was only partially fulfilled. A significant correlation between explanation scores and personal teaching efficacy was found ($r = .24$, $p \leq .02$); and a significant path from personal teaching efficacy to explanation scores was observed. However, the role of personal teaching efficacy was less important than construct differentiation and communication efficacy. Its total association with explanation scores was relatively weak, compared to that construct differentiation and communication efficacy; it enhanced the explanatory power of construct differentiation by a mere 4%; and its role as a mediator was weak, conveying a small percentage (10%) of the influence of construct differentiation on explanation scores.

In effect, although personal teaching efficacy was significantly associated with teachers' explanation

scores, prediction of behavior from personal teaching efficacy was not reliable. For some teachers, high personal teaching efficacy translated into a supportive orientation toward parents, but for many others, high personal teaching efficacy translated into an effort to control the boundaries of responsibility and to assert one's authority.

In summary, the role of personal teaching efficacy as a direct influence on teachers' explanation scores and as a conduit of construct differentiation was less substantial than anticipated. Construct differentiation and communication efficacy were better able than personal teaching efficacy to explain the variance in teachers' explanations scores; the two variables combined to explain 20% of the variance, showing that teachers' production of supportive messages depended upon a prior social/cognitive development, as well as their determination to be successful with parents who challenged their actions, motives, or recommendations.

To understand why the influence of personal teaching efficacy on teachers' explanations was not stronger, it is important to consider that personal teaching efficacy and communication efficacy operated independently of each other ($r = .09$, ns). Personal teaching efficacy did not influence communication

efficacy. Teachers with high personal teaching efficacy may have possessed adequate communication skill (highly differentiated communicators), but lacked the incentive to work at developing a relationship with a difficult parent. These teachers may be expected to invest little effort in their relationships with parents (low communication efficacy), finding that they can do the job independently of parent involvement. Alternatively, some teachers with low personal teaching efficacy scores may have produced supportive messages because they had adequate communication skills (high construct differentiation scores) *and* the incentive to work at the relationship with the parent (high communication efficacy scores).

Validity of The Scale for Explanation Scores

The validity of the Scale for Explanations was tested within this investigation by examining teachers' messages for level of relational development and attention to multiple communicative goals. It was reasoned that teachers who showed support for a parent, despite the face-threatening implications of the parent's complaint, were motivated by an interest in protecting and promoting their relationship with the parent; and that support of the parent and promotion of the relationship with the parent would be achieved through strategies

that addressed more than one goal (separation and integration strategies). Therefore, the expectations were that supportive explanations would be associated with relational development and would reflect relatively frequent attention to multiple communicative goals in the act of criticism and or issuing a directive. These expectations were supported. A significant and substantial correlation was found between the teachers explanation scores and relational development scores ($r = .71$, $p \leq .001$).

Teachers' explanation scores were also, and not surprisingly, associated with their goal management strategies. Teachers who employed relatively defensive messages (low explanation scores) tended to rely heavily upon strategies in which a single communicative goal was addressed, manifesting in significant correlations between explanation scores and frequent use of explicit and implicit selection strategies ($r = -.38$, $p \leq .000$ and $r = -.35$, $p \leq .001$, respectively). Teachers who employed relatively supportive messages (high explanation scores) relied more heavily upon strategies that addressed multiple communicative goals within the same message. Explanation scores were significantly associated with the frequent use of explicit separation ($r = .36$, $p \leq .000$) in which multiple goals

were addressed sequentially; and with the frequent use of integration ($r = .32$, $p \leq .001$) in which the situation was redefined to integrate potentially incompatible goals.

The assumption that defensive messages impede relational development and that supportive messages promote relational development is open to challenge and requires further empirical work to establish or refute the assertion. In an examination of methods of dealing with verbal aggression, Infante (1995) noted that it can be argued that recipients of verbal aggression need to set limits in order to pave the way for more rational discourse in the future. Following this reasoning, refusing to talk with a parent until the parent calms down may be the appropriate strategy. More than one teacher in the present investigation understood the potential value of setting limits. For example, one message was as follows,

> First of all, I'd like to help you with your problem, but you really need to calm down. If we want to have a constructive conversation, we need to both be calm. What seems to be the problem?

However, as observed by Infante, the strategy of setting limits is not without risk. An angry parent may respond to a directive or suggestion to calm down with renewed anger. ("Don't tell me to calm down.")

If the tactic backfires, an escalation of conflict may lead to a termination of the relationship. (In the message quoted above, the teacher probably would have avoided an escalating spiral. She softened her second directive by using the editorial "we" -- possibly a reminder to herself as well as to the parent to remain calm. She expressed a wish to be helpful and an interest in hearing what the parent had to say. Therefore, the message combined supportive and defensive content and it received a score of 3 on the Explanation Scale.)

While the rationale for setting limits is understood, more supportive strategies avoid the risks associated with defensive messages. Dictating the terms under which communication can go forth can lead to termination of an interaction and lasting damage to a relationship. The data show that teachers with high scores on construct differentiation, personal teaching efficacy, and communication efficacy were more likely than other teachers to employ strategies that held less risk for the relationship and offered more support to the parent. In effect, supportive communication occurred when teachers worked at their relationship with the parent.

Persuasive Appeals - Encouraging Parent Support

Teachers were presented with four persuasive appeal vignettes in which the implicit task was to gain sup-

port from an uncooperative parent for a specific instrumental objective (correcting a child's behavior; improving a child's attendance; evaluating a child's educational needs). Persuasive appeal messages were ordered for level of person-centered communication along a five-point scale.

Person-centered messages were those that supported the parent's ability to make an informed decision without coercive pressure. Person-centered messages tried to remove obstacles to cooperation, to find common ground, to offer solutions that would benefit the parent and/or child, and to offer a perspective on and/or information about the problem that could help the parent arrive at his or her own decision. Above all, person-centered messages contained statements about feelings, motives, and intentions. For example, when a parent complained of frequent calls from the teacher to gain assistance in solving the child's behavior problem, one person-centered message stated,

> Mrs. S---, I realize that I have called you in several times. But, unfortunately, T--- has really been having some problems. We have two new children; and from day one, Tommy has really been, as the children say, on the cases of these two children. He's been semi-bullying them; he's been trying to take their belongings. I've spoken to Tommy and I've spoken to the other two children. And even to the parents of the other children. We cannot really decipher why Tommy has been feeling

> this way about the two newcomers. Why he's been acting out. I don't want to send Tommy to the principal. I thought it was better to discuss the situation with you... I want to do everything possible to keep him in school; to keep him functioning to the best of his ability.

The above message began with common ground -- recognition that the parent's feelings were not unreasonable, but based on the teacher's frequent calls. The message then placed the child's peer problems into a specific context. The teacher described the child's behavior and then shared information concerning an option she was trying to avoid -- sending the child to the principal. Finally, she concluded her explanation by stating her reason for calling the parent -- her wish to help the child -- to keep him in school and "functioning to the best of his ability."

At the opposite end of the continuum, positional messages asserted a teacher's authority, issued directives, and/or threatened adverse consequences for noncompliance and/or noncooperation. For example, when an uncooperative parent said she was tired of being called to school and that it was the teacher's job to control the child, one teacher replied:

> Actually, it is not my job to control the kids. It's my job to teach the kids. I think that in order to deal with this behavioral problem, we have to work together. The kids spend a lot of time in

school, yes. But they spend a lot of time at home and that's where discipline should begin.

This teacher placed herself in direct opposition to the parent's assertion; assumed a solidarity with the parent that had not yet been established; and then instructed the parent about parental responsibility ("Discipline should begin [in the home]").

Validity of The Scale for Persuasive Appeals.

An argument can be made that person-centered communication is not an effective way of dealing with a serious school-related problem; and that the way to produce change is to present a clear and direct message, even if the message jeopardizes the relationship. This argument has empirical support. In a study about multiple goal management, O'Keefe and Shepherd (1987) reported that frequent use of selection (a low level strategy) during an argument was more effective in producing attitude change than frequent use of either implicit separation or integration (high level strategies).

The argument is well-taken. There are situations which warrant the assertion of power for the safety and well-being of the child. The appropriate use of positional messages would seem to depend upon an assessment of the legitimacy and urgency of a parent's obligation;

and the level and persistence of a parent's resistance. These variables were not systematically examined in this investigation.

The opposing argument is that in many situations, the instrumental objective can be reached through strategies that support relational development. Although less strong than for explanation scores, the correlation between persuasive appeal scores and relational development scores was significant and substantial ($r = .53$, $p \leq .01$). Teachers who employed person-centered messages gave priority to building a relationship with the parent. This priority was evident in messages showing respect for the parent's perspective and a willingness by the teacher to examine his or her own responsibility in the situation.

Path Analysis of Persuasive Appeals

Although personal teaching efficacy played a limited role in influencing teachers' explanation scores, its role in persuasive appeals was singular and substantial. By itself, personal teaching efficacy accounted for 17% of the variance in teachers' persuasive appeals. The preponderance of this effect was direct. A small fraction of its influence (5%) occurred through its effects on communication efficacy. The full model enhanced the predictive power of personal teaching efficacy by only 1%.

The important influence of personal teaching efficacy on persuasive appeals scores is not surprising. Personal teaching efficacy assessed teachers' beliefs about their ability to perform professional responsibilities. The items asked teachers to evaluate their knowledge, general competency, and teaching skills, including their ability to adjust instruction to the needs of individual students and their ability to handle classroom discipline problems. Other items asked teachers about their perception of the relationship between their efforts and the outcomes they achieve.

