

**THE EFFECTS OF TRAINING IN FEEDBACK ON MANAGERS'
ATTRIBUTIONAL BIAS AND PERCEIVED EFFECTIVENESS
OF THEIR WORK GROUPS**

by

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(ABSTRACT)

Problematic situations involving managers and employees can be dysfunctional in the work setting. Resolution of these problems often requires giving feedback that is specific, empathic, and in a spirit of inquiry. This research tested the effects of a learning intervention designed to intercept attributional bias and untested inference through training in feedback. An experimental field study was conducted in a large municipal government to address manager-subordinate feedback. Pre and posttest measures were used to answer three research questions: What are the effects of training in feedback on managers' (1) perceived effectiveness of their work groups, (2) attributional bias of their Least Effective Subordinate, and (3) use of feedback skills with employees.

Sixty-five managers with work groups of 5-10 subordinates were randomly assigned to two comparison groups. A written instrument, SYMLOG--the SYstematic Multiple Level Observation of Groups was used to measure managers' perceptions of their subordinate work groups' effectiveness on three bipolar behavioral characteristics: *Dominance versus Submissiveness, Friendliness versus Unfriendliness,*

and Task Acceptance versus Non-Acceptance of Task-Orientation and Authority.

Blind ratings on five scales were used to analyze critical incidents on attribution (dispositional and situational), and feedback skills (specificity, empathy and inquiry). Structured critical incidents provided a measure of managers' bias in interactions with their Least Effective Subordinate (LES); a written dialogue provided a measure of managers' use of feedback skills.

Analysis of covariance (ANCOVA) was used for each analysis. A statistically significant difference ($p < .05$) was found for treatment managers' perceptions of their work groups' effectiveness on the Dominance and Friendliness dimensions. An increase in Dominance suggests that managers perceived that they, as well as employees, engaged in behavior that reflected a greater sense of responsibility for individual and team activity. An increase in Friendliness suggests a greater trust level and collaboration as a result of more effective feedback. Ratings of the critical incidents yielded significant differences for four of the five scales showing that treatment managers blamed subordinates less in problem situations, and increased their use of three key feedback skills with employees.

Results of this study should increase an understanding of the feedback process in manager-employee relations, especially in the team setting. A Feedback Process Analysis training model is offered. Implications for HRD programming and research in supervisory-management education and training are discussed.

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CHAPTER I

INTRODUCTION

Background of the Problem

The foundation of any organization is its human resources. Yet during transitions of organizational belt-tightening and restructuring, people are often management's lowest priority. American firms are struggling to counter charges of low productivity, poor quality, and questionable customer service (Albrecht & Zemke, 1985, Peters, 1990), while the economic crisis fuels employees' fears, insecurities, and in too many cases, loss of jobs.

To bolster employee confidence in the midst of stressful change, organizations must make a long-term commitment to training their number one asset, their human resources. Through an emphasis of interpersonal relations and team training, an immediate return may be realized in employee commitment to productivity and quality service. Managers can be trained to lead their people using methods that will contribute to positive change. Cooperative goals and teamwork can be encouraged through the use of feedback for exchanging information, and responding to each other's requests (Kouzes & Posner, 1990). Human systems interacting using feedback can track, coordinate, and maintain a flow of work throughout the system. Without this continuous two-way exchange of feedback on all levels of the organization, communication shuts down, with less than accurate and timely work as the result.

Feedback is also linked to teamwork and leadership effectiveness. Feedback is characteristic of leaders who work constructively to promote their teams' effectiveness (Hackman, 1987). Effectiveness through feedback is tied to perceived efficiency, high work morale, and good working relationships of team members (Weisbord, 1985). Feedback and openness influence the cognitive activities of decision making, problem solving, and information transmission (Argyris, 1964) that connect team issues with results.

In developing work groups through feedback, a manager's job extends beyond evaluating individuals to coaching and leading members of a team (Deming, 1986). Through emphasizing quality and continuous learning in feedback groups, Japanese firms were "the first wave in building learning organizations" (Senge, 1990b, p. 8). Consequently, to compete economically, it is imperative that Americans, too, build learning systems at each level of the organization (Drucker, 1988).

Learning organizations begin with group members interacting (e.g., dialoguing), because teams, not individuals, are the basic operational learning unit in many organizations (Hackman, 1987; Senge, 1991). Team learning is more easily reinforced in groups where people share individual resources, motivations for learning, and common organizational goals (Knowles, 1980, 1985). Yet managers do not as a rule bring employees together to interact, reflect, problem solve, and learn through group process feedback, even though feedback to the team rather than to individuals alone is found to increase efficiency and foster group harmony (Galagan, 1990; Stull, 1988).

As greater numbers of women, seniors, minorities, and immigrants mainstream the work force, differences among employees constrain the feedback process and increase the likelihood that manager–employee misperceptions and misunderstandings will occur. Even though managers' assumptions are sometimes correct, if left untested they can contribute to causal attributional bias, or problems of imprecise, incomplete, and incorrect inference (Tversky & Kahneman, 1982). Interpersonal skills training can sometimes counter managers' nonproductive reasoning. Unfortunately, linear thinking rather than system–wide problem solving is often the result in organizations where "interventions usually focus on symptomatic fixes, not underlying causes" (Senge, 1990b, p. 15). In this instance, interactive feedback skills training may help managers learn how to avoid leaping to abstract conclusions, and how to make attributions explicit by validating their perceptual data (Argyris, 1985; Argyris & Schön, 1978).

Although managers receive a major share of the educational budget (Carnevale, & Gainer, 1989), they may be poorly trained for interacting with employees. Hundreds of management education and training programs are easily accessible (e.g., American Management Association Catalog of Seminars, 1992; ASTD Buyer's Guide & Consultant Directory, American Society for Training and Development, 1992). Typically, these programs contain interpersonal skills that also include feedback. It is presumed that effective feedback skills will improve the productivity and interpersonal relations of managers and employees, but research has not confirmed that presumption through the testing of feedback skills training.

Conceptual Framework

Organizational literature documents the valence of uniting interpersonal and task-oriented feedback and its theoretical significance to professional practice in this present research (Bales, Cohen, & Williamson, 1979; Jablin, Putnam, Roberts & Porter, 1987; Lewin, 1947; Nadler, 1977; Polley, Hare & Stone, 1988). Additionally, adult education literature advocates training that seeks to link structured classroom activities with informal and incidental learning opportunities in the workplace (Marsick & Watkins, 1990; Wiswell, 1987, 1990).

In earlier workplace studies, Hackman and Lawler (1971) reported that employees relied on performance feedback to experience greater job satisfaction. In fact, Hackman and Oldham's (1975) Job Diagnostic Survey (JDS) of 6000 workers confirmed that feedback boosted employee motivation and productivity, as it lowered absenteeism and turnover. This was a landmark study, not for its numbers alone, but because it signaled to organizations that lack of feedback to employees was a key problem of workplace learning and productivity.

Using the JDS as their guide, Couger and Zawacki (1980) studied the high-tech industry and found three conditions threatened employee motivation and effectiveness. Managers lacked concern about others' attitudes and goals; managers lacked frequent, substantive exchanges with employees; and managers lacked feedback role models from whom they could learn. "These data indicate the absence of a role model on feedback from the top of the management hierarchy, on down" (p. 62).

Concerned about the lack of data-based feedback in organizations, Nadler (1977) advocated the creation of continuing feedback loops through participative human processes. In feedback loops, manager peer-teams can be instructed by internal trainers on the tools, concepts, and multiple sources of feedback without excessive dependence on outside consultants. In feedback loops, managers and work groups can identify and solve problems; and, cross-functional work groups can be generated for projects in the organization system-wide. Yet Nadler cautioned that much of the focus has concentrated on developing technology without comparable training of its human resources in how to use these data for solving problems.

To use these data one must comprehend an important distinction between process and outcome feedback (Johnson, 1982). In Johnson's study, the formative nature of process feedback provided information that nursing subjects attending geriatric patients in a state mental institution could learn to use. These subjects used process feedback for improving a task before completion. Outcome feedback was not as useful because it usually summarized performance, evaluated a task only after completion, and lacked the error-correcting/learning component of process feedback. In this present study the primary emphasis is on learning how to use process feedback for productive change before task completion.

There were other studies that defined the operational concept of feedback upon which this current study builds. One basic construct is that feedback is a determiner of individual and group behavior (Ilgen, Fisher, & Taylor, 1979; Nadler, 1979).

Another is that feedback is a tool for learning, reflection (Argyris & Schön, 1978), and collaboration for purposes of research (Schön, 1991). In addition, there were numerous studies that verified how feedback, in manner and content, afforded people social cues through confirming or disconfirming data about themselves or events (Goffman, 1955, 1959, Lewin, 1947; Schein & Bennis, 1965).

Several studies also reported that through feedback, positive energy is created and where motivation exists (Locke, Cartledge, & Koeppl, 1968; Nadler, 1977), employees are directed toward desired goals (Ilgen et al., 1979). Still other studies demonstrated that with feedback work efficiency increases; moreover, without feedback there would be no improvement in accuracy or in the discrimination to change task production (Anderson, 1983). Still other researchers, Gioia and Sims (1986), confirmed the value of two-way feedback exchanges. They found that managers probed for the cause of failure by asking threatening attribution-seeking "why?" questions of their poor performers. Yet managers asked open-ended "what-do-you-think?" questions of their good performers instead. It was noted that after face-to-face feedback interactions, these same managers blamed their poor performers less for failure and credited their adequately performing employees more for success.

Statement of the Problem

Research has affirmed the robust relationships between employee motivation, job performance, and feedback from managers (Jablin, 1979, 1985; Locke et al., 1968; Locke et al., 1981; Nadler, 1977, 1979). A number of studies connected the lack of

managers' feedback to employee dissatisfaction and performance problems (Couger & Zawacki, 1980; Hackman, 1983; Hackman & Oldham, 1976, 1980).

Among the studies that reported workplace problems important to this research, several studies found that managers resist giving negative feedback to employees (Fisher, 1979; Ilgen & Knowlton, 1980). A second finding was that superiors tend to blame ineffective employees using causal attributions internal (i.e., dispositional) rather than external (i.e., situational) to their subordinates (Green & Mitchell, 1979; Mitchell & Wood, 1980).

A third problem was that managers' attributions persevere long after employee behaviors change. In fact, perseverance biases can be so robust that they remain long after false evidence or no evidence is discovered to support managers' assumptions (Fiske & Taylor, 1984; Lord & Foti, 1986; Ross, Lepper, & Hubbard, 1975). A fourth was the difficulty managers have reflecting on their assumptions, sharing their thoughts, and asking others what they are thinking (Senge, 1990a). Resolution of these problems is crucial for workplace communication to improve and continuous learning to take place.

One strategy for dealing with these problems is training managers in feedback skills using group process methods. These skills and methods can be applied in work groups instead of with individuals alone. In this way, managers can develop shared understanding among team members (Senge, 1990a); through feedback involving the team, leaders can guide the growth and well-being of its members (Hackman, 1987).

Another strategy may include applying feedback skills for verifying and changing managers' causal analyses of their least effective employees (Fiedler, 1967). These leaders can draw on personal models of perceived team effectiveness, deliberated on during training, for assessing problems and taking action (Hackman & Walton, 1986).

An investigation of the research literature revealed a plethora of manager-subordinate studies in feedback, particularly in performance evaluation. These studies have typically been done in laboratory settings (Jablin & Sussman, 1983; Nadler, 1979) and add to the theoretical knowledge base. Predominantly, past research has focused on biases which define persons as information processors, rather than seeking ways to modify these biases to increase social effectiveness (Hamilton, 1979).

What appears to lack investigation is the effect of feedback skills training methods on managers' perceptual-judgments and subsequent practices with their employees. What is unique about this proposed intervention is the emphasis on group process feedback for transporting skills from workshop to workplace to increase learning and solve problems.

Transferring these feedback skills and group process methods, managers may perceive their work groups as supportive feedback loops, seeking change through improved communication. Managers may use group process methods, seeking change through improved teamwork. Although research validates the significance of group process feedback, previous studies have not employed group process methods for transporting feedback skills to the workplace. Therefore, the problem to be addressed

in this study was: What are the consequences of feedback skills training and group process methods on managers' attributional bias and perceived effectiveness of their work groups? It is proposed that feedback skills training methods--if practiced and applied--should improve managers' interactions, and intercept their labeling of employees without conscious monitoring (Feldman, 1981).

Purpose of the Study

The purpose of this study was to develop and test feedback skills instruction and an interactive team process that managers can use in peer-teams and subordinate work groups. Managers' feedback to ineffective team players is necessary to develop team cohesiveness because the team is only as strong as its weakest link. However, even though individuals are important, the focus in this study was primarily on team management--managers giving and receiving feedback in a team setting. A second intention was to learn what happens when managers apply these skills and methods in the workplace. Ultimately, the challenge that theory and research brings to each new study is to translate this knowledge into organizational practices that make patterns of social behavior more effective (Hamilton, 1979).

Research Questions

Three major questions guided this study. What are the effects of training in feedback on managers' (a) perceived effectiveness of their work groups, (b) attributional bias of their Least Effective Subordinate, and (c) use of three key skills of feedback (i.e., specificity, empathy, and inquiry) with employees?

Significance of the Study

The results of this study provide practitioners and managers a tested rationale for supporting interpersonal skills training, and a group process intervention that can be transported to other settings in subordinate and management teams. Group process methods may improve relations among managers and workers because feedback in teams fosters group harmony (Singer, 1987; Stull, 1988).

Attribution theory (Heider, 1958) may serve as an important link between cognition and action. Mindful, rather than mindless, attributions may be reinforced through feedback. Using feedback in manager peer-teams can lead to desirable outcomes for dealing with bias through sharing their blaming attributions (i.e., internal and external) of employees. From this intervention, managers should find the skills and methods transferable for setting up task/interpersonal support groups (e.g., superior-subordinate work groups, and cross-functional peer-teams) system-wide.

In work groups which serve as professional development support groups (Chalofsky, 1992), feedback skills and team process methods can serve to develop employee effectiveness—for example, through cross-training—from the manager's perspective. The goals of this intervention for those who experienced the training were twofold. First, participants were to learn to use group process feedback for building supervisor-subordinate support groups. These teams would then advance task and interpersonal workplace learning in the organization by maintaining open communication from the systems to the work group levels.

Second, participants were to learn how to perceive themselves and others more accurately. Using critical reflective, transformative learning (Brookfield, 1987; Mezirow, 1981, 1990) in peer-teams, managers may learn to use feedback to reduce dysfunctional bias in service of positive intrapersonal change.

The practical findings of this research should benefit educators and human resource practitioners in the field. Results of this study should also contribute to the body of knowledge of superior-subordinate studies of attributional bias, feedback, and organizational communication research.

If managers' attributional bias is reduced through feedback, then manager-employee relations may be enhanced through feedback skills training methods. If on the other hand the reverse is true, the researcher is at least compensated with new insights and useful learning (Bales et al., 1979).

Definition of Terms

These terms are defined as they are used in this study:

1. **Action Learning** – team problem solving using critical reflection, analytical inquiry, and group process feedback; also described in Stage 2 of the Feedback Process Analysis training model designed for this study.
2. **Attribution** – perceptual-causal analyses of people that play an important role in determining the perceiver's reactions to the observed actor's behaviors.
3. **Attributional Bias** – vivid, strongly held impressions slow to change; untested conclusions or perceptual-judgments can be classified as attributional biases.

4. ***Attributional Bias of 'Perceived Control'*** – actor–observer differences in perceived causality research where actors usually attribute their actions to situational factors, while observers attribute the actions of others to dispositional factors.

5. ***Critical Incidents*** – workplace events written by managers to describe problematic interactions with their Least Effective Subordinate (LES).

6. ***Cross–Functional Work Groups*** – inter–divisional task teams or project groups of system–wide significance to the organization.

7. ***Feedback*** – interactive process; information given to and sought by people in organizations that helps them in decision–making, following directions, correcting errors, and confirming beliefs about themselves and others. The designated three key skills of feedback in this present study are specificity, empathy, and inquiry.

8. ***Feedback Process Analysis (FPA)*** – training model that describes the intervention; also refers to a critical reflection/analysis process used by teams.

9. ***Feedback Skills Training Methods*** – key feedback skills combined with group process methods applied in team meetings (e.g., questioning, discussing, analyzing, and problem solving); also use of the Feedback Process Analysis training model (FPA), Feedback Process Analysis, and Feedback Process Analysis Forms.

10. ***Group Effectiveness*** – cooperative, democratic participation of persons working together to accomplish shared organizational visions, goals, and objectives.

11. ***Manager*** – employee who supervises a work group of five to ten directly reporting subordinates in a multilevel organization.

12. **Managerial Effectiveness** – leadership fostering openness, honesty, trust, cooperation, and collaborative learning through interactive feedback of team members.

13. **Process Feedback** – information given to employees before task completion to help them detect/correct errors, and use data sources to perform their tasks; versus outcome feedback used for summarizing/evaluating after task completion.

14. **Schemas or Schematas** – abstract expectations about how the world operates based on people's personal experiences.

15. **SYMLOG** – **S**Ystematic **M**ultiple **L**evel **O**bservation of **G**roups; a theory of personality and group dynamics with a set of practical methods for measuring values.

16. **Team Management Effectiveness Training (TMET)** – Feedback skills and group process methods training program designed for this study.

Assumptions of the Study

These assumptions facilitate starting points for this research:

1. Causal attributions play a central role in human behavior; individuals perceive and seek feedback information to assign causes for the behavior of others.
2. Inferences most people make in everyday life rely on models or schemas which are imprecise, incomplete and sometimes incorrect.
3. Inferences and judgments people make are based on how they conceptualize the world, and the meaning she or he gives to information in their feedback to others.
4. Misunderstandings and conflicts stem from differing cultural orientations, life experiences, and perceptual–judgments of the same event.

Delimitations of the Study

Because this study is conducted in a local county government of 68 agencies, the participant-managers are heterogeneous in composition. They differ in age, gender, race, duties performed, supervisory experience, and educational background. These managers were selected through recommendation and volunteerism on the basis of one special criterion--that each manager supervised work groups of 5 to 10 directly reporting subordinates at the time of selection and random assignment to the comparison groups. The intervention spans four consecutive weeks with a full-day session each week, totaling 23 hours of training. Finally, this study is based on perceptions and self-reports of 65 supervising managers who share a common bond of employment in local government agencies.

Limitations of the Study

There are four important limitations to consider when reviewing the findings of this research. First, generalizability is the principle limitation of this study. The representativeness of the population may have been affected by the selective criterion of interest (i.e., work group size) which prohibited purely random selection. Second, participants were recruited predominantly through nomination by their managers, and the remainder volunteered with the approval of agency directors.

Third, the length of treatment extended over a period of four weeks which may have limited the magnitude of treatment effect. Yet it is not unreasonable to expect participants to grasp the feedback skills training methods during this period of time, *if* they diligently apply themselves and the skills in class and in the work environment.

Fourth, the data from this study is based on managers' perceptions and, in part, self-assessments; although, self-reports are believed to be the best data source for studying social behavior interactions (Argyris, Putnam, & Smith, 1985; Bales, 1950; Harré and Secord, 1972). However, even though other measures are used for verifying managers' perceptions of their employees, the reader is cautioned to examine the reliability and validity of instruments employed in this study.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Introduction

This chapter reviews the theoretical literature related to managers' perceptions and causal attributions of their employees, with feedback serving as a potential mediator in problem workplace situations. These studies focus on managers' bias and inference that affect individual and team effectiveness. Thus, the scope of this review is limited to superior–subordinate relations, task and interpersonal feedback, and attribution research in organizational settings.

This review is organized in three parts. The first part examines the roles of feedback in the literature: feedback as a tool for learning, three key skills of feedback, employee motivation, process feedback, and team effectiveness. The second part examines the literature on attributions and work relations. While the final section describes the four–stage Feedback Process Analysis (FPA) training model that emerged from theoretical concepts in the literature reviewed.

Roles of Feedback

The literature revealed a diversity of elements classified under the rubric of feedback. Feedback schemas (i.e., abstract ideas) emerged from the research in several categories. Lehmenkuehler, Roscher, and Theis, in international small group research, outlined their schema of roles as: (a) feedback giver, (b) feedback receiver, and, (c) interactions between dyads or groups (Schneider & Becker-Beck, 1988).

A second classification of feedback types were defined by Ford (1980) as: (a) individual versus group, (b) private versus public, (c) personal versus mechanical, (d) immediate versus delayed, and (e) schedules of feedback (e.g., frequency or time frame). In contrast, the feedback classification proposed by Cusella (1987) appeared more inclusive than those differentiating solely between types of feedback in organizations (e.g., Ford, 1980; Nadler, 1979). Cusella outlined five feedback categories of (a) purposes or goals, (b) types, (c) dimensions, (d) sources, (e) functions or outcomes.

Using Cusella's framework, the purpose of this review of the relevant theoretical literature is threefold. The first is to examine studies that suggest purposes or goals of feedback which enhance manager-employee relations. The second is to investigate types and sources of feedback--individual and group, superior and subordinate--that contribute to this research. The third purpose is to uncover functions or outcomes of feedback in the literature to confirm managers' need of feedback skills training and methods for transporting these skills to the workplace.