Previous research has found that high efficacy teachers are more likely than low efficacy teachers to accept responsibility for student failure, to recognize the importance of their ability and effort in influencing students' achievements, and to employ solution-oriented, rather than control-oriented, problem-solving strategies (Grafton, 1987; Guskey, 1987; Hall, et al., 1992). Therefore, it could be expected that high efficacy teachers, compared to low efficacy teachers, would exert less pressure on parents in trying to solve a student's school-related problem. They would be more likely than low efficacy teachers to consider alternative reasons to understand a child's school-related

problem and to explore alternative resources to overcome it. For these reasons, the persuasive appeals produced by high efficacy teachers could be expected -- and were found to be -- less controlling and more person-centered than those produced by low efficacy teachers.

Criticism of the operationalization of personal teaching efficacy may explain why the observed associations, while substantial and significant (particularly for persuasive appeal scores) were not stronger. The predictive power of efficacy depends upon a multidimensional assessment approach that evaluates efficacy beliefs along the dimensions of strength, generality, and magnitude. This would involve presenting a hierarchically organized set of tasks that vary along a dimension that is relevant to the task. Strength is measured by the degree of confidence reported (usually along a ten-point scale) by the individual that he or she can perform the designated behavior. Generality is measured by presented a range of tasks within the same domain of activity.

The measure of personal teaching efficacy in this study asked teachers to estimate their performance capabilities in general contexts, but it did not provide a set of hierarchically ordered tasks and did not

assess confidence levels. In comparison to the criteria of assessment set forth by Bandura (1986), the personal teaching efficacy factor of Gibson's Teacher Efficacy Scale provides a global assessment of capability that has relatively weak power to predict behavior. Therefore, the associations between personal teaching efficacy and the communication variables may have been stronger with a more precise and dynamic measure of teacher efficacy. Nonetheless, personal teaching efficacy was a significant source of variance in teachers' persuasive appeals.

On the other hand, construct differentiation and communication efficacy were not significant influences on persuasive appeal scores. Independently of other variables in the model, construct differentiation explained only 1% of the variance and its total association with persuasive appeal scores was nonsignificant. Furthermore, most of its scant effect occurred through its influence on personal teaching efficacy. Similarly, communication efficacy played a non-significant role in the production of persuasive appeals. Reasons for the failure of these variables to influence persuasive appeal scores is discussed in the next chapter.

In summary, persuasive appeal scores reflected the direct and singular influence of personal teaching

efficacy. High personal teaching efficacy teachers were at an advantage with these items because of their lower level of felt need to gain cooperation (and concomitant greater level of patience with an oppositional parent), their inclination to seek and use alternative resources to solve problems, and their greater reluctance to extract an immediate gain for a long-term loss in relational development.

Summary of Discussion of Statistical Results

The path analyses demonstrated different paths to competent communication for the different communicative situations. For explanation situations, construct differentiation and communication efficacy were the most important influences. For persuasive appeal situations, personal teaching efficacy was the single and substantial influence. Although paths of influence differed for the different communication indices, personal teaching efficacy was more consistent than the other variables in showing significant associations with measures of communicative behavior. It had significant associations with all three communication indices (explanations, persuasive appeals, and relational development) and with three goal management strategies (explicit selection, implicit separation, and integration). Although its role declined in impor-

tance when *a priori* social/cognitive achievement was considered in the analysis of explanation scores, its role in the quality of parent-teacher communication should not be underestimated. The quality of a teacher's investment in educating children is related to the quality of a teacher's interactions with parents. Teachers who believe that their instructional activities with children are worthwhile are more likely than teachers who do not share this belief to develop cooperative relationships with parents and to find alternative strategies to solving children's problems when it happens that parents cannot be engaged.

In the next chapter, some of the limitations of this investigation are addressed. Attention is given to the variance that has not been explained and the limited (virtually negligible) role of general teaching efficacy and role-bound construing in this investigation. The meaning of personal teaching efficacy is reconsidered; and the implications of analog research for generalizability of findings are discussed.

Chapter 7

Critique, Directions for Future Research, and Implications for Practice

The following critique considers the limitations of measures and methodology, giving specific attention to (a) factors that undermined reliable and valid measurement; and (b) strengths and weaknesses of the methodology. Following the critique, directions for future research and implications for practice are presented. Concluding remarks highlight the achievements of this research for identifying paths to effective communication with parents and for providing empirical support for the importance of continued research on the subject of parent-teacher communication.

Measurement Problems

In the previous chapter, reasons were offered to account for the observed patterns of influence. At this time, the unexplained variance is considered. Specific questions addressed are (a) why construct differentiation did not influence teachers' persuasive appeal messages; (b) why role-bound construing was an insignificant source of influence throughout the

tigation; and (c) why general teaching efficacy failed to manifest either a direct or an indirect influence on any of the communication indices.

Persuasive Appeal Scores.

The set of persuasive appeal vignettes had inadequate internal consistency (r=.49). This problem may have attenuated the association between construct differentiation and persuasive appeal scores. Items varied within the set with regard to the legitimacy of the parent's obligation and the level of imposition of the request. These sources of variance are known to influence the level of politeness employed in making a request and to have a differential effect on communicators who are sensitive to situational variables -- in other words, communicators who are highly differentiated in their perceptions of interpersonal (Leichty & Applegate, 1991). Therefore, this uncontrolled source of variance could explain why the relationship between construct differentiation and persuasive appeals was low and nonsignificant. Highly differentiated teachers who recognized the legitimacy of the parent's obligation and saw no alternatives to solving the problem may have produced positional messages just as did low construct differentiation teachers. In other words, an interaction effect may have obscured detection of the relationship.

Role-Bound Construing.

Role-bound construing was employed as a measure of teachers' perceptions of their students. Teachers were expected to vary in the proportion of role-bound constructs they used in their description of a student. Role-bound construing was expected to manifest in an inverse relationship with construct differentiation and the communicative indices. This expectation was only partially met. Role-bound construing achieved a significant association with construct differentiation ($r = -.22$, $df = 83$, $p = .02$), indicating that teachers who produced lengthier construct differentiation protocols were likely to produce a lower proportion of role-bound constructs. However, it was not associated with any of the communication indices; and it was not associated with any of the other causal variables. The failure to find significant associations with other variables in the study may reflect insufficient variability in the role-bound construing percentage scores.

A methodological problem may have attenuated variability and interfered with valid measurement of this construct. Teachers were asked to describe a student who represented their idea of the "ideal student." They were further asked to include the ways this student was exemplary and the ways this student was

similar to his or her classmates. The second part of the instructions appears to have been ignored by many teachers. Therefore, variability may have been attenuated, leaving little room for the observation of correlations. This variable was not employed in the path analyses because it failed to have a significant association with any of the three communication indices (explanations, persuasive appeals, relational development).

General Teaching Efficacy.

It was a surprising result that teachers' scores on the variable of general teaching efficacy showed weak and nonsignificant associations with the communication variables. It was expected that beliefs about the constraining role of home influence on student performance would be reflected in communicative behavior because these beliefs contribute to bias in teachers' attributions for children's school-related problems. Several hypotheses are suggested to understand why this variable had a negligible influence.

The possibility of low reliability or the operation of a social desirability effect were considered and rejected. General teaching efficacy was measured with six items from the Gibson Teacher Efficacy Scale. Although the scale was brief, its reliability coeffi-

cient was adequate and consistent with those obtained for personal teaching efficacy (.71 for pte and .70 for gte). The validity of general teaching efficacy could have been compromised by a social desirability factor, resulting in attenuated variability and a non-significant relationship between general teaching efficacy and communicative behavior. However, if teachers were inclined to produce socially desirable responses, they would likely have done so for items on both factors, rather than just the factor of general teaching efficacy. This was not the case.

Alternatively, it may be argued that the general teaching efficacy represents a construct that is too vague and poorly measured to have predictive power. The operational definition of general teaching efficacy employed in this study may be challenged, along with a more encompassing challenge to the total Gibson Teacher Efficacy scale. Criticism may be lodged on two levels -- its conceptual consonance with Bandura's efficacy construct and its predictive validity.

The factor structure of the Gibson Teacher Efficacy Scale is assumed, with empirical evidence, to conform to Bandura's distinction between efficacy beliefs (assessment of ability to achieve a certain level of performance) and outcome expectations (beliefs about

the consequences of specific actions). Personal teaching efficacy measures beliefs about performance capabilities; and general teaching efficacy is measures outcome expectations. Bandura questioned the correspondence of these factors, and particularly the general teaching factor, to the constructs of efficacy and outcome expectations. He suggested that general teaching efficacy represents efficacy beliefs, not outcome expectations because belief in the ability to overcome external constraints manifests belief in performance capabilities rather than action-outcome contingencies (Woolfolk & Hoy, 1990). The meaning of the two factors may not be resolved in this discussion, but general teaching efficacy is understood in this investigation to represent the belief about action-outcome contingencies rather than assessment of performance capabilities. The two factors are understood to be conceptually distinct -- and were found to be statistically independent of each other. Following the reasoning of Greenwood and associates, teachers may believe in their own performance capabilities, but see themselves as exceptions to the general status of the relationship between teaching and learning. Alternatively, teachers may lack belief in their own performance capabilities, but belief in a connection between good teaching and student success.

When one considers that general and personal teaching are conceptually distinct factors and operate independently of each other, a tenable explanation for the nonsignificant associations between general teaching efficacy and communication variables becomes apparent. It becomes reasonable to suggest that an interaction effect with personal teaching efficacy masked the relationship between general teaching efficacy and indices of communicative behavior.

Strengths and Weaknesses of Methodology

The methodology of simulated conferences facilitated the study of message production in controlled situations. The benefits of controlling extraneous sources of variance are considerable. Such control makes possible the detection of individual differences in resources and constraints, independently of situational variance. In other words, the use of laboratory-controlled research facilitates conclusions about individual differences that are more securely grounded in the common situation to which participants were exposed. Different performances are likely to reflect differences between teachers, rather than differences between contexts; and it becomes possible to say, with relative certainty, why some teachers, rather than others, have success with parents.