Feedback as a Tool for Learning

From a historical perspective, feedback as a concept and metaphor can be traced to the mechanical systems approach of cybernetic theory (Wiener, 1948). Next, Kurt Lewin (1947) coined the term *feedback* for performance improvement in social learning. According to Schein and Bennis (1965), feedback was also used for determining how far an individual's progress deviated from a desired goal.

Feedback fueled Lewin's action research, the National Training Laboratory (NTL) workshops, and Bales' small group research at Harvard University. In feedback sessions, facilitators solicited the perception, evaluation, and participation of all its members. Feedback-givers and feedback-receivers in these sessions engaged in an interactive dialogic format.

In small group research, feedback served as an analytical stimulus for interactive discussion among group members based on their observations and evaluations of the team (Bales et al., 1979). However, it became increasingly clear that for lasting change to occur, underlying values and not action skill levels alone had to be involved (Putnam, 1990).

Feedback as a tool for learning swept the country in t-groups, sensitivity training, and encounter groups; this activity was described as a social movement for educating adults (Back, 1972). Lewin's group dynamics, a training innovation in the re-education of adults, focused on questions regarding perception and learning about oneself and others in the group (Benne, Bradford, & Lippitt, 1964).

One question addressed was--What do individuals perceive and learn in the interactive leader-group experience? Another question examined was--What factors in the leader affect group interaction in the work setting, facilitating learning and effective performance for some and difficulties for others?

One of the important legacies of this movement was its experimentation in behavior with feedback. The NTL premise was--feedback leads to change that is transferable from workshop to workplace. However, this did not happen because NTL did not provide methods for transferring these new values and behaviors from classroom to organizational environment.

Robert Freed Bales (1950, 1970, 1985)--whose work involved feedback in small group research for more than forty-five years--created with colleagues at Harvard University, SYMLOG, the Systematic Multiple Level Observation of Groups, as a new social field theory and method for measuring observations and interactions of members in groups (Bales et al., 1979).

Bales (1988) summarized the current uses of SYMLOG as it relates to team effectiveness in organizations. Hare (1988) provided an annotated bibliography of SYMLOG research as of Spring, 1986; among these entries, it is noted that the development of SYMLOG norms judged to foster teamwork effectiveness were first introduced in Bales (1970), "distilled from the correlations in the large factor study of Couch and Bales (1969) on which the book is based" (p. 353).

The importance of the feedback process which undergirds SYMLOG theory in the group process is described in Bales et al. (1979, p. 13) as the "getting back and forth from a view of each individual separately to a view of the inclusive group." The SYMLOG literature documented that those involved in a feedback message *sending-receiving-sending* cyclical process were totally committed. They were committed verbally and nonverbally to transmitting messages that made the feedback process clear. Yet in the literature taken as a whole, although feedback is readily described through the behaviors of interactants—it is rarely defined. This may be the case because experts in communication theory (Burgoon, 1982; Knapp & Miller, 1985) have yet to agree on a definitive conceptualization of feedback.

Even in the absence of a definition upon which everyone agrees, a great number of experts have agreed on several factors. One factor is that feedback involves nonverbals of people to a greater extent than verbals—some experts say up to 85%. Second, the feedback process most often described in the literature is an ongoing cyclical process between sender and receiver.

Among those who disagree, Dansereau and Markham (1987) apparently viewed feedback as a mechanistic message-response operation. Analyzing multi-levels of superior-subordinate communication, the authors argued "in feedback the message is not about the sender but about the potential receiver"...."feedback may be defined differently depending on whether the supervision, leadership, exchange, and/or personal modes are of interest" (p. 380).

There are recognizable and agreed upon differences in the applied feedback modes. However, even then it may be almost generic to the feedback process that the message is as much about the sender as it is about the potential receiver. In this sense, people rely on both nonverbal and verbal feedback of the sender to learn how to decipher the message. Often the message is more accurately delivered by the sender's nonverbals (e.g., volume, tone, body language, eye contact, and facial movements) than by words verbalized in the message.

Feedback as a tool for learning was explored further in action learning studies that distinguish between behavioral practices and changes in values. In the workplace, individuals bring their bias (i.e., underlying values and theories of action) based on early socialization (Argyris, 1982) to bear on how they interpret problems and seek solutions in the learning situation. Untested, incorrect learning reinforced through misinterpreting others' behaviors can be erroneously *belief strengthening* (Wiswell, 1990) and sustain problematic workplace relationships.

In the team setting, work group behaviors are guided by norms based on organizational theories of actions and underlying values. Changes that stop at the action skill level are categorized as single-loop learning (Argyris & Schön, 1978); this is where errors are uncovered and automatically corrected without question. In contrast, feedback becomes a tool for learning when inquiry and two-way exchanges provide an error-detecting and correcting mechanism for double-loop learning to occur.

Skills practiced in training that lead to learning without affecting insights or underlying values (i.e., single-loop learning) may not last. Perhaps this is so because an individual's conduct is guided by a system of values, norms, and standards, so that "piecemeal changes in discrete techniques have limited impact" (Putnam, 1990, pp. 283–284). In contrast, skills mastery requires an accompanying shift from old to new values and practices. Thus, feedback as a tool for learning is successful when it affects both underlying values and action skills that increase the likelihood that transfer of training to the work setting will take place

Three Key Skills of Feedback

Feedback is defined as information given to and sought by people in organizations to help them make decisions, follow directions, detect and correct errors, use data, and confirm their beliefs about themselves, their work, and others in the social setting (Argyris, 1964; Bales, 1950; Bales et al., 1979; Hackman & Lawler, 1971; Lewin, 1947; Nadler, 1977; Schein & Bennis, 1965; Torbert, 1972).

The content, application, and manner in which feedback is given are critical issues in the workplace. Thus, an effort is made to account for nonverbal and verbal effects of feedback through three key skills of specificity, empathy, and inquiry. In the workplace, these skills structure employees' interpersonal and task behaviors and are essential for continuous workplace learning. Task behaviors are tied to the specifics of fulfilling job skills requirements. Interpersonal behaviors are those necessary for role learning, influencing, and supporting others in leadership functions.

Specificity. In the feedback literature, researchers have described the optimal conditions of feedback. Nadler (1979) emphasized that the less specific the feedback, the weaker the impact. Ilgen et al. (1979) examined specific feedback for preventing supervisors from giving inflated evaluations, and, in turn, poor performers from holding inflated views of their own performance.

Ilgen et al. (1979) emphasized that feedback sources should be perceived as credible by recipients. Credible sources were those who had knowledge, judgment, task familiarity, and the ability to give specific feedback. Next, the person giving the feedback should be perceived as trustworthy, and should give feedback in a timely manner so the immediacy factor is supportive of change.

In a later study, Ilgen and Knowlton (1980) investigated negative conditions where feedback lacking specificity was often misperceived, misunderstood, and generally not accepted. Military Academy supervisors of three-person work groups deliberately distorted negative feedback to make it sound more positive when they attributed dispositional-internal factors (e.g., low ability) to poor performers.

In their study, Ilgen and Knowlton (1980) asserted that supervisors altered their feedback specificity and delivered inflated performance attributions; their intention was to boost morale and motivate ineffective subordinates. Unfortunately, the outcome was feedback receivers' misperceptions and inflated self-perceptions (Ilgen et al., 1979). As a result, it was suggested strongly that feedback be specifically defined and accurately conveyed to employees for corrective change to occur.

Torbert (1972) defined feedback as first-hand, descriptive, authentic, and nonevaluative. For Torbert, specific feedback and openness were crucial for separating inference from fact based on how one perceives and interprets the world. Other important implications of past research suggest that feedback is often too soft, bland and general for guiding subordinates' actions (Nadler, 1979; Torbert, 1972; Wood & Mitchell, 1981). In comparison, specific feedback given to employees tends to leave "less room for distortion and may be harder to deny" (Ilgen et al., 1979, p. 367; Ilgen & Knowlton, 1980).

Empathy. Authentic superior-subordinate perceptions of employee performance were described in a study (Smircich & Chesser, 1981) that observed the manner in which feedback was given. These researchers investigated whether understanding or misunderstanding in workplace relations could be moderated. The subjects were subordinates and superiors in two organizations who rated each other. The superiors rated their employees' performance, and the subordinates rated the way they thought their superiors would rate them.

Authenticity in superior-subordinate relations (Smircich & Chesser, 1981) was operationalized in terms that promoted mutual perspectives. Authentic relationships were characterized by openness, empathy, and supportiveness in which individuals did not perceive one another as either objects or stereotypes. In authentic relationships, managers and subordinates listened, displayed supportive caring and trust in which neither group needed to dominate, evaluate, or withdraw.

Smircich and Chesser (1981) found that empathy can be illusive and difficult to emulate; in fact, subordinates in their study indicated they did not understand their superiors' perspective. Furthermore, there appeared to be a clear misunderstanding of perception of performance and relationship expectancies between employees and their managers.

In other studies, the lack of giving and receiving nonevaluative feedback has been a concern; these studies emphasize the affirming function of nonevaluative empathic feedback, actively listened to and shared (Gibb, 1961; Hersey & Blanchard, 1972; Hunsaker & Alessandra, 1980; Jablin, 1978). Expressing compassion through nonverbal behavior--taking the time and having the patience to let others feel heard and cared about--has opened the door through empathic feedback that bonds people in a social setting together.

Empathy, not sympathy, signals constructive workplace understanding through such expressions as "I understand what you are saying" or "I can relate to what's happening." For training the work force in customer contact, Zemke (1989) called empathic expressions of compassion "the mother lode of all service gold" (p. 24).

Inquiry. Numerous researchers suggested that managers can open communication channels, confirm data, and affirm relationships by actively using inquiry. Ashford and Cummings (1983) viewed inquiry as a feedback strategy that gave employees an accurate view of their performance. These researchers described employees as active feedback monitors and processors in the work environment.

Inquiry also plays an exceedingly important role where feedback is actively sought in support of goals individuals hold and organizations determine. An inquiry strategy used in one study (Ashford & Cummings, 1983) involved asking a given source how "X's" behavior was perceived and interpreted. However, because of risks associated with inquiry, there existed a greater instance of monitoring (i.e., observing) rather than inquiring behaviors in organizations. Particularly, this is the case in negative workplace environments where managers may infer that inquiry on the part of employees must mean they are weak or insecure in their work.

Even when inquiry leads to information, this does not mean feedback will automatically be accepted. Importantly, to be accepted by employees, feedback may have to be perceived as an incremental increase in learning about something they did not already know (Ilgen et al., 1979). Alternatively, when uncertainty in goal attainment or inconsistency in information blocks performance, feedback can be invaluable. Then feedback can serve as an important resource in reducing uncertainty of employees and managers intent on attaining organizational goals (Ashford & Cummings, 1983).