Notwithstanding the advantages of laboratory-controlled research, simulated methodology has an important drawback: It is likely to interfere with the generalizability of the results of the research. The decision to employ analog research because of its ability to control the sources variance. This decision was supported by the belief that face-to-face interviews provide a setting in which concerns for face protection and self-presentation continue to operate. It was expected that teachers would be motivated to make good presentations of themselves, however they defined a "good" professional presentation.

Reviewing the protocols, it is unlikely that teachers' concerns about self-presentation were as strong during the simulation as they would normally be during a real-life situation. In real life, a confrontation with a parent is likely to have future consequences; and the teacher may have to engage in another interaction with the same parent, as well as continue to work with the child. These features were notably absent from this investigation.

Emotional investment in the simulated conference was general weak. Few teachers spoke from *immediate* affective response and few expressed anger. Vignette 7, in which the parent implicitly challenged the

teacher's competence to teacher her "talented and special" child, was a notable exception. While most teachers avoided the most serious face-threatening implications of this situation, those who recognized the parent's attack were likely to respond with immediate affect. One irate teacher, upon learning that the parent thought her incapable of meeting the child's needs, said,

> I understand. And if you feel that I can't give your child the attention she needs, you are more than welcome to go down and speak to the principal and ask for your child to be transferred.

Notwithstanding the use of face-to-face communication, important features of natural discourse were notably absent. Teachers did not actually engage in a dialogue; they produced messages in response to a situation and a prompt. Therefore, the constraints of naturally-occurring dialogue were not present. Teachers had to determine for themselves when to conclude their message. They also had to determine, without reactions from the investigator *qua* parent, if and when their message had an adverse effect. Sometimes teachers spoke long enough to include message features that reduced their scores. This problem occurred when teachers posed questions or offered solutions. In these cases, the absence of a naturally

occurring exchange led some teachers to persist with their questions or to add more detail to their suggestions.

The simulated situations could not account for variance due to prior knowledge of and experience with the parent. The importance of this variable was understood by one teacher who observed that she would respond differently to Vignette 2 (an attendance and lateness problem), depending upon whether she had a comfortable relationship with the parent. If the relationship was comfortable, she would say, "Come on, I mean, who pays the bills here? You say,'Go to school.' She go." If the relationship was formal, her response would be more conventional. She would say, "School is very important; it's affecting her grades. What do you think you should do? How do you think you can get her to come to school?"

A further risk to the generalizability of analog research is the potential influence of directions on participants' behavior. In real-life, people usually do not enter interactions with a set of standardized directions provided by an outside observer. Yet directions are necessary in analog research. Previous research has found that instructional variations influence assertive behaviors during role-play

(Westfield & Galassi, 1980). The present investigation asked teachers to respond as they would in real-life situations. The reason for this direction was to examine the self-generated goals teachers addressed. If the directions had guided teachers to specific goals (i.e. overcome the parent's resistance; help reduce the parent's distress), messages for some teachers might have been different from the messages they produced for this investigation.

The generalizability problem of analog research was anticipated by asking teachers to evaluate the naturalness of their responses. In general, teachers gave high ratings to the naturalness of their responses. Most of the vignettes received mean scores that exceeded 3.6 on the four-point scale for naturalness of response. Notwithstanding these high ratings, sometimes a teacher would describe a difference between the message produced during the simulation and the message they would produce in real-life. For example, one teacher, in response to Vignette 2 which concerns an attendance and lateness problem, said,

> Well, first of all, not getting your child to school is a neglect issue and it could be taken up in the courts.

In responding to the question about the naturalness of her response, this teacher observed a difference.

She thought that in real life, she "would probably not bring up the legal part." In effect, the simulated situation did not present the same constraints as a real-life interaction with a parent would.

Beyond evaluating teachers' beliefs about the naturalness of their messages, efforts were undertaken to heighten the realism of the artificial situations. Specifically, teachers were encouraged to think of a particular child when formulating and presenting a message. Teachers varied in their ability to employ this strategy. About a third of the participants (27 teachers) employed the strategy easily, thinking of a particular child for at least six of the eight vignettes. However, nearly 20 percentage (19 teachers) were less successful in generating a realistic basis for their response and reported thinking of a particular child during fewer than three vignettes.

It was hypothesized *post hoc* that teachers who thought of a particular child during the role play would have an advantage in producing supportive explanations and person-centered persuasive appeals. Statistical analyses supported this hypothesis. Explanation scores and persuasive appeal scores were significantly associated with reported frequency of thinking of a particular across the set of eight vig-

nettes ($r = .22$, $n = 77$, $p \leq .03$; $r = .28$, $df = 77$, $p \leq .006$). A regression analysis showed that with explanation scores, thinking of a particular child across the set of eight vignettes (but not necessarily during that situation) enhanced the predictive power of construct differentiation by 7%, from 9% to 17%. With persuasive appeal scores, frequency of thinking of a particular child across the set of eight vignettes (but not necessarily during that situation) enhanced the predictive power of personal teaching efficacy by 7%, from 16% to 23%. However, correspondence between a specific vignette and thinking of a particular child for that vignette occurred with only two of the eight vignettes (Vignettes 2 and 7).

It was hypothesized that teachers with high personal teaching efficacy would be better able to draw upon their professional experience to think of a particular child to enhance the realism of the role-play situation. The data did not support this hypothesis. Personal teaching efficacy scores were not significantly associated with thinking of a particular child (-.04, df 77, p=.37). However, construct differentiation scores were (r=.26, df 77 p=.01). Furthermore, construct differentiation, although not a significant path to teachers' persuasive appeals, was

significantly associated with the four persuasive appeal items ($r=.20$, df 80, $p=.03$), as well as with the four explanation items ($r=.25$, df 78, $p=.01$). In other words, thinking of a particular child supported teachers' messages independently of personal teaching efficacy; and reflected variance in the *a priori* social/cognitive developments represented by construct differentiation scores. Teachers who were able to draw upon prior personal experiences with children, enhancing the realism of the simulation, were likely to have more differentiated and better organized perceptions of others, as well as greater situational acumen and interpersonal skill.

In summary, the methodology employed in this investigation posed problems for its generalizability to the real-world. Unlike interactions in the real world, simulated situations lack many variables that influence naturally occurring dialogue and raise questions about the relevance of the observed messages for real-life interactions between teachers and difficult parents. While not a conclusive finding, a majority of teachers reported the belief that their responses were natural. Furthermore, the methodology provided a strategy to enhance realism. The fact that this strategy was significantly associated with some of the causal and out-

come variables suggests that it may be more difficult for some teachers to enter the spirit of role-play and produce messages that are consonant with those they would produce in real-life. The implications of this finding for staff development are taken up later in this chapter.

Directions for Future Research

Future research should improve upon the measures and methods employed in this investigation and extend its findings. Specifically, studies are needed to clarify the intended meanings of teachers' messages; to improve upon the measures of role-bound construing and communication efficacy; to validate the communication indices against external criteria; to employ alternative methods of observing teachers' communicative strategies with difficult parents; and to examine perceptions of the legitimacy of obligations and request magnitude on teachers' messages to parents.

Validation of the communication indices against external criterion would examine the perceptions of relevant audiences (parents, teachers, administrators) on the level effectiveness of person-centered persuasive appeals and supportive explanations in producing a change in behavior and attitude, in gaining interpersonal trust and accord, and in presenting an

image of professional competence and caring. Validate the communication indices against external criterion. For example, ask parents, teachers, administrators, and guidance staff to evaluate messages of varying levels of person-centered communication and supportiveness for impressions of teacher competence, teacher caring, persuasiveness, credibility

Rationales for communicative behavior are important in gaining an accurate assessment of an individual's communicative competence. Were messages produced for self-defensive, instrumental, or relational development goals? or a combination of these? Examination of teachers' rationales for their responses is needed to learn whether teachers' reasons are concordant with their messages. Teachers might be asked to assess and explain differences between messages produced during simulation and those they would produce in real-life in a more systematic manner than was employed in this study.

Improving upon the measures of communication efficacy and role-bound construing would be a productive extension of this investigation. At times, teachers commented that their response to the prompt would depend upon the particular parent. This comment underscores the need to examine the strength and range

of efficacy beliefs, as well as teachers' confidence levels. An improved communication efficacy scale would not only differentiate between expectations of success (action-outcome contingencies) as the present scale did, but it would also employ a hierarchically ordered set of situations, varying in difficulty, to appraise performance capability. Variability in role-bound construing scores can be enhanced by asking teachers to describe not only an ideal student, but also a student who presents behavior management problems.

Alternative methods for observing teachers communicative behavior would extend the results of this research. Teachers can be asked to reconstruct from memory a difficult parent-teacher conference and its context (history of interactions and subsequent events). *In vivo* observation is an alternative method of observing communicative behavior. Both the recall and natural observation methods have their own validity problems, but alternative methods of gathering data would complement and extend this investigation.

Lastly, investigation of potential interaction effects would clarify the combined and independent effects of personal and general teaching efficacy on teachers' message production; and varying levels request magnitude and legitimacy of obligation could

tease out the relationship between construct differentiation and variance in teachers' messages to parents.

Implications for Staff Development

Several implications for staff development programs emerge from this study. First, the data affirms a need for staff development programs to improve teachers' communication with parents. The distribution of scores for explanations and persuasive appeals were both negatively skewed. Teachers tended to rely upon positional responses for persuasive appeals and upon defensive messages for explanations. Relatively few messages (51 of 665 messages, or 8%) received scores at the highest level. These percentages varied with situation type -- 11% of persuasive appeals (38 of 333) and 4% of explanation messages (13 of 332) were assigned the highest scores on their respective scales.

Second, pre-training levels of personal teaching efficacy, communication efficacy, and message production are likely to influence the effectiveness of any training program. Not only will high efficacy teachers be likely to demonstrate higher pre-training skill levels than low efficacy teachers, but they will be likely to receive training with initially greater enthusiasm and to make greater use of training to fur-

ther advance their communicative skills. In other words, teachers who are most in need of training may be least likely to take advantage of it unless the program incorporates strategies to enhance efficacy beliefs for instructional capabilities and for parent conferencing skills.

Third, pre-training levels of construct differentiation may make it easier for some teachers, rather than others, to engage in simulation and to draw upon the contextual details of prior experiences in both discussing and enacting strategies of message production. Variance in role-play ability can be anticipated and reduced by discussions that encourage teachers to reflect upon specific conferences they have had with parents and to draw comparisons with the situations offered for practice exercises and role-play. Emphasis should be on encouraging teachers to learn from prior experience.

To overcome initial resistance to training, two strategies may be helpful. First, skills training should begin with explanatory situations. The potential advantage to beginning the program with explanatory situations is its incentive value. Teachers may be more motivated to acquire strategies to help them deal with a verbally aggressive or complaining parent.

This sequence has the further advantage of preparing teachers to understand the impact of positional language when the topic of person-centered persuasive appeals is introduced.

A second strategy that may help overcome initial resistance is to demonstrate the potential benefits of training. Specifically, the value of training to reduce the stress teachers may anticipate regarding parent conferences and the potential value of training for other areas of teachers' lives. This strategy can take the form of encouraging teachers to think about contexts beyond their professional activities where effective communication is important; and to elicit examples where communication strategies were used effectively to resolve a conflict.

Training aimed at improving teacher-parent communication and increasing teaching efficacy should include three elements: demonstration; discussion; and practice. Demonstrations involve specific examples of difficult situations, e.g., a parent's complaint, where the use of defensive and supportive responses is modeled. Attention can be drawn to the specific elements of defensive and supportive messages in explanatory situations. Demonstration should lead naturally to discussion. By considering the face-threatening

implications of apologies, requests, and verbal aggression teachers begin to address the values, beliefs, and motives that underlie alternative strategies for dealing with parents' complaints. Defensive and supportive messages can be examined for the goals they address, their efficiency via the feelings and impressions they arouse within the communicator (and are likely to arouse within the parent), and the likelihood of developing a cooperative relationship with the parent and of influencing the child's school-related problem. Also relevant to discussion are the constraints and resources teachers have when dealing with a difficult parent. Might there be situations when defensive strategies would not be appropriate? Discuss the potential risks and benefits of employing supportive messages and consider situations when defensive strategies might be more appropriate than supportive strategies, despite their potential costs.

Key to facilitating teacher efficacy is the opportunity to practice what was learned and monitor success. Prior to practice activities, teachers should first recognize the role of choice and intention in message production. Practice exercises to elicit supportive messages and to anticipate the parent's verbal response to the teacher's message can then be carried

out through role-plays during which one teacher plays the role of a difficult (verbally aggressive and/or complaining) parent and the other acts the role of the teacher. Teachers should then be supported to reflect on the feelings generated by employing supportive communication for both teachers participating in the role-play and share the results. Encouraging teachers to self-monitor their reactions during role-plays helps to identify stress points. What preceded the production of a defensive message? What preceded a positional persuasive appeal? Teachers may report that the use of person-centered and supportive messages reduced their anxiety and enhanced their feelings of empowerment and optimism. If affective reactions differed, further review of the dialogue may be necessary, as well as continued support to generate messages that would have produced feelings of empowerment. In line with this approach, teacher's expectations of the outcomes of the conference regarding the future of his or her relationships with the parent and the potential for solving the child's problem would be important to determine. If the teacher did not achieve the desired outcome, was the relationship preserved to enable him or her to try again in the future?

When teachers have understood and practiced the supportive communication in explanatory situations, the

topic of persuasive situations can be introduced following the same set of procedures. Providing and eliciting examples where person-centered communication overcame seemingly irreconcilable parent-teacher differences which, in turn, led to improvement in a child's school-related problem, can set the stage for role-plays. Direct attention to features of person-centered persuasive appeals -- identifying common ground, providing specific and relevant information, suggesting potential benefits to the parent and/or child. Generate a list of parent attributes that are relevant to gaining cooperation from a resistant parent. Facilitate discussion about the potential costs and benefits of using positional messages and non-supportive messages. Consider the benefits of positional messages to the teacher in terms of level of reduced effort and self-control during the communicative situation; efficiency of achieving the instrumental goal; and reliance on defensive (external) attributions if non-compliance and lack of cooperation persist. Compare these to the benefits of person-centered communication -- facilitating the development of a relationship with a parent that may have long-range benefits for the child.

In summary, an effective staff development program will include strategies to overcome initial resistance

to training, particularly among low efficacy teachers; provide discussion of values and beliefs relevant to the use of different strategy choices; provide practice exercises, role-play opportunities, and encouragement to apply newly acquired strategies in real-life situations. Ultimately, the program should lead teachers to develop the goal of becoming "master communicators" who enjoy the challenge of dealing with difficult people and it should introduce them to metacommunicative knowledge to support self-monitoring of behavior as well as a repertoire of strategies for communicating effectively with difficult people. Beyond the development of self-concept, training should encourage teachers to expand their thinking to incorporate effective communication with parents as a criterion for evaluating professional competence. A successful staff development program will serve another objective. Not only will individuals experience enhanced communication efficacy and enhanced parent conferencing skills, but the benefits of training can be translated into what Bandura calls "collective efficacy" in which the school staff exchange apathy toward parent involvement for a concerted program to involve even the most difficult of parents.

Summary and Concluding Remarks

This investigation began with a belief in the value of parent-teacher cooperation and an interest in learning about the strategies teachers employ to deal with difficult parent conferences. From this value and interest, a set of hypotheses were developed on the shoulders of the constructivist approach to communication. The main agendas of the investigation have been met: significant variability between teachers' messages was observed and a portion of this variance was explained through the variables of construct differentiation, personal teaching efficacy, and communication efficacy.

The results of this study provide modest support for its major assertions. Different patterns of influence were observed. In explanatory situations, general communicative ability, measured through construct differentiation, and communication efficacy were the most important sources of influence. However, personal teacher efficacy was significantly associated with all communication variables, including teachers' explanation scores. From this broad range of associations, it is reasonable to conclude that teachers who believe in their ability to achieve results -- who have the determination to see their students succeed -- are

more likely to employ communicative strategies that foster relationships with parents than teachers who feel powerless and lack the drive and tenacity to produce successful student outcomes. In other words, teachers who believe in the value of their professional capabilities are likely to be less defensive and more supportive toward parents who either oppose their requests or express complaints of their own.

Teachers who rely upon positional communication and defensive responses can acquire new methods of talking to parents. Finding new ways of talking is not necessarily easy, but it is possible for teachers to examine what Dorothy Rich called their "teacherish" behavior and make choices that promote cooperative relationships with parents. As one teacher told this investigator,

> "Some parents, its hard.... There are some personalities where I have no problems with; other parents, where I have a tough time. But I don't give up. You know, because whose gonna be hurt in the end? the child."

This teacher's comment underscores the importance of the determination to win with parents as much as it underscores the importance of the determination to succeed with and for children. The two are interconnected. Teachers who believe that their instruc-

tional activities with children are worthwhile are more likely than teachers who don't share this belief to recognize the obstacles to parent cooperation, to anticipate success with parents, and to employ communicative strategies that have a likelihood of promoting the kind of cooperation that works for parents, teachers, and children.

APPENDIX

Appendix A: Sample Demographic Data

		Phase 1 (N = 108)		Phase 2 (N=84)	
GENDER	Male	11	10%	9	11%
	Female	97	90%	75	89%
AGE 20-29		31	29%	26	31%
30-39		30	28%	23	27%
40-49		24	22%	17	20%
50-59		17	15%	15	18%
above 59		5	4%	3	4%
ETHNICITY		(n=105)		(n=82)	
Caucasian		57	53%	41	50%
African American		31	29%	26	32%
Hispanic		8	9%	7	9%
Asian		3	3%	3	4%
other		6	6%	5	6%
PARENTAL STATUS (Do you have children?)					
Yes		49	45%	39	46%
No		59	54%	45	54%
EDUCATION (highest degree attained)				(n=83)	
Bachelor		13	12%	12	15%
Bachelor plus		9	8%	7	8%
Master		32	30%	22	27%
Master plus		51	48%	41	49%
Doctorate		2	2%	1	1%
GRADE TAUGHT (School Year 1995-1996)				(n=81)	
pre-K and k		13	12%	8	10%
grades 1 to 3		40	39%	32	40%
grades 4 to 6		29	28%	22	27%
several grades		22	20%	19	23%
PROGRAM TYPE (School Year 1995-1996)					
Regular		64	59%	53	63%[1]
Gifted & Talented		13	12%	9	11%
Special Education		28	26%	19	23%
Mixed		3	3%	3	4%

[1]rounding error

POSITION				
Classroom Teacher	79	73%	57	68%
Cluster position	12	11%	11	13%
Other	17	16%	16	19%
YEARS OF TEACHING EXPERIENCE			(n=81)	
1-4	35	33%	29	36%
5-11	36	34%	24	30%
12+	34	32%	28	34%
Mean & SD	10	9.0		
SCHOOL			(n=82)	
A			4	5%
B			6	7%
C			6	7%
D			7	9%
E			11	13%
F			11	13%
G			13	16%
H			7	9%
I			5	6%
Others			12	15%