Moreover, challenging others' ideas in the give and take of feedback causes cognitive dissonance if the ideas are inconsistent with one's own (Festinger, 1957). When inquiry and feedback lead to new perceptions that conflict with old learning, then "new information becomes a force for changing perceptions and actions" (French & Bell, 1984, pp. 184–185). Combining critical thinking skills in workplace learning

(Brookfield, 1987, Schön, 1983) with feedback, provides new interpretations that in the process "making meaning becomes learning" (Mezirow, 1990, p. 1). Additionally, inquiry, feedback and reflection connect error detection "to strategies and assumptions for effective performance. . . .to the very norms which define effective performance" (Argyris & Schön, 1978, p. 22). Without inquiry, single-loop learning is the result based on inferences which can be ineffective and self-defeating. In contrast, double-loop learning can bring openness, honesty, and trust to manager-employee relationships.

In other studies mediating defensiveness, open-ended inquiry was examined by Gibb (1961) who confirmed the strong tie between good leaders and communication. When managers' neglected employees perceived a closed-door policy, their hopeful expectations changed to defensiveness. In negative work environments, employees reacted defensively to managers' nonverbals (e.g., acts, tone, and words). To combat this negativity, Gibb suggested using open-ended inquiry instead of threatening "why?" questions, to avoid placing subordinates on the defensive. For example, the supervisor could say, "What is the status of your report?" instead of "Why isn't your report ready?" or "Are you late again?" Gibb argued that defensive climates were evaluation-focused; supportive climates were analysis-focused, seeking error and improvement. Supportiveness was characterized by managers' ability to listen to others' opinions. Managers were supportive when they encouraged inquiry and invited commitment by asking not telling employees what to do (Latham & Saari, 1979).

Wiswell (1987, 1990) suggested that inquiry, properly used, could open up significant and untapped informal channels for learning in organizations. He proposed that practitioners help managers improve informal workplace learning through using inquiry and reflection. Wiswell recommended taking two critical steps—to stop and think—before taking action; in this manner, error may be reduced through the testing of inferences and assumptions.

Employee Motivation

Schein and Bennis (1965) described feedback as being generated from publicly observed and experienced data, closely contiguous in time and space, and validated by as many data sources as are available at the time. They established that feedback affords people cues by confirming or disconfirming data about themselves or events. These cues serve as motivators in the social setting.

Nadler (1979) also explored the motivational and cueing effects of feedback in group-level and individual feedback situations, and helped conceptualize and define feedback in the organization. In his survey of the experimental feedback research, Nadler outlined six major effects of feedback on task behavior. Nadler argued that choosing to use group-level or individual feedback depended on "the desired impact of the feedback, nature of the group task, and characteristics of group members" (p. 325). Nadler separated feedback process effects with cueing from the motivational functions of task feedback. Apparently, feedback leads to "changes in member motivation. . . . and changes in patterns of group interaction or structure" (p. 331).

In addition, Locke et al. (1968) documented that feedback affects behavior through its motivating, directing function. When feedback creates energy and where motivation exists (Nadler, 1977, Wiener, 1948), employees are directed toward desired goals and respond more willingly to those who control the outcomes of feedback (Ilgen et al., 1979). Therefore, at the systems and work group levels in organizations, feedback works as an error–correction model.

Further study led Locke et al. (1981) to refute an earlier position that goals mediate the effects of feedback on performance (Locke et al., 1968). Instead, Locke (1981) and his colleagues found that in 90% of both laboratory and field studies reviewed, specific feedback and challenging tasks motivated recipients to achieve higher goals. In the majority of survey studies reviewed (1969–1980), goals and feedback were seen as reciprocally dependent and vital for motivating performance.

Nadler's work (1977) was one of the studies reviewed in which goals and feedback were discussed as equally important in terms of employee performance. In his study, Nadler identified three driving factors of the motivating feedback function: (a) *Disconfirmation* is information inconsistent with one's perceptions; (b) *Extrinsic–Reward Expectancies* is expectations that feedback will lead to the attainment of other valued rewards (e.g., from managers, co–workers, and the organization); and, (c) *Internal–Reward Expectancies* is expectations that behavior will lead to feedback generating positive feelings in the individual or group, and providing standards against which goals can be set (pp. 71–79).

Next, Nadler (1977) identified two driving factors, cueing and learning, of the directing feedback function. Cueing refers to errors correctable through routines of feedback behavior; Learning calls attention to errors where correction behavior has yet to be and must be discovered. Nadler also described how feedback influences behavior:

The feedback process creates the expectation that behavior will lead to feedback and feedback will lead to reward....[Therefore] feedback becomes instrumental for the attainment of desired outcomes. (p. 74)

In a landmark study in 1975, the Hackman and Oldham Job Diagnostic Survey (JDS) confirmed the link between feedback (i.e., knowledge of results through work activities) to employee motivation and job satisfaction. However, following a series of studies, Hackman (1983) reversed the original feedback concept of the JDS model which he explained in the following statement:

The concept of feedback in the model is flawed. Job incumbents, supervisors, and outside observers frequently disagree about how much feedback a given job actually provides. Moreover, the model does not address feedback from nonjob sources (such as supervisors or co-workers) that also affect one's knowledge of the results of the work. How a person reacts to feedback from the job itself may be altered by data about performance that come from nonjob sources such as these. (p. 246)

Feedback and motivation in Couger and Zawacki's (1980) study replicated the Hackman–Oldham Job Diagnostic Survey with modifications on the feedback dimension. They found lack of feedback had pervaded the high–tech industry, with first–line supervising managers seriously threatening employee effectiveness and satisfaction on the job.

One problem was that managers lacked introspection about their own and others' attitudes and goals. Another was that managers failed to give frequent, quality feedback even though both groups perceived the need for improvement in feedback. Next, managers complained that there were no role models in the system for them to follow. Moreover, both superiors and subordinates agreed that the unique nature of programming and the type of people attracted to the field may actually perpetuate barriers to using feedback. Some of these barriers—infrequent or poor quality feedback (e.g, nonspecific or mechanical) and a delay or decrease in feedback—have negatively impacted employee performance (Couger & Zawacki, 1980; Fisher, 1979; Hackman, 1983; Hackman & Oldham, 1976, 1980; Ilgen et al., 1979).

Yet a substantial number of research studies have agreed on the credibility and motivational effect of manager–to–employee feedback. One exception was Greller's (1980) research that found subordinates did not agree that supervisory feedback was most valuable. In Greller's study, superiors and subordinates in a public service organization were surveyed in an attempt to measure how well the feedback system served its employees.

Six feedback sources were considered. Greller (1980) documented that managers underestimated the importance of (a) feedback from the task, (b) comparisons to the work of others, and, (c) co-workers' comments. These same managers overestimated the importance of (d) formal rewards, (e) informal job assignments, and, (f) comments from the boss. This study differed from the major share of feedback studies reviewed that substantiated the perceived value of feedback from managers to employees (Jablin, 1979, 1985; Nadler, 1979).

Greller (1980) also reported that subordinates rated highest those feedback sources over which they had control (i.e., the task itself and comparisons to the work of others). Although these employees did not rate supervisory feedback as worthless, they apparently regarded least those feedback activities in which they had little control and participation. Reportedly, Greller's employees rejected their managers' apparent one-way performance feedback messages as failing to provide feedback of value; furthermore, they felt uninformed even when their managers related having held a meaningful performance evaluation.

Negative feedback is yet another example of poor quality leader response that directly affects team motivation. In the workplace, there is always the possibility of negative responses (e.g., ignored or misinterpreted) to feedback; sometimes negative responses are based on people's differing backgrounds and beliefs (Hall, 1959; Schein, 1988; Triandis, 1964). Still other studies characterized supervisors who resisted giving negative feedback even when it was appropriate, and who distorted the negatives by

inflating the positives (Fisher, 1979; Ilgen & Knowlton, 1980) in an attempt to motivate poor performers. In contrast, there were other studies which demonstrated that negative feedback from effective leaders did not have to result in negative outcomes.

For example, Hansford and Diehl (1988) reported that self-confidence increased and anxiety decreased with positive feedback to discussion group participants. Interestingly, these same factors of increased self-confidence and decreased anxiety were even more pronounced when these subjects received negative feedback. It was implied that these subjects may have been stimulated by the uncertainty of how they would be rewarded, and uncertainty may have stimulated a positive flow of ideas generated in their small group discussions. Disconfirmation of group members' ideas may have initiated motivating-drivers and extrinsic-reward expectancies (Nadler, 1977, pp. 72-74) strengthening their beliefs (Wiswell, 1990) that generating new ideas might lead to positive reinforcement.

In an earlier survey of t-group literature, Stock (1964) examined negative feedback and referenced the work of Gibb. Gibb and colleagues described group members who received no feedback, and others who received both negative and positive feedback (Gibb, Smith, & Roberts, 1955). Recipients of both negative and positive feedback felt more motivated and favorable toward other members even though negative feelings were expressed. Gibb (1964) inferred that negative comments actually increased the level of openness and trust: "It is possible that this

increased freedom made the group a less frustrating experience and led to increased positive feelings" (p. 430). Even so, finding acceptable outcomes from negative feedback (e.g., improved productivity and motivation) were more the exception than rule in the performance feedback literature. Among the positive examples of negative feedback, studies reported consistently that negative feedback was most favorably received by team members when shared openly in the group (Gibb et al., 1955; Stock, 1964).

Process Feedback and Team Effectiveness

Feedback studies record little that is known about how feedback is processed or used by members in groups. Yet research has confirmed the usefulness of process feedback in groups serving task-organization and individual-psychological functions (Hare, 1988; Jablin & Sussman, 1983; Johnson, 1982; Nadler, 1979). An early model of small group interaction, the cybernetic-growth model (Mills, 1967), emphasized group and individual growth through adaptive responses to new information (i.e., professional goal-attainment/task role and interpersonal relations/group role) gained from feedback.

Another vital distinction made was the difference between process and outcome feedback defined in Johnson's (1982) study of a state mental institution's nursing staff. Process behavior was described as those actions of organizational members which lead to desired results. Johnson predicted correctly that process feedback (i.e., not outcome feedback) combined with explicit goals result in more desirable staff behavior.

Using Johnson's (1982) criteria in this present study, the following statements applied. First, process feedback improves performance through detecting and correcting errors before task completion. This implies a continuous supply of information (e.g., between managers and employees) to help people detect, correct, and learn to use data sources through trial and error for improving performance. Second, outcome feedback summarizes performance after task completion and is used primarily for evaluating performance.

Nadler (1977) used feedback to insure the flow of information, and envisioned continuing feedback loops for providing employees data-based feedback on how to use technology to solve problems. With these suggestions in mind, managers in this study will concentrate their efforts on two key points. First, managers will learn to use process feedback more effectively with subordinate work teams; second, they will learn to transfer feedback skills and methods to the workplace for improving team effectiveness. Nadler (1979, p. 322) shared other insights that contributed to this study: (1) Using feedback in different ways should influence what effects feedback will have; (2) Process feedback is more effective if it incorporates behavior models or information on how to correct errors; (3) Evaluative dimensions of feedback appear to lead to changes in patterns of group interaction or structure; (4) Focal points of future research should be the process with which groups use feedback; (5) Time needs to be spent prior to performing tasks for discussing procedural, operational, or maintenance issues that affect group process, progress, and performance effectiveness of the team.

Again, other researchers (Ashford & Cummings, 1983) emphasized process feedback giving and feedback seeking skills as an individual resource for effectiveness. Yukl (1981) also stressed the role of process feedback for improving social exchange relations between leaders and members in regularly held problem solving sessions.

Over the years, the relationship between team effectiveness and process feedback has been explored by others. For example, Hackman (1987) theorized how active membership strengthened through feedback was an important criterion of group effectiveness. His theory highlighted three criteria upon which leader and team effectiveness was based. Importantly, the first criterion insisted that the group's product or service should meet the standards of productivity (i.e., quantity and quality) of those who were receiving the product or service. The second criterion asserted that the group's interdependent process in producing the work should reinforce the team's future productivity. While the third and last criterion maintained that the experience of working together should contribute to the growth and sense of well-being of all team members.

In another study, Weisbord's (1985) team effectiveness theory linked effectiveness to perceived efficiency, high work morale, and good working relations of team members. Feedback and openness were two processes that linked team issues with results. In operation, Weisbord's theory accomplished three goals. First, team members received information they needed to do a good job. Second, team members had a chance to own up to uncertainties. Third, members were provided a forum for

constructively expressing opinions and inquiring about what they still did not know.

Anderson (1983) suggested that process feedback advanced team effectiveness in the workplace because it affected feedback givers and receivers in four major ways: (1) It gave people an equal chance to make suggestions and influence decisions; (2) Managers felt more in charge and secure; (3) Managers experienced a new level of trust that redefined their relations; (4) Work efficiency improved because feedback offered opportunities for improvement in accuracy, and in the discrimination to change task production.

Among the many studies that examined the relationship between effectiveness and process feedback in groups, Hirokawa and Pace (1983) found specific process feedback behaviors which distinguished effective from ineffective groups. It was suggested that effective groups used vigilant strategies of careful reasoning and analysis. Effective groups weighed opinions and evaluated assumptions; and they based their final decisions on a consensus of what was believed by everyone to be accurate and reasonable.

Still another study discussed group process feedback and cited Lewin's training for increasing team effectiveness and productivity (Marrow, 1967) of manufacturing plant foreman. At the session, the men listened, reflected, then applied feedback in a constructive way. Lewin said: "This result occurs because the facts become really their facts (as against other people's facts). An individual will believe facts he himself has discovered in the same way that he believes in himself" (p. 147).

Attribution and Workplace Relations

In their review of the attribution literature, Kelley and Michela (1980) defined the term attribution theory as the study of perceived causation with the emphasis on *perceived* causes of others' behaviors. After reading through the literature, however, it became apparent that attribution theory is "an amorphous collection of observations about naive causal inference. . . .[lacking] a firm grasp of interrelated deductive principles" (Jones, Kanouse, Kelley, Nisbett, Valins, & Weiner, 1987, p. x). Yet since Heider's (1944, 1958) initial contribution, progress has been made by others (e.g., Jones & Davis, 1965; Kelley, 1967) toward constructing a more comprehensible theoretical framework.

One theory important to this study generalized on divergent perceptions of actors and observers. Jones and Nisbett (1971) proposed that actors tend to attribute their own problematic behavior to situational constraints (e.g., lack of training or supervision), while observers tend to attribute problem behaviors to the actor's personal dispositional limitations (e.g., traits, characteristics, attitudes, and abilities). Research based on Jones and Nisbett's (1971) theory found that managers who make untested inferences about behaviors they perceive in workers run the risk of creating negative environments and dissatisfied employees. An impressive case has been made in the literature for problems that stem from blaming employees without supporting evidence of any fault-finding claims. For purposes of examining workplace problems in this present study, attribution research contributed in two ways: (a) through

explaining the rules managers sometimes use to infer causes of observed behavior, and (b) through examining factors that influence some managers regarding intentions and attitudes they attribute to subordinates.

A plethora of studies explored how people generally use attributions daily in their personal and business relationships. In his review of the attribution literature, Sillars (1982) found people relatively "unsystematic, nonreflective, and nonexhaustive" (p. 81) in monitoring attribution data. Instead of searching for a better explanation of their perceptions, people settled on the first plausible conclusion that came to mind (Kahneman & Tversky, 1973; Taylor & Fiske, 1978).

Although the attribution literature proposed several theories that account for managers' bias; more often, a personal schemata accounted for people's bias. In the literature, schematas or schemas are abstract expectations of how the world operates based on personal experience. Though far from logical, schematas offer people some sense of prediction and control over their lives (Fiske & Taylor, 1984). Also, schemas can be theories about social structures to explain superior–subordinate relations. Schemas in cause–effect relations reflect a person's basic notions of reality and assumptions about a stable external world (Kelley, 1971); they are "an *effect* of which people are in some manner the possible *causes*" (p. 154).

In a positive sense, bias that informs through automatic categorizing and stereotyping helps people organize their social schematas on a minute–to–minute basis. In a negative sense, inferences most people make on a daily basis "rely on

models or schemas which are imprecise, incomplete, and occasionally incorrect" (Tversky & Kahneman, 1982, p. 125). Consequently, bias that leads to conflict is often the result of differing cultural orientations, perceptions, and attributions of the same event (Brislin, Cushner, Cherrie, & Yong, 1986; Hall, 1959; Schein, 1988).

Feldman's (1981) study illustrated biased schemas and cognitive processes which led managers to negatively categorize and devalue employees who differed from them in cultural background. Feldman found these managers used a dual-process system (i.e., controlled or automatic) for categorizing: (a) controlled for decision-making, and (b) automatic for dealing with perceived employee behavior. In the latter instance, managers automatically "categorized [employees] without conscious monitoring" (p. 127). Significantly, Feldman's study characterized a substantial body of research that examined people's biased schemas, negative categorizing, and automatic stereotyping of others.

Viewed again from a more positive perspective, Hamilton (1979) suggested that automatic cognitive processes (i.e., categorizing and stereotyping) can be viewed as functional and adaptive. Furthermore, Hamilton credited manager perceivers as having seen or created evidence--using stereotypic schemas--to reduce work complexities to a more manageable means.

The following examples of bias based on stereotypic schemas are abundantly represented in attribution research literature: (a) *Perseverance Bias*, (b) *Availability-Salience Bias*, (c) *Availability Heuristic-Judgments*, and, (d) *Actor-Observer*

Differences. These examples of bias are automatically processed by individuals.

Because they form an important part of an individual's personal schema, these types of bias can greatly influence a person's relationships with others.

Perseverance Bias

This type of stereotypic bias may explain the long-lived perseverance of bias based on managers' perceptual impressions of employees. Stereotypic bias has been the subject of interest in many studies (Kelley, 1967, 1973; Ross, 1977; Ross, Lepper, & Hubbard, 1975). In one study, Ross (1975) examined the perseverance of first perception impressions of high school students in an experiment. These students were initially informed incorrectly of their success or failure in completing a task. When they were debriefed with corrected results, the students would not believe the true data. Ross argued that "personal impressions and social perceptions become relatively autonomous from the evidence that created them" (p. 880); therefore, perseverance bias persists long after no evidence or false evidence is produced and discredited.

Availability-Salience Bias

Salience bias is based on distinguishing attributes--behavior, color, unique quality, or solo status--that might make a person the center of attention. Differences in age, gender, or race could be a determiner of managers' salience bias. For example, Snyder and Cantor (1979) found when subjects used previously learned data to make attributions, they recalled salient confirming evidence from memory that agreed with opinions of others. In other research, social workplace consequences have been

studied (Taylor & Fiske, 1975; Taylor, Fiske, Etcoff, & Ruderman, 1978) that feature salient characteristics of people. One dimension studied was highly contrasting color (e.g., skin, hair, and clothes); another emphasized a solo in a group (e.g., Asian among whites, or seniors among 20–30 year olds). These studies described a distinctiveness or novelty solo status that fostered salience bias in their research.

In a series of salience bias studies employing videotape, subjects listened to and observed a small group (6 people) of varying age, gender, and race. After listening to the group discuss, subjects described their impressions. Consistently, a solo black's behavior was seen as most salient among whites, compared to a mixed black–white group where no solo stood out. Next, a female solo was recalled as most salient in an all male group; this was not the case in a mixed gender group. Findings from these studies implied: salience bias leads people to evaluative extremity (Taylor, 1982) and stereotypical–biased groupings of those persons observed (Feldman, 1981).

Availability Heuristic–Judgments

Heuristics or *rule of thumb* social judgments are used under conditions of uncertainty (Kahneman & Tversky, 1973; Tversky & Kahneman, 1974). Perceivers use the availability heuristic for constructing, retrieving, and categorizing social behaviors of those they observe. These inferences and assumptions that people sometimes make are based on their concept of the world and the personal meaning they give to information (Hogarth, 1987; Kelly, 1971). To counter the effects of untested social judgments, feedback is used as a mediator in the workplace. For

example, Hogarth's (1987) descriptive research confirmed a three-way contribution of feedback to employee performance evaluation. First, feedback supported positive change in the learning climate. Second, feedback was instrumental in helping people overcome their cognitive myopia (i.e., one-sided, inflexible beliefs and practices). Third, feedback promoted Hogarth's incremental and adaptive, performance-judging strategy; this strategy is in striking contrast to discrete performance appraisals lacking continuity which a great number of organizations still use.

Actor-Observer Differences

Perhaps the most identified bias or error in social interaction is the *fundamental attribution error* initially acknowledged by Heider (1958, p. 54; Ross, 1977). This bias referred to the tendency of attributors to underestimate situational factors beyond the observed actor's control. When applied in work settings, attribution theory is directly related to managers' interactions with employees to accomplish tasks and motivate teams. Jones and Nisbett's (1971) theory, based on Heider, was linked in research to managers' automatic or irrational bias which constricted the growth of superior-subordinate relationships.

Jones and Nisbett (1971) affirmed that actors interpreted their own behavior largely in situational terms (e.g., "I need more training to do this job"); alternatively, observers interpreted actors' behaviors by assigning personal blame (e.g., "Training will not improve this employee because she/he lacks ability to do the job"). An examination of the attribution literature confirmed the belief that managers may be

overly blaming subordinate behavior on personal causes. To test this premise, a series of studies based on Jones and Nisbett's theory investigated nursing supervisors' attributions of their poor performers in a hospital setting (Green & Mitchell, 1979; Mitchell, 1979; Mitchell & Wood, 1980; Mitchell, Green & Wood, 1981; Wood & Mitchell, 1981).