Variable	Mean	Std Dev	Minimum	Maximum	N
YEARSEXP	10.31	9.00	1	39	104
REGISTER	27.67	18.72	6	99	98

- - - - F A C T O R A N A L Y S I S - - - -
n = 85

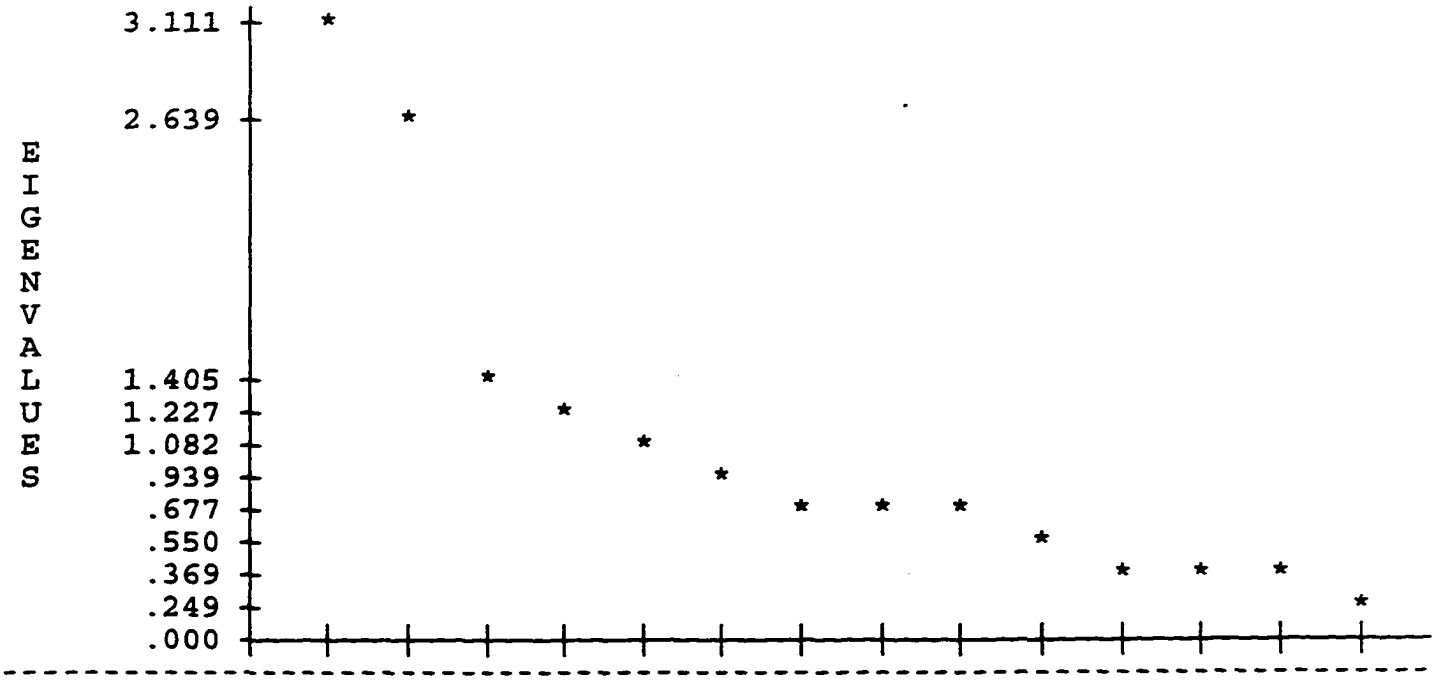
Analysis Number 1 Listwise deletion of cases with missing value
SPSS/PC+

Extraction 1 for Analysis 1, Principal-Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
		*				
TES1	1.00000	*	1	3.11109	20.7	20.7
TES2	1.00000	*	2	2.63871	17.6	38.3
TES3	1.00000	*	3	1.40469	9.4	47.7
TES4	1.00000	*	4	1.22695	8.2	55.9
TES5	1.00000	*	5	1.08182	7.2	63.1
TES6	1.00000	*	6	.93904	6.3	69.3
TES7	1.00000	*	7	.81570	5.4	74.8
TES8	1.00000	*	8	.78702	5.2	80.0
TES9	1.00000	*	9	.67707	4.5	84.5
TES10	1.00000	*	10	.54972	3.7	88.2
TES12	1.00000	*	11	.47422	3.2	91.4
TES13	1.00000	*	12	.40130	2.7	94.0
TES14	1.00000	*	13	.36902	2.5	96.5
TES11	1.00000	*	14	.27475	1.8	98.3
TES15	1.00000	*	15	.24890	1.7	100.0

- - - - F A C T O R A N A L Y S I S - - - -



Factor Matrix:

	FACTOR 1	FACTOR 2
TES1	.48100	-.28975
TES2	.26565	.39433
TES3	.05194	.73666
TES4	.07572	.58392
TES5	.41776	-.10916
TES6	.65104	-.29107
TES7	.65773	.09160
TES8	.30109	.77576
TES9	.74093	-.13597
TES10	.40946	-.40023
TES12	.67105	.12194
TES13	.38940	-.03961
TES14	.51503	.03928
TES11	-.06849	.67741
TES15	.30092	.39148

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum
		*				
TES1	.31532	*	1	3.11109	20.7	
TES2	.22607	*	2	2.63871	17.6	
TES3	.54536	*				
TES4	.34669	*				
TES5	.18644	*				
TES6	.50857	*				
TES7	.44100	*				
TES8	.69247	*				
TES9	.56747	*				
TES10	.32785	*				
TES12	.46518	*				
TES13	.15320	*				
TES14	.26679	*				
TES11	.46358	*				
TES15	.24381	*				

Varimax Rotation 1, Extraction 1, Analysis 1 - Kaiser Normal

Varimax converged in 3 iterations.

Rotated Factor Matrix:

	FACTOR 1	FACTOR 2
TES1	.53306	-.17652
TES2	.17213	.44321
TES3	-.11182	.72997
TES4	-.05494	.58624
TES5	.43155	-.01433
TES6	.69920	-.14030
TES7	.62133	.23442
TES8	.12257	.82307
TES9	.75268	.03080
TES10	.48766	-.30007
TES12	.62763	.26694
TES13	.38855	.04725
TES14	.49368	.15190
TES11	-.21622	.64562
TES15	.20716	.44821

Factor Transformation Matrix:

	FACTOR 1	FACTOR 2
FACTOR 1	.97537	.22056
FACTOR 2	-.22056	.97537

Rotated Factor Loadings - Teacher Efficacy Scale

(n = 85)

Personal Teaching Efficacy

1. When a student does better than usual, many times it is because I exerted a little extra effort. (.53)

5. When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level. (.43)

6. When a student gets a better grade than he usually gets, it is usually because I found better ways of teaching the student. (.70)

7. When I really try, I can get through to most difficult students. (.62)

9. When the grades of my students improve it is usually because I found more effective teaching approaches. (.75)

10. If a student masters a new math concept quickly, this might be because I knew the necessary steps in teaching that concept. (.49)

12. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly. (.63)

13. The influences of a student's home experiences can be overcome by good teaching. (.39)

14. If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty. (.49)

General Teaching Efficacy

2. The hours in my class have little influence on students compared to the influence of their home environment. (.44)

3. The amount that a student can learn is primarily related to family background. (.73)

4. If students aren't disciplined at home, they aren't likely to accept any discipline. (.58)

8. A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement. (.82)

11. If parents would do more with their children, I could do more. (.65)

15. Even a teacher with good teaching abilities may not reach many students. (.45)

Appendix C

DIRECTIONS

You are about to participate in a series of brief parent-teacher conferences. You will play the part of the teacher, talking to me as if I were the child's parent. I will listen and then prompt you with a parent's response. At the end of each role-play, you will be asked four questions about the situation.

Each situation was designed to present a challenge to the teacher's communicative skills and abilities. Although these situations are difficult, they are also realistic. Most teachers will encounter similar situations at some point during their career. Of course, it would be highly unusual for any teacher to encounter all of these situations on the same day, or even during the same school year.

We will read a paragraph describing a problematic situation. After reading the paragraph, think about what you would say to the parent. Use your experiences with children and parents to guide you. It may help to think of a similar situation or of a child like the one described in the passage. You may assume that you and the parent have already exchanged greetings.

Remember, this is a role-play situation. I need to know what you would say -- not how you would approach the situation. Please take some time to think about the words you would use in a real-life situation like this. When you are ready, you may begin speaking.

Please speak clearly and audibly. The role-plays will be tape-recorded. The tapes will be heard only by myself and my assistant. Do you have any questions?

Please turn the page. Here is the first situation. Follow along while I read it to you.

Appendix C - Vignettes

Explanatory Situations

1. The parent has asked to see you. She is upset about her daughter's ongoing conflicts with her classmates. As soon as she sits down, she says, " My daughter comes home everyday upset by other children. Why can't you get these kids to leave my daughter alone?."

3. The parent has asked to see you. She is upset that you sent her child to the principal's office the previous day. She says, "I know Eddie can be a handful, but was it really necessary to send him out of the room?" (Canady & Seyfarth, 1979 p. 29-30).

7. The parent calls the teacher about a low grade her daughter has earned. She says, "My child is special and I want a teacher who recognizes her special talents and needs. I will not sit by and settle for anything less." (Canter, L. & Canter, M., 1991, p. 30; used by permission).

8. The teacher calls a parent to discuss an academic problem. As soon as the teacher begins to speak, the parent goes on the offensive: "You teachers today don't like kids any more than my teachers did. All you ever do is call me and tell me how bad my kids are." (Canter, L. & Canter, M., 1991, p. 28; used by permission).

Persuasion Situations

2. The teacher calls a parent to discuss a child's lateness and excessive absence from school. After telling the parent that the child misses a lot of work by being late and absent, the parent replies as follows: "I understand. But what can I do? She doesn't want to come to school."

4. The teacher calls a parent about a behavior problem. The student gets into fights everyday with his classmates. As the teacher begins discussing the problem, the parent responds, "I'm tired of being called to school all the time. It's your job to control these kids, not mine."

5. A teacher is meeting with a parent about a behavior problem. As the teacher begins discussing the problem, the parent responds, "Believe me, I'd do something if I could. I know how John behaves at school is wrong; he's the same way at home. I just don't have any idea what to do to help him stop. And what difference would it make anyway? He doesn't listen to a thing I say." (Canter, L. & Canter, M., 1991, p. 27; used by permission).

6. The teacher calls a parent to discuss referring a child for an evaluation. After the teacher describes the reasons for the referral, the parent goes on the offensive: "I have been asking for years to find out how Donnie was doing and what we could do at home to help him. Did anyone answer or give us any advice? No. Everyone said he was doing just fine. I knew better than that. Now you want him to go into a special class. I won't hear of it." (Canady & Seyfarth, 1979, p. 27).

Appendix D

Table 1. Teachers' Ratings of the Vignettes

Vignette	REALISTIC		DIFFICULT		NATURAL	
	X	SD	X	SD	X	SD
1	3.66	.65	2.76	1.01	3.60	.62
2	3.41	.84	2.55	1.05	3.68	.52
3	3.54	.80	2.51	1.06	3.76	.46
4	3.62	.62	3.02	1.01	3.60	.60
5	3.67	.54	2.72	1.04	3.68	.52
6	3.66	.67	2.91	.97	3.72	.53
7	3.39	.73	2.61	.95	3.76	.46
8	3.24	.78	2.84	1.00	3.73	.47

Table 2. Did you have a specific child in mind?

	Vignette Number							
	1	2	3	4	5	6	7	8
Percent Yes: (N=84)	61%	55%	52%	66%	58%	46%	40%	42%

Table 3. Validity Check Reliability

	N	ALPHA
REALISTIC	79	.79
DIFFICULT	77	.88
NATURAL	77	.83

Appendix E

Teacher Autonomy Protection Scale For Explanations
(Highly Defensive to Highly Supportive)

Four vignettes -- 1, 3, 7, and 8 -- present teachers with the communicative dilemma of responding to a parent's complaint without appearing defensive. The Teacher Autonomy Protection Scale for Explanations has been applied to these four vignettes. Designed for this study and adapted from Applegate and Woods (1991), the scale evaluates the effectiveness of teachers' explanations in protecting the boundaries of their authority from parental intrusion and imposition and in accepting professional responsibility.

The scale ranges from Highly Defensive to Highly Supportive. At the lowest level, teachers refuse to offer explanations and put the parent on the defensive. At the highest level, teachers give explanations which show that their actions are guided by abstract principles and values and by their knowledge and understanding of the child.

Each vignette receives one score from 1 to 5 and each respondent receives a total score ranging from 4 to 20 unless No Role-Play occurred on one or more vignettes.

(Note: Following Stiles, when there is a conflict between the form and intention of the message, the message is scored for its intention.)

0. NO ROLE-PLAY

The teacher explain what he/she would say, but does not engage in a simulated role-play. (If there are three scorable responses on the scale, the scores are averaged.) (Scores 0.)

I. HIGHLY DEFENSIVE

The teacher challenges the parent's right to question his/her competence and/or decisions. The teacher immediately puts the parent on the defensive by asking potentially derogatory questions or double-bind questions; by sharply criticizing the parent; and/or by referring the parent to another authority. (Scores 1.)

> Yes, it was. (Failure to elaborate upon the teacher's reasoning constitutes a challenge to the parent's right to question the teacher's decision.) (714/3)

> I appreciate that [the parent's complaint]; and maybe you should make an appointment to see the principal to discuss your child's placement. (714/7)

II. MODERATELY DEFENSIVE

The teacher offers an explanation of his/her action(s), although the emphasis is still on defending

the teacher's face needs. The message contains threats to the parent's face needs or does not address the parent's face needs. The teacher denies responsibility; disputes the parent's perception of the situation; and/or puts the burden on the parent and/or child. (Scores 2.)

> Well, you know I never heard about it. This is the first time I hear about her being harassed by other kids. You have to tell her the first thing she has to do she has to come to me or to Mr. N-- or to Ms. S--. In case no one is available she has other kids she can go to or even to Mr. V--. You cannot come to me and tell me something I never heard of. I don't know when they harassed her. Is it on the way from school? to school? In the gym? At the yard? When they're at lunch? I have no idea. When she's in my class, I don't see anybody bothering her so she really has to come and tell us. We don't, we cannot do anything unless we're told and thank you for coming. (716/1)

III. MIXED DEFENSIVE/SUPPORTIVE

The teacher's message contains both threatening and supportive content. Emphasis continues to be on protecting the teacher's face needs, but he/she also pays some attention to the parent's face needs. The message demonstrates the teacher's awareness of the parent's perspective and/or feelings. Nonetheless, efforts to defend the teacher's face needs take priority. These efforts may appear excessive (i.e., boastful, ingratiating) or they may undermine the teacher's appearance of competence and reliability. (Scores 3.)

> I'm sorry you feel this way, but actually I'm calling to find out how is it that you and I can go

about helping your child; and because we have another marking period to go, I'd like to find ways that I may be of assistance to help booster up your child's grades. And I'd like to know also, does your child have help at home with homework? And what ways can I as a teacher of your child perhaps give extra time ' maybe instead of allowing your child to play one day a week -- I would not like to take the whole week uh play time, but I would be willing to give up part of my lunch hour to work once a week to help, you know, where I feel that there's a way that I can help to benefit this child. (718/8)

IV. MODERATELY SUPPORTIVE

The emphasis shifts from protecting the teacher's face needs to supporting the parent's face needs. The teacher shows genuine empathy for the parent and/or child and attempts to alleviate the parent's distress. But, in doing so, the teacher may sacrifice some of his/her own face protection. (Scores 4.)

Well, I want to thank you for bring this to my attention. I had no idea that your daughter was having these problems. I need to talk with her to see what the issues are and what is going on in the class. I was fully unaware of this. Then at this point, we need to talk to her classmates and see what is the problem. Yes. Your child should come to a safe environment everyday and be able to learn and conduct herself in. She should feel good about coming to school and not have to face these conflicts so I would like to talk to her and then follow up with a talk to the class and see what the problem is. (721/1)

V. HIGHLY SUPPORTIVE

The teacher supports the parent's face needs and simultaneously enhances his/her own self-image. The teacher recognizes how his/her behavior may have con-

tributed to the parent's perceptions and/or feelings. The teacher offers a genuine apology in which he/she attempts to redress past mistakes and promises to take corrective action in the future. The teacher reassures the parent that his/her actions are guided by the well-being of the child and/or the teacher's commitment to abstract principles and values. (Scores 5.)

> I'm very sorry that you feel this way. However, I cam calling and there seems to be a problem. And I'm calling so that we can try to address this problem now and hopefully things will get a little better. It is unfortunate that teachers tend to call with the bad news, and not good news. I guess we are very busy people and its tough, at times. But, nonetheless, I really really need to speak with you about your daughter's academic problems in class and we need to figure out ways that we can help so that this won't be a problem. It's still early on in the year and maybe by us working together, we can prevent failure.... Let's sit together and see if we can figure out some ways to help her. As I say, that is sad that teachers only call with bad news. I hear that a lot, but it's very difficult. Maybe I need to think of some ways of sending home some positive messages sometimes. (721/8)

Autonomy Granting Scale for Persuasive Appeals

Four vignettes -- 2, 4, 5, and 6 -- present teachers with the communicative task of promoting parent cooperation and support. The Autonomy-Granting Scale for Persuasive Appeals has been applied to these four vignettes. Designed for this study and adapted from Applegate and Woods (1991), the scale evaluates the effectiveness of teachers' persuasive appeals in encouraging cooperation and empowering the parent to take action.

The scale ranges from Highly Positional to Highly Person-Centered. Person-centered communication is evident in messages which are sensitive to the uniqueness of the individual, which focus on emotional experience and motivations, and which demonstrate respect for the uniqueness of the individual. Person-centered communication directly or implicitly acknowledges the relevance of the listener's perspective to the situation at hand, recognizes and values the listener's perspective, and avoids assumptive statements. Position-centered communication is characterized by messages which either dismiss or ignore the perspective of the listener as irrelevant and focus on the role-determined aspects of overt behavior and expectations. Position-centered communication is characterized by messages which take the listener's per-

spective for granted by making assumptions about the listener's intentions and constraints.

Each vignette receives one score from 1 to 5 and each respondent receives a total score ranging from 4 to 24 unless No Role-Play occurred on one or more vignettes.

(Note: Following Stiles, when there is a conflict between the form and intention of the message, the message is scored for its intention.)

NO ROLE-PLAY

The teacher explains what he/she would say, but does not engage in a simulated role-play. (If there are three scorable responses on the scale, the scores are averaged.) (Scores 0.)

I. HIGHLY POSITIONAL

The response emphasizes the power differential between the parent and teacher and the role obligations of the parent. The response either ignores, disputes, or discounts the parent's and/or child's perspective. Pressures for action emphasize advantages to the teacher and/or school. The teacher defines the obligations of the parent, offering reasons which ignore the parent's perspective. The teacher threatens adverse consequences for failure to act upon

role-defined obligations. Methods to encourage action include commands, threats, and/or sanctions. (Scores 1.)