Green and Mitchell's (1979) study reported where subordinate nurses performed poorly (e.g., tardiness and low productivity), their supervisors blamed them personally regardless of the circumstances. The more internal the accusation (e.g., poor ability or little effort), the more blame was attributed to subordinates for patients' problems. Moreover, Green and Mitchell found that attributions guided employee policies chosen for managers' conveniences; supervisors made *blanket rules* to avoid interacting and working with employees on recurring problems. Conclusively, Mitchell and Wood's (1980) attributional model illustrated supervisory responses to subordinate performance failures. Whether subordinate performance was affected by external factors (e.g., task or setting), or internal factors (e.g., ability or behavior), nursing supervisors continued to blame their employees personally for workplace problems.

Summarily, several studies surmised that attribution errors would probably occur wherever supervisors made blaming analyses of their least effective employees. It was also suggested that leader bias accounted for managers' blaming employees more often than should have been the case; this was particularly so combined with supervisors' seemingly biased support of selective policies and norms (Mitchell, Green,

& Wood, 1981). Martinko and Gardner's (1987) review of attributional bias research supported findings of Mitchell (1981) on two points. First, regardless of where bias originated (i.e., manager or employee), Jones and Nisbett's (1971) actor–observer theory invariably applied. Second, when an observer showed empathy and interest in an actor's experiences, the observer's bias was reduced.

In addition, Gioia and Sims (1986) found that two–way feedback successfully moderated the perseverance effect and helped people deal with their bias. While Lord and Smith (1983) cautioned managers that personal bias may lead to employee dissatisfaction, low motivation, and problems managing conflict. As a result, managers were counseled to observe the following recommendations: (a) Reflect about how they might be categorizing people, (b) Watch for bias when interpreting social schema about others, and (c) Consciously monitor their perceptual–judgments.

Predictably in the literature reviewed, workers performed well when they felt respected and appreciated by supervisors (Martinko & Gardner, 1987). The underlying premise built on trust, openness, and honesty in manager–employee relations (Argyris, 1964, 1985; Gibb, 1961; Hunsaker & Alessandra, 1980; Ryan & Oestreich, 1991). On the other hand, negative relations in organizations were found to be self–perpetuating. Where self–serving "cause maps" instead of team efforts are nourished, discrediting attributions caused people to view a continuously gloomy cycle (Weick, 1979); if negative causal variables were seen to move in the same direction, people would assume more of something would lead to more, while less would lead to less.

In another study, Argyris (1976), described attributions managers used in feedback as abstract categories whose meanings were not testable in public and whose use inhibited group learning. Usually, these managers were unaware of their ineffective feedback; they avoided confrontations that meant discussing the "undiscussables" (e.g., negative employee behaviors or problematic work events). Here critical thinking, reflection, and analysis using inquiry and group process feedback (i.e., *action learning*) can help managers (a) surface an awareness of biased attributions, and (b) transform underlying values and beliefs that have been part of their incidental workplace learning (Marsick & Watkins, 1990). Negative though they may be, Revans (1980) encourages managers to look critically at past experience, and to disclose workplace problems for the inspection and debate of colleagues so that "first perceptions" of the past are "constantly and inexorably under review" (p. 256).

Thus, the disabling characteristics of managers are made the social chemistry of the action learning set....The joint confrontations with reality on the job and with deeply-involved colleagues in the set offer scope for the psychology of perception and of personality structure, such as to explore attitudes to authority, senses of security and armouries of defence mechanisms.

(Revans, 1980, p. 257).

Next, for purposes of expanding the parameters of managers' attributional bias, Anderson (1988) cited three common "lack-of-interest" barriers to developing bonds of trust between managers and workers. The first bias was a universality (i.e., managers think all subordinates are alike). It was suggested that this phenomenon breeds indifference among managers where lack of interest in their staff supported

inaccurate and automatic attributions. A second lack-of-interest bias employed time constraints, a barrier used to avoid personal feedback interactions. A third barrier was twofold--(a) managers assumed employees understood what they meant, and (b) managers disregarded the fact that subordinates had pressures outside the workplace.

The complexities of contemporary workplace problems--fostered through bias and barriers in a diversity of relationships--continue to escalate as greater numbers of women, seniors, minorities, and immigrants penetrate the work force. However, whether culturally diverse or not, helping new workers learn or ineffective employees improve requires a variety of educational strategies (Block, 1987; Deming, 1982; Kohn, 1986; Martin and Ross-Gordon, 1990; Mitroff, 1987; Ryan & Oestreich, 1991).

Emergent Feedback Skills Training Model

Feedback and attribution research offered descriptive models to explain the performance feedback-attribution process (Larson, 1984; Mitchell & Wood, 1980). Yet, as far as can be determined in the relevant literature, there have been no theoretical feedback skills training models, nor attempts to influence managers' causal analyses of workers through feedback skills training methods.

Purpose of the Model

While providing a conceptual framework for this study which tests managers' attributional bias and perceived effectiveness of their work groups, a feedback skills training model evolved from theory in the literature reviewed. The purpose of the Feedback Process Analysis (FPA) training model is graphically displayed and

conceptually explained by two representations in Appendix F. Desirable outcomes or goals of managers-in-training who apply this four-stage model are identified as (1) Increased employee productivity; (2) Improved superior-subordinate interpersonal relations; (3) Improved manager-teamwork effectiveness; (4) Improved feedback skills and use of group process feedback methods; (5) Critical reflective testing of inferences and assumptions with peers; (6) Improved employee motivation and satisfaction.

Effectiveness in the FPA model is defined by managers' interactions with others. Training is characterized by adult learning assumptions (Knowles, 1980), action learning concepts (Revans, 1980), and experiential activities (e.g., skill exercises, role-playing, brainstorming, skill applications, team reporting, and open group sharing). Peer-team activities support the training goals and transference of skills. These activities also support transference to the workplace of Houle's (1980) three forms of adult learning--inquiry, performance, and instruction (i.e., not inquiry and performance alone as intended). Instruction in the model takes place informally when supervisors apply feedback training with subordinates, especially in the group setting.

Finally, if these desired outcomes are to take place, then this is how the training of the FPA model should be organized. The five objectives of the model provide a rationale and process for managers to follow. Participants in this program should learn to (a) interact with poor performers, (b) interact with subordinate work groups, (c) interact in workshop peer-teams, (d) practice feedback skills and group

process methods, and, (e) transport feedback skills training methods to the workplace in the team setting during the period of training.

Unintentionally, managers' Least Effective Subordinate may resemble Fiedler's Least-preferred Coworkers (1967), a study of leader and group members' perceptions of most and least-preferred coworkers in the group. In contrast, in this present study, the effects of feedback training is tested; the goal is to improve social effectiveness in workplace relations that will impact productivity and satisfaction on the job. Central Propositions Underlying the Model

It is instructive to review the theoretical foundations from past research upon which the feedback skills training model is based:

1. *Feedback is characteristic of effective leaders* (Argyris, 1976; Bales et al., 1979; Couger & Zawacki, 1980; Deming, 1982; Hackman, 1987, 1990; Hackman & Walton, 1986; McElroy, 1982; Weisbord, 1985).

2. *Feedback influences decision making, problem solving, and information transmission* (Argyris, 1964, 1982; Brookfield, 1987; Hirokawa & Pace, 1983; Houle, 1980; Knowles, 1980; Lord, 1985; Nadler, 1977; Nadler & Nadler, 1990; Yukl, 1981).

3. *Feedback creates energy* (Bales et al., 1979; Lewin, 1947; Locke et al., 1968; Locke et al., 1981; Nadler, 1977).

4. *Feedback is a tool for learning* (Argyris & Schön, 1978; Ashford & Cummings, 1983; Festinger, 1957; Gibb, 1955; Gioia & Sims, 1986; Johnson, 1982; Knowles, 1980, 1985; Marsick & Watkins, 1990; Mezirow, 1981, 1990; Putnam, 1990;

Revans, 1980; Schön, 1983; Torbert, 1972; Wiswell, 1987, 1990).

5. *Feedback links team issues with results* (Bales et al., 1979; Hackman, 1987; Hackman & Walton, 1986; Hirokawa & Pace, 1983; Kouzes & Posner, 1990; Mezirow, 1991; Nadler, 1979; Revans, 1980; Senge, 1990, 1991).

6. *Feedback fosters harmony among all group members* (Feldman, 1981; Hare, 1990; Latham & Saari, 1979; Matsui, Kakuyama, & Onglatco, 1987; Singer, 1987; Steckler, 1990; Stull, 1988).

7. *Feedback intercepts unconscious monitoring* (Feldman, 1981; Hamilton, 1979; Hogarth, 1981; Larson, 1984; Lord & Foti, 1986; Lord & Smith, 1983; Martinko & Gardner, 1987; Mitchell & Wood, 1980; Kahneman & Tversky, 1973; Sillars, 1982; Taylor & Fiske, 1978).

Implications from the Literature Reviewed

For the most part, the majority of researchers--not being trainers themselves--presented their findings from a behavioral scientist's instead of a practitioner's perspective. Yet a paradigm shift has broadened the role of adult educator/human resource developer in the workplace (Knowles, 1985). As this current research exemplifies in its action learning component, human resource developers have moved toward reflective, transformative learning; thus, the role of trainer has been expanded to "one who enhances the learning capacity of individuals, groups, and organizations" (Marsick & Watkins, 1990, p. 237). Adult educator/trainers who are also researchers may be expected to contribute studies that are more practical in nature.

Still, a number of researchers, practitioners or not, have identified workplace problems and made some suggestions based on theoretical findings and conclusions.

Individual Learning Strategies. In one study, Lord and Foti (1986) identified the need for developing managers in more appropriate work-related schemas to combat personal bias. To do this they recommended interpersonal communication skills training to develop in managers more balanced, less biased information processing. In another study, Hogarth (1981, p. 199) identified feedback as central to information-processing systems of people. He found without feedback, information-processing systems of people are limited by memory, selective by perception, and relied on by cognitive simplification mechanisms (i.e., heuristics, or rule of thumb judgments). And in two other studies, Ilgen et al. (1981) recommended that managers explore external causes of employee behavior, and use specific data in two-way feedback exchanges (Wood & Mitchell, 1981). Individual learning strategies were implied to enhance managers' awareness of their own work-related schemas and bias.

Developing cross-cultural effectiveness was central to Hare's (1990) study of American and Chinese managers in the Southern California hospitality industry. Her research included suggestions for designing *switcher* training. Through training in switching techniques, managers can learn to adapt skills "situation-appropriate" to the culturally plural workplace. Attitudes that favored switching were: (a) positive self-image, (b) interest in people and respect for diversity, (c) valuing quality over the speed of communication, and (d) empathy.