> It's not my job to control your child. It's my job to teach; and reinforce positive behavior. Your child seems to get into a fight every day with his classmates because he says the wrong they and they respond by fighting. I really need your cooperation or else perhaps we're going to have to think about re-evaluating your child and seeking the appropriate placement." [Note: The teacher states *her* need for cooperation, but actually antagonizes the parent by making a threat and blaming the child.

II. MODERATELY POSITIONAL

The teacher minimally acknowledges the parent's perspective, but emphasizes the needs of the teacher and/or school by citing the severity of the problem and the actions which have already been taken or by making simple unelaborated statement of need. Threatening statements may be made, but they are redressed by conventional politeness forms. (Scores 2.)

> Controlling these kids in school is partially the responsibility of teachers and ' the administration, ' but your child comes to school every day ' and starts fights with other children. There's only so much we can do in school; we need the help of the parents as well because they will go home and ' then they're out of our hands. They're only in school for six hours a day and although we try to control them as best we can, obviously something's not happening at home and he's coming to school with the same frustration and taking it out by fighting or it may be something in school; it may be something at home. But we need to find out what it is and where it's starting in order to put an end to this." (752/4)

III. THE PRESUMPTIVE LEVEL

The teacher assumes a solidarity with the parent on the basis of their role relationship. The teacher uses conventional politeness forms and the term "we" to imply a solidarity in the relationship. There is an attempt to respect the parent's autonomy, to avoid imposing a decision, and to accommodate to the parent's feelings and position. However, the teacher continues to press for action, rather than developing a shared mutual perspective on the problem. Persuasive appeals address potential generic benefits to the child. The teacher assumes the parent is motivated to solve the problem, but doesn't know how. The message is either a search for the cause (often through potentially derogatory questions) or an offering of solutions. If addressed, obstacles are mentioned and then either discounted or ignored. (Scores 3.)

> Okay. So we're both facing the same problem. It's important for me to know that's not just happening in school. This is a problem that's happening in John's life. I have an idea, if you don't mind. Maybe we can make an appointment together to meet with Annette, the school psychologist. She's really good on ideas of how to work with kids and maybe with Annette we can both develop a plan that we could work together to help him change his behavior..help him have better behavior. The point being that he's a pretty bright kid and his behavior's getting in the way of his learning. So would that be alright with you? (745/5)

IV. MODERATELY PERSON-CENTERED

The teacher continues to use conventional politeness forms and to make assumptions about solidarity in the relationship. In addition, the teacher tries to alleviate the parent's distress by minimizing or normalizing the child's problem or by minimizing or retracting the teacher's imposition. (e.g., "I'm just calling to advise you...") (Scores 4.)

> I don't know what anyone said to you prior to my having Donnie. Donnie is having some problems with his work. I'm not suggesting that he go into a special class. I'm suggesting we find out why he's having the problem; and then we can all sit together and find out what the best way is to help Donnie with his education. (727/6)

V. HIGHLY PERSON-CENTERED

The teacher personalizes the interaction with the parent by elaborating upon his/her knowledge and understanding of the child, by offering insights into the child's motives and feelings, and/or by elaborating upon the reasoning processes underlying his/her actions. Emphasis is on developing a foundation for coordinated action (rather than presuming its a priori existence). Persuasive appeals for cooperation address and try to remove obstacles and identify specific advantages to the parent and/or child. The teacher elaborates upon the child's perspective and uses this understanding and knowledge as a basis for encouraging

parent cooperation. The teacher helps the parent reason through the situation by encouraging reflection. The teacher is candid, but does not impose a solution or undermine the parent's self-esteem. (Scores 5.)

> Mrs. West, as you know, I have had Tommy with me for a year and a half. He was with me in the fifth grade and now he's with me in the sixth grade. I have asked you to come in and let's talk about his performance. And when you were in last time, you observed some of the things that he was not able to do. And I've told you that I thought maybe this might be the wrong setting for Tommy. I know you said that you liked the class and you would like him to be here; and that he'd shown some improvement. However, I have watched Tommy for a year and a half and I feel that maybe this might may not be the right setting for him. I've spoken to my supervisor and he has come in and uh observed him; and I've asked other teachers who Tommy works with to pay strict attention to his performance. Along with my supervisor and other teachers, this decision was made. I did not make this decision on my own. He needs a lot of individual attention; and as you know, I have twelve children in this class. And it's almost impossible for me to give him the attention that he needs. And I feel very bad about this; and I feel that now is a good time to place him in a setting where he may be able to do better rather than wait later on when uhm he will have lost so much time. So uh that's way I've made the referral. (6/746)

Relational Development Goal

(Adapted from Applegate, 1978, p. 196)

Messages were scored on a five-point scale reflecting effort at and emphasis upon developing a relationship with the parent. At Level I, teachers intensified negative feelings and employed coercive attempts to generate change. At Level II, teachers did nothing positive to improve the relationship, although they recognized that a problem existed. Level III was assigned when teachers acted as if the relationship with satisfactory and proceeded upon that assumption. At Level IV, teachers tried to foster a relationship with the parent or avoided intensifying negative feelings. At Level V, teachers worked to enhance the relationship through active and explicit efforts.

Multiple Goal Management Strategies

Teachers' messages were evaluated for the manner in which criticism of the parent and/or child was expressed or the manner in which a directive to the parent were issued. A categorical system of multiple goal management was used to assign messages to one of five discrete categories. Based upon the work of O'Keefe and Shepherd (1987, 1989), the system employs three types of multiple goal management strategies (selection; separation; integration) and two levels of directness (explicit; implicit).

Each vignette receives one score for the strategy employed in expressing criticism or issuing a directive. When more than one criticism or directive were used or when criticism and directives were both used, the first of these to appear in the message was scored. Scores within each category are summed and divided by the number of messages receiving a score for criticism.

0. No Criticism/No Directive

The response contains no implied or explicit criticism of either the parent or child and issues no implicit or explicit directive. (Scores 0.)

1. Selection (Explicit)

The teacher expresses criticism of the parent's and/or child's attitude, values, and/or actions (issues a directive to the parent) without attempting to redress the face-threatening action. (Scores 1.)

2. Selection (Implicit)

The teacher implicitly expresses criticism by asking potentially derogatory questions or implicitly issues a directive by stating what the parent should do. (Scores 2.)

3. Separation (Explicit)

The teacher expresses criticism (issues a directive), but employs redressive actions. The teacher alternates between praise and criticism, employs hedges or minimizers, or expresses reluctance or regret about the face-threatening action. (Scores 3.)

> Donnie has been doing wonderfully in certain areas. I'm very proud of his achievements. However, there are areas where he lacks... (vignette 6/781)

4. Separation (Implicit)

Criticism (a directive) is implied through potentially derogatory questions or through hints and suggestions about what action(s) the parent should take or

what attitude the parent should project. An implicit criticism (an implicit directive) is redressed by a reluctance to make the criticism (directive), by the use of hedges and/or minimizers, and/or by the inclusion of praise in the message. (Scores 4.)

5. Integration (Explicit and Implicit)

The teacher turns potentially face-threatening ideas (criticism or a directive) into an opportunity for constructive change and insight. The teacher redefines his or her role from that of judge, critic, or authority to that of an ally and source of support. (Scores 5.)

Appendix F - Communication Efficacy Scale (CES)

PART I

DIRECTIONS: Please indicate how much difficulty you would expect to have in each of the situations described below by circling the numeral next to the item. Use the rating scale below:

1. No difficulty
2. Slight difficulty
3. Moderate difficulty
4. Great difficulty

1. How much difficulty would you expect to have when dealing with a parent who blames you for her child's lack of interest in school?	1	2	3	4
2. How much difficulty would you expect to have in explaining your actions to a parent who accuses you of punishing her child unfairly because other children were not also punished?	1	2	3	4
3. How much difficulty would you expect to have when dealing with a parent who wants you to change her child's reading group to a more advanced group?	1	2	3	4
4. How much difficulty would you expect to have when dealing with a parent who is angry	1	2	3	4

about being called to school to discuss her child's behavior problem?

5. How much difficulty would you expect to have in reporting a child's misconduct to a parent whom you suspect of using physical punishment when the child misbehaves in school? 1 2 3 4

6. How much difficulty would you expect to have in responding to a parent's accusation that you were physically abusive toward her child? 1 2 3 4

7. How much difficulty would you expect to have in meeting with a parent to report a child's shyness and difficulty in making friends? 1 2 3 4

8. How much difficulty would you expect to have in responding to a parent who is angry about ***not*** being notified sooner that her child was not doing the homework assignments? 1 2 3 4

9. How much difficulty would you expect to have in responding to a parent's request to change her child's seat? 1 2 3 4

10. How much difficulty would you expect to have in reporting a child's behavior problem to an uncooperative parent who blames the school, teachers, and other children for her child's behavior? 1 2 3 4

11. How much difficulty would you expect to have in responding to an anxious parent who asks you to keep her informed daily about the class assignments and activities? 1 2 3 4

12. How much difficulty would you expect to have in meeting with a parent to report a child's significant learning problems? 1 2 3 4

PART II

DIRECTIONS: Please indicate how much success you would expect to achieve in each of the following situations by circling the numeral next to the item. Use the rating scale below:

1. No Success
2. Slight Success
3. Moderate Success
4. Great Success

1. How successful would you expect to be in developing a cooperative relationship with a parent who, upon meeting you, says that you are responsible for her child's declining motivation and declining grades in school?	1	2	3	4
2. How successful would you expect a parent conference to be in improving a student's completion of homework assignments?	1	2	3	4
3. How successful would you expect a parent conference to be in improving a student's defiant attitude?	1	2	3	4
4. How successful would you expect to be in convincing a parent of your fairness toward her child when the parent has accused you of treating her child unfairly?	1	2	3	4
5. How successful would you expect to be in calming a parent's anger about your action of sending her child to the principal's office as a disciplinary measure?	1	2	3	4
6. How successful would you expect to be in convincing a parent to do a better job of getting her child to school on time?	1	2	3	4
7. How successful would you expect to be in convincing a parent to permit her child to	1	2	3	4

take a battery of tests to assess the child's need for special education?				
8. How successful would you expect to be in convincing an anxious parent to permit her child to go on a class trip?	1	2	3	4
9. How successful would you expect to be in convincing a parent who is in denial of her child's problems that her child poses significant management problems in the classroom?	1	2	3	4
10. How successful would you expect to be in calming a parent's anger about being called to school to discuss her child's behavior?	1	2	3	4
11. How successful would you expect to be in convincing a parent who is in denial about her child's problems that her child has difficulty getting along with the other children in the class?	1	2	3	4
12. How successful would you expect to be in developing a cooperative relationship with a parent who blames the school, teachers, and other children for her child's misbehavior?	1	2	3	4

PART III

DIRECTIONS: Please indicate the degree to which you agree or disagree with each statement by circling the appropriate numeral to the right of each statement. Use the rating scale below:

1. Strongly Disagree
2. Moderately Disagree
3. Slightly Disagree
4. Slightly Agree
5. Moderately Agree
6. Strongly Agree

1. When a parent has unrealistically high expectations for a child, I know what to say to help the parent become realistically supportive of the child.	1	2	3	4	5	6
2. When a parent is angry about a method of discipline I employed, I am successful in explaining my decision in a way which the parent can accept.	1	2	3	4	5	6
3. I am more skillful than most teachers in explaining standardized test results to parents.	1	2	3	4	5	6
4. I am more effective than most teachers in helping a parent understand the nature of a child's learning problems.	1	2	3	4	5	6
5. I am more successful than most teachers in building good communication with parents.	1	2	3	4	5	6
6. When a parent says he or she has no time to come to school, I know what to say to obtain the parent's cooperation.	1	2	3	4	5	6

7. I enjoy meeting parents, particularly those who are viewed by others as "difficult parents."	1	2	3	4	5	6
8. I often learn important information from parents about how to work effectively with their children.	1	2	3	4	5	6
9. When a parent complains that the instruction is not sufficiently motivating, I know what to say to encourage the parent's trust and respect.	1	2	3	4	5	6
10. When a parent believes I treat his or her child unfairly, I know what to say to build the parent's confidence in my fairness.	1	2	3	4	5	6
11. I am not easily intimidated by parents.	1	2	3	4	5	6
12. When a parent is in denial of his or her child's behavior problems, I know what to say to help the parent recognize that the child has a problem.	1	2	3	4	5	6
13. I would rather do almost anything other than meet with an angry parent.	1	2	3	4	5	6
14. When a parent of an acting out child uses excessively harsh punishment in response to complaints from the school, the teacher should handle the child's behavior without involving the parent.	1	2	3	4	5	6
15. When a parent makes an unreasonable request, I know how to refuse the request and gain the parent's support for my decision.	1	2	3	4	5	6

Appendix F

The Role Category Questionnaire and Role Bound Construing

Directions for The Role Category Questionnaire were adapted from Burleson and Waltman (1988). Participants were asked to describe a person known to them who fit a designated category. Two categories were presented: a liked person of their age; and a disliked person of their age. Participants were asked to spend no more than five minutes on each description and to focus on the person's personality traits, habits, ways of dealing with others, and mannerisms, rather than physical attributes.

Directions for a measure of role-bound construing were adapted from Applegate (1978) and Burleson and Waltman (1988). Participants were asked to describe an ideal student. They were asked to describe those characteristics that distinguished the student from other students; and those characteristics held in common with other students.

TEACHER ATTITUDE SURVEY

Directions: *Please indicate the degree to which you agree or disagree with each statement below by circling the appropriate numeral to the right of each statement.* [The scale ranges from 1 (Strongly disagree), 2 (Moderately disagree), 3 (Disagree slightly more than agree), 4 (Agree slightly more than disagree), 5 (Moderately agree), to 6 (Strongly agree).]

1. When a student does better than usual, many times it is because I exerted a little extra effort.

2. The hours in my class have little influence on students compared to the influence of their home environment.

3. The amount that a student can learn is primarily related to family background.

4. If students aren't disciplined at home, they aren't likely to accept any discipline.

5. When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level.

6. When a student gets a better grade than he usually gets, it is usually because I found better ways of teaching the student.

7. When I really try, I can get through to most difficult students.

8. A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement.

9. When the grades of my students improve it is usually because I found more effective teaching approaches.

10. If a student masters a new math concept quickly, this might be because I knew the necessary steps in teaching that concept.

11. If parents would do more with their children, I could do more.

12. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.

13. The influences of a student's home experiences can be overcome by good teaching.

14. If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.

15. Even a teacher with good teaching abilities may not reach many students.

Appendix F

Teacher and Student Information Survey

(This information is for research purposes only.)

Gender: Male_____ Female_____

Age: (Check one.)
20-29_____
30-39_____
40-49_____
50-59_____
above 59____

Years of Teaching Experience _____

Parental Status: Do you have any children? Yes / No

Educational Background: Please indicate the highest degree you have earned. (Check one)
Bachelor's Degree_____
Master's Degree_____
Doctoral Degree_____
Additional credits beyond highest degree_____

Information about Your Class:
Grade Level _____
Number of Students _____

Program Type: Identify the type of Program in which you teach. (Check One)
Regular _____
Gifted and/or Talent _____
Special Education - Slow Learners _____
Special Education -
Emotional/Behavioral Disorders _____
Other _____

Teaching Position: Please indicate your current teaching position. (Check One)
Classroom teacher_____ Cluster position _____
Other (Please specify) _____

Appendix G

Development of the Communication Efficacy Scale

The Communication Efficacy Scale underwent several revisions. As initially proposed, the scale consisted of a series of vignettes describing problematic parent-teacher conferences. Teachers were asked to assess their confidence in using the conferences to bring about a solution to the child's school-related problem. The scale was revised to include teachers' expectations of success and their self-appraisals of communicative skills.

The revised measure was constructed with three sub-scales and a total of 39 Likert-type items. Items #13 and #14 on the Skills sub-scale were deleted because of their ambiguity and consequent effect on reliability. Internal reliability on the 37-item scale was satisfactory (alpha = .90). Internal consistency for each sub-scale was satisfactory (alpha = .80 on the Skills sub-scale; alpha = .82 on the Difficulty sub-scale; and alpha = .87 on the Success sub-scale).

The total score across the three sub-scales was expected to correlate positively with measures of construct differentiation and personal and general teach-

ing efficacy. This expectation was partially met. The correlations are reported in Table 1.

Table 1

Correlations Between Communication Efficacy, Construct Differentiation, Personal Teaching Efficacy, and General Teaching Efficacy

	Communication Efficacy Subtests and Total			
Causal Variable	Difftot	Succtot	Skilltot	Total
CD[a]	.30**	-.16	-.03	.09
PTE[b]	-.17	.25*	.32**	.26**
GTE[b]	-.07	.28**	.06	.22*

[a] N = 83; [b] n = 84

* $p \leq .05$; ** $p \leq .01$

Communication efficacy was significantly associated with general teaching efficacy and personal teaching efficacy, but it was not significantly associated with construct differentiation. However, teachers construct differentiation scores were negatively associated with their expectations of difficulty, reflecting greater awareness of the obstacles to effective

communication with parents. Teachers' appraisals of their communication skills were significantly associated with both personal and general teaching efficacy, but not with construct differentiation.

These relationships suggested that the construct of communication efficacy might be better construed as a ratio between teachers' expectations of success and their skill appraisals to their expectations of difficulty. Teachers who are aware of the difficulties involved in parent-teacher communication, but hold high expectations and believe in their skills to achieve successful outcomes are expected to mobilize their resources to work with parents and to overcome the obstacles to successful conferences.

A ratio scale was computed with reverse coding on the difficulty sub-scale. The ratio scale and the additive scale were correlated with the communication indices and the other causal variables in the path model. Table 2 shows these correlations.

Reading across the rows in Table 2, it shows that the ratio scale was significantly associated with two out of three communication indices, while the additive scale appears to have significant association with the efficacy variables, while the ratio scale does not. However, the ratio scale was associated with two of the three communication indices, but the additive scale was associated with one of the three communication indices.

Table 2

Correlations Between the Communication Efficacy Scale and Variables in the Proposed Model (n = 85)

Communication Efficacy	Causal and Outcome Variables					
	CD	PTE	GTE	EXPLAIN	PERSUADE	RD
CES	-.21#*	.30**	.18*	-.21*	.01	-.14&
RATIO CES	.26#	.12	.10	.39&*	.11&	.23&*

Note. An ampersand (&) indicates a sample size of 84; a number sign (#) indicates a sample size of 83.

* $p \leq .05$; ** $p \leq .01$.

Regression analyses found that the ratio model is a better predictor of communicative behavior. When both models and the subscales of difficulty and skills were regressed on the explanation scores, the additive model of communication efficacy accounted for about 5% of the variance in teachers' explanation scores. When the ratio measure was added to the equation, the explained variance jumped to about 16%.

In summary, the ratio model has been employed in the path analyses as a measure of teachers' communication efficacy. This decision is supported by its greater role in predicting communicative behavior and by a re-conceptualization of the construct of communication efficacy. Conceptually, communication efficacy refers to a determination to actually *do* something with

and through communication. Therefore, teachers' skill appraisals and expectations of success become meaningful and significant only in the context of what they are trying to do and achieve through conferences with parents. Teachers who report high expectations of difficulty are likely to interpret communication in more complex ways than teachers who report low expectations of difficulty. Therefore, the decision to use the ratio model is conceptually sound, as well as supported by its predictive power.

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