Group Learning Strategies. Another body of research important to this present study focused on reflective, critical discourse combined with feedback in a group. Critical reflection was reported as necessary for managers to test their preconceptions and analyze their bias using feedback (Argyris, 1982; Argyris & Schön, 1978; Schön, 1983). The dialogic process of feedback exchanges in a group can stimulate new learning and transformative changes. "This form of validity testing is a learning activity designed to arrive at a most informative, thoughtful, objective, and reflective judgment" (Mezirow, 1991, p. 189; Revans, 1980).

In the international management literature, group process feedback was also valued highly. Several Japanese studies explored the team concept that dominated their organizations. Matsui et al. (1987) argued that subjects performed better if standards were based on team concepts, not individualized Western-style goals; thus, subjects developed a sense of responsibility for attaining team goals. Goal-setting and team interactions based on the group model basic to the family, community and workplace) are integral to Japanese culture and society. Matsui's subjects exerted extraordinary efforts to reach goals set by team members so as not to cause the failure of the group.

Stull (1988) also added to the knowledge of cross-cultural behavior in groups through findings that (a) foreign-born workers preferred group to individual feedback because they did not want to personally confront managers, and (b) feedback fostered group harmony in interactions transcending cultural barriers through understanding.

Training Model Learning Strategy. The FPA training model in this research capitalizes on group process feedback and the team concept for effectiveness. This model builds on Knowles' (1980) adult learning assumptions as the guiding instructional foundation for each of the four-stages in the FPA model:

1. *Planning:* the facilitator (a) attends to the physical and psychological learning climate (e.g., facility, materials, facilitation, and interactions); (b) diagnoses learners' needs; (c) provides direction/rationale (i.e., curriculum goals and purposes), and (d) negotiates a "buy-in" from learners for the training intervention.

2. *Action Learning:* the materials (a) are problem-centered to meet learners' workplace demands; (b) focus on relevant issues in learners' lives; (c) draw on experiences and resources of learners in the group; and (d) offer activities that support transference of skills and methods to the workplace.

3. *Communicating:* the learners (a) diagnose their needs; (b) practice applying skills in self-directed learning activities based on problem-centered work situations; and (c) draw on resources of peers in critical reflective interactions.

4. *Evaluating:* the learning goals focus on (a) feedback/evaluation between stages as the learner proceeds through the overlapping four-stage process; (b) new perspectives that may be achieved through peer-team exchanges; (c) rediagnosing learning in terms of goals set, expected outcomes, and unmet needs; and (d) reinforcing the notion that learning is a life-long continuing process within and outside the organization.

An important point to be made is that feedback skills training is not designed to accomplish its goals in four lock-step stages. There is a natural flow in the process that continuously advances a person through training sessions, with considerable feedback interaction overlapping the model's stages. Addressing this particular issue, Brinkerhoff (1988) suggested that process models are not strictly linear though they may follow a logical developmental sequence. "The several stages interact with one another, there is recycling among the stages, and sometimes stages are nested within one another" (p. 31).

Another primary purpose of the FPA model is associated with the detecting/correcting error component of feedback. For error detection and correction to take place, it is essential that feedback/evaluation be centrally placed in the model for revisiting at each stage as the learner progresses through the process (Nadler, 1982). Feedback/evaluation at each stage takes place within manager peer-teams, the basic learning unit in the intervention. Thus, action learning can be transforming in peer-teams where managers disclose and analyze underlying values, verify facts and justify proposals (Revans, 1980) connected to their causal attributions of LES. In this instance, critical thinking and reflection shared in the team setting are of paramount importance if intrapersonal change in managers' values is to occur. The FPA model provides instructional guidelines for identifying and solving workplace problems. The model offers a descriptive outline for feedback skills training and group process methods.

Feedback Process Analysis Training Model (FPA)

Stage I – Planning: Where are we going?

Engage the learner to explore: What are the training needs, problems, or task projects? What are the goals and objectives? Do they support manager–employee and group relations? Do they enhance employee productivity, motivation, and satisfaction?

Skills/Methods:

Define the goals, expected outcomes, needs and problems: Construct a critical incident about LES (least effective performer in the back home work group). Script a problem–centered dialogue between manager and LES.

Theoretical Anchors:

(GOALS) Wiswell (1987) proposed that people stop, reflect, and rethink before taking action. Nadler (1977, 1979) listed motivational, cueing, and energy generating effects of feedback. Locke, Saari, Shaw and Latham's (1981) reported that specific feedback and challenging goals motivated recipients to attain higher task goals. Goals and feedback were viewed as reciprocally dependent.

(OUTCOMES) Nadler (1977) envisioned continuous feedback loops in organizations for transmitting feedback to help people use technology for solving problems without extensive help from outside consultants.

Feedback Process Analysis Training Model (FPA)

Stage II – Action Learning: How will we get there?

Engage the learner to consider: What are the leadership roles of team leaders?

What are the key feedback skills and group process methods?

Skills/Methods:

Practice experiential activities: Role-play the manager's feedback script with LES. In pairs, practice feedback skills exercises; practice critical process analysis in peer-teams using group process methods and interactive feedback. In teams, have managers take turns discussing their critical incident conclusions and receiving feedback about LES (i.e., different perspectives and alternative suggestions). Have managers practice giving feedback to LES using specificity, empathy, and inquiry.

Theoretical Anchors:

(REFLECT) Inquiry, feedback and reflection connected error detection to strategies and assumptions for effective performance (Argyris & Schön, 1978, p. 22).

(ANALYZE) Types of experiential learning are based on disclosure of tacit beliefs, lessons learned from mistakes and transformative self-knowledge (Revens, 1980; Torbert, 1972). Group feedback is based on vigilant strategies of careful reasoning, analyzing, weighing opinions, and evaluating others' assumptions (Hirokawa & Pace 1983). Single-loop learning based on inferences can be dysfunctional (Argyris, 1982), and erroneously belief strengthening if left untested (Wiswell, 1990).

Feedback Process Analysis Training Model (FPA)

Stage III – Communicating: What Skills Will We Need?

Engage the learners to examine: How managers' attributional bias can be intercepted? How manager–subordinate team relations can be enhanced? What is the role of specificity, empathy, and inquiry (key skills) in feedback interactions?

Skills/Methods:

Managers observe and report: Observations of feedback with LES in peer–teams. Managers reevaluate their perceptions of LES, and share their critical incidents. Group process analysis is practiced in work group simulations. Managers hold problem solving feedback meetings with LES and their work groups between sessions. Managers record their observations, plan an agenda for work group meetings, and discuss holding regularly scheduled meetings to improve communication at work.

Theoretical Anchors:

(*TEAMWORK*) Setting up work groups as data–processing feedback loops (Nadler, 1977) promoted harmony through increased interactions among members of the group (Stull, 1988). (*KEY SKILLS*) Inquiry used in two–way feedback provided new insights to supervisors by asking employees "what–do–you–think?" rather than threatening "why?" questions instead (Gioia & Sims, 1986). Specificity gave employees detailed feedback that was hard to deny (Ilgen et al., 1979). Empathy used in feedback promoted trust (Smircich & Chesser, 1981).

Feedback Process Analysis Training Model (FPA)

Stage IV – Evaluating: Were We Successful?

Engage the learner to rediagnose: What did they learn? What goals and objectives were accomplished? What skills/methods did they use? What needs to be modified or changed? What were the outcomes/results?

Evaluate Skills/Methods:

Discuss and plan in peer-teams: Usefulness of feedback skills and group process methods for sharing feedback with LES and subordinate work groups. Plan steps to achieve transfer of learning from workshop to workplace.

Assess SYMLOG's Leadership Values Instrument, critical incidents, feedback self-assessment, exercises, simulations, discussion, feedback process analysis in peer-teams; report observations of LES, work groups, and team evaluations.

Theoretical Anchors:

(EVALUATE) Bales (1990) provided a *Most Effective* profile as a benchmark. Hackman's (1987) criterion for effectiveness was growth and well-being of team members and leaders whose personal models helped them assess team problems before taking action. *(CHANGE)* Dialogic sharing in groups supported perspective transformation (Mezirow, 1991). For change to last, underlying values/action skills must be involved (Putnam, 1990) and training must be linked to informal/incidental workplace learning opportunities (Marsick & Watkins, 1990; Wiswell, 1987, 1990).

Conclusions

Perhaps, the FPA training model is best characterized as an interactive cyclical process through which learners progress clockwise in four stages. Feedback/evaluation is central to the model and to each of its four stages. Importantly, managers practice two-way feedback in class before applying feedback in the workplace. Additionally, of two formats that represent the FPA model (refer to Appendix F), only the graphic display is actually seen by training participants. It is critical that managers never see the conceptual model for it outlines theoretical constructs (e.g., automatic blaming and change process of managers) underlying some basic questions and concerns of this research. For example--Can feedback skills training methods: (a) intercept managers' automatic and sometimes biased causal attributions of employees, (b) improve managers' perceptions of their work groups' effectiveness, and (c) help managers transport skills and methods from workshop to work group through feedback training applications in the work setting?

Given the considerable amount of research reviewed in the literature which demonstrated the effects of feedback on task and interpersonal behavior, it is surprising that relatively few studies have been concerned with attribution that influences the delivery of feedback (Larson, 1984). Even fewer studies propose strategies for modifying bias to improve social workplace relations (Hamilton, 1979; Kelley & Michela, 1980; Mitchell, 1982). In contrast, a prime objective of this research was to modify interactions between perceived causality (Jones & Nisbett,

1971) and attributional bias of managers through feedback to improve social relations effectiveness in the workplace. However, this study does not presume to offer prescriptive remedies for essentially complex, workplace problems. Problems of human perception, causal attribution, and interpersonal relations, in concert with values and group norms of the organization--provide a formidable barrier to overcome when seeking positive change.

Managers who are properly trained can perhaps make a difference. Yet realistically, to be acceptable, new values and skills must first be perceived by managers as leading to desirable outcomes. Secondly, methods must be learned and applied appropriately by leaders who not only desire but who are willing to strive for change. Even then, the complexities of workplace leadership remain.

According to Fisher (1986, p. 215):

The trick involved in discovering, predicting, and training for effective leadership is to resist the common-sense mythology of leadership and take advantage of the complexity well known to be inherent in leadership as a social phenomenon we would be well advised to encourage it and attempt to understand it as a phenomenon in its own right.

CHAPTER III

METHOD

This chapter presents the method of the study. The population and sample, procedures for the intervention, and data collection are described; instrumentation and data analyses used will be discussed. Through this study, the following research questions are addressed. What are the effects of training in feedback on managers' (a) perceived effectiveness of their work groups, (b) attributional bias of their Least Effective Subordinate, and (c) use of three key skills of feedback (i.e., specificity, empathy, and inquiry) with employees?

Population and Sample

The population of interest in this study is employed by Fairfax county government in the state of Virginia. This county covers approximately 400 square miles with a population of 900,000 residing on the fringe of Washington, DC. Sixty-eight county agencies provide a variety of typical city services (e.g., police, fire and rescue, public libraries, parks, courts, jails, recreation, animal control, health, public housing, assessments, transportation, consumer protection, and human services). Twenty-two (32%) Fairfax county government agencies were represented in the sample.

According to the County's Office of Research and Statistics, the racial profile of Fairfax county as of 1990 was 81.3 percent White, 7.7 percent Black, 6.3 percent Hispanic, and 11.0 percent Asian, American Indian and Other. These data became increasingly important for three reasons.

One reason is an estimated 7,314 county residents are currently employed by government agencies in Fairfax county. A second reason is a minority task force of 25 local organizations and district representatives are actively seeking employment diversity and upper mobility opportunities for minorities and women in Fairfax county government. Third, immigration trends indicate a continuous growth in Asian and Hispanic populations in Fairfax county during this last decade of the 20th century.

The demographic profile of the Fairfax county government work force is presented in Table 1, in categories of full-time merit (i.e., with benefits), part-time merit, exempt (i.e., no benefits), and management levels of administrative and professional employees. Table 1 shows that participants in this study were recruited from 336 administrative level, and 1,594 of 3,985 (40%) professional level managers who are supervisors. These managers have salary/grades, referred to as S-Levels, ranging from \$17,000 (administrative) and \$26,000 (professional) to \$110,000, at the top of the scale in both categories. Of the 65 managers in this sample, 36 (55%) were administrative, and 29 (45%) were professional level supervisors.

Table 1

Demographics of Fairfax County Government Work Force

	Full-time^a	Part-time^b	Exempt^c	MGRS^d Admin.	MGRS^d Prof.
N	9,414	933	3,707	336	3,985
Race %					
White	75.7	87.8	82.4	90.2	80.2
Black	17.7	7.4	12.4	6.6	14.3
Asian	4.2	3.2	2.0	2.4	3.3
Hispan.	2.2	1.5	3.0	0.9	2.0
Am. Ind.	0.2	0.1	-	-	0.2
Sex %					
Female	42.3	89.8	59.5	26.5	43.8
Male	57.7	10.2	40.5	73.5	56.2

Note:

^aFull-time merit employees receive benefits;

^bPermanent part-time merit receive benefits;

^cExempt includes contract/limited tenure with no benefits;

^dAdministrative and professional managers are included in the 9,414 full-time merit category (Revised June 30, 1991, Office of Equity).

In response to a recruitment letter to Fairfax county government agencies from the Office of Personnel (refer to Appendix H), a list of 140 supervising managers was compiled by the training administrator. Only 85 had work groups of 5 to 10 directly reporting subordinates. Of these, 75 were randomly assigned to the comparison groups, with the remaining 10 on call as last-hour substitutions. Consequently, shifts in the sample (i.e., replacements and dropouts) accounted for uneven numbers in the groups (i.e., 33 in treatment and 32 in control). In the end, the treatment group was composed of 19 females and 14 males; the control group had 18 females and 14 males.

Of the managers who participated, 61% were recommended for Team Management Effectiveness Training (TMET) by their supervisors with the approval of agency directors; the remaining 39% were volunteers. Their subordinates were from the full-time, part-time, or exempt categories employed in Fairfax county government. And although the sample is not representative of the predominantly white male management population, there were reasons for selecting these particular managers. The first criterion was to select supervising managers of 5 to 10 directly reporting subordinates because of constraints imposed by the research design and treatment. The sample included 75 of the total 85 supervisors who met this criterion. Other considerations were (a) separating agency personnel, especially mid-level managers from managers they directly supervised; and, (b) attempting to balance the groups by gender when substitutes were added before testing and training began.

Research Design

For determining the effects of the presence or absence of feedback skills training (independent factor) in this experimental study, a pretest–posttest control group design was applied. The rationale for using this design was to obtain pre and post comparisons between the treatment group receiving training and the control group receiving no training that would provide statistically significant cause–effect change, if change occurred, as a direct result of training. Random assignment of managers was the procedure used for obtaining nearly equal groups. Team Management Effectiveness Training (TMET), using group process methods, was the treatment for managers conducted in three 5.5–hour and one 6.5–hour, full–day sessions, over four consecutive weeks. Training modules are detailed in the procedures section. Dependent variables as they relate to feedback training are described separately for each research question under instrumentation.

Experimental Component

The purpose of TMET was to engage participants in a program designed to improve communication and enhance interpersonal relations at work through feedback skills training methods. Ultimately, the outcomes desired were managers' effective use of feedback skills and methods for facilitating open and honest communication with their (a) LES (Least Effective Subordinate), (b) work groups, and (c) peer–teams and task groups system–wide. A key element was managers' perceptions of their self–efficacy in team management.

The intervention followed a four-stage Feedback Process Analysis (FPA) training model designed for this study. Basically, each of the four stages of the FPA training model provided managers an overview of corresponding sessions with some overlap; refer to the last section in Chapter 2. In the fall of 1991, materials custom-designed for feedback skills training were evaluated in a one-day session with Virginia Tech graduate students. Shortly thereafter, the intervention was pilot-tested with managers in a high-tech firm located in the Virginia suburbs (see Appendix G).

Procedures

Two separate testing sessions were held on January 7, 1992, for obtaining data from the comparison groups using forms designed for this study and detailed under instrumentation: (a) *Personal Demographic Information*, (b) *Critical Incident Report*, (c) *Feedback Self-Assessment*; and, (d) *SYMLOG--the Systematic Multiple Level Observation of Groups*--a leadership values instrument provided by the SYMLOG Consulting Group, San Diego, CA. Both groups were pre and posttested to assess specific pre and post experimental characteristics. Posttest data was obtained from the treatment group at the fourth session, and from the control group on January 30, 1992. Training sessions for the treatment group were held January 8, 15, 22, and 29, 1992, at the Virginia Tech Northern Virginia Graduate Center, Falls Church, Virginia, 8:30 a.m. to 3:00 p.m. In February, 1992, the control group received training in support of ethical and equal treatment of all research subjects (American Psychological Association, 1982). Refer to Table 2 for the outline of the intervention.

Table 2

Procedural Outline of the Intervention and Data Collection

Feedback Treatment

Pre-test:	T₁: <i>SYMLOG Data (January 7, 1992)</i> <i>Critical Incident #1</i> <i>Feedback Self-Assessment</i>
Session 1:	Goals, Training Session Overview I Assume - Assumptions/Inferences Getting to Know You - Exercises Brainstorm Most Effective Profile in Peer-Teams Feedback Process Analysis Model (Graphic Display Only) Feedback Skills Instruction/Exercises H.W.: Script Feedback Session with LES
Session 2:	Feedback Process Analysis, Discuss Field Diagrams Critical Reflection/Group Process Methods H.W.: Write Agenda for Work Group Meeting Duplicate Agenda to Critique in Peer-Teams
Session 3:	Report Observations in Peer-Teams Team Simulation/Group Process Methods Share Agenda for Work Group Meeting Receive Feedback in Peer-Teams H.W.: Give Feedback/Work Group, Meeting Agenda Feedback Session with LES, Record Observations Complete Critical Incident #2/Hand in Session 4
Session 4:	Report Feedback with LES and Team Meeting, Agenda Peer-Team Review/Evaluation, Team Plans for Transporting TMET Skills/Methods to the Workplace
Posttest	T₂: <i>Collect Critical Incident #2 (January 29, 1992)</i> <i>SYMLOG Data, Feedback Self-Assessment</i>
No Feedback	
Control	T₁: <i>SYMLOG Data, Critical Incident #1 (January 7, 1992)</i> <i>Feedback Self-Assessment</i>
	T₂: <i>SYMLOG Data, Critical Incident #2 (January 30, 1992)</i> <i>Feedback Self-Assessment</i>
Control	
Treatment	Control group receives treatment (February 5, 1992)

Note: Data testing and collection were at T₁, T₂, except for treatment managers' Critical Incident #2 which was assigned as homework after feedback with LES in the workplace and collected at Session 4.

Training Session 1 (5.5 hours)

First, participants received a packet of TMET materials for the course. Next, they joined one of six peer-teams with 5 or 6 managers they did not know, from agencies different than their own, to build a level of trust for confidential sharing. An overview of the training goals and objectives was shared, and practical applications (i.e., workplace assignments) were outlined and discussed in advance.

For purposes of developing collaborative teams for the duration of training, manager peer-teams participated in two warm-up exercises specifically designed for this intervention. The first exercise, *I Assume*, focused on assumptions (i.e., perceptual-judgments) people sometimes make of others. Managers were asked to match a personal disclosure written by a peer member, to a team player through inference alone (i.e., no verbal exchanges permitted). The point stressed was that making erroneous inferences about others can easily occur without using feedback to check assumptions.

The second exercise, *Getting to Know You*, was another ice-breaker directed at helping members learn about one another so as to function as a team. Another purpose was to have managers discover that subordinates needed to share information, too, if they are to perform optimally on the job. Participants responded to: (1) What motivates you to perform at work? (2) What unique talents do you bring to the job? (3) What does performing effectively mean in your job? (4) How do you know what is expected of you? and (5) As a team, discuss and define effectiveness (see

SYMLOG's *MOST EFFECTIVE* [i.e., referred to as *MOST EFF*] Profile in Appendix B). Peer-teams brainstormed and shared their team effectiveness profiles. This was an important exercise for understanding the SYMLOG value categories that (a) *CONTRIBUTE*, (b) may be *NECESSARY SOMETIMES* but *DANGEROUS*, and (c) almost always *INTERFERE* with teamwork. It is important to note---values that contribute to teamwork also contribute to leadership effectiveness.

The objective of this session was to inform managers of three feedback skills, and provide practice and feedback from peers on using skills in role-plays. Methods for learning skills included viewing videotapes and modeling behaviors of persons in work problem scenarios. Experiential practice activities of managers supported skills learning. Workplace assignments were twofold: (a) construct a feedback dialogue with LES using a scripted version of the critical incident report (i.e., *LES: . . . , MGR: . . . , LES: . . . , MGR: . . .*), and (b) compose sentences using these skills in preparation for a feedback session with LES.

Training Session 2 (5.5 hours)

First, managers in dyads practiced using their scripted dialogue for interacting with LES. Next, they practiced feedback skills using group process methods. One primary objective of this session was to inform managers of the three-dimensional theoretical space underlying the SYMLOG instrument (see cube model, Appendix B). Other objectives were (a) providing participants an opportunity to interact with their peer-teams using group process feedback, (b) helping managers understand their field

diagrams computed from filling out the pretest SYMLOG instrument, and (c) instructing participants on uses of group process feedback for critical reflection and analysis of managers' conclusions about LES.

Using SYMLOG Field Diagrams. Field diagrams gave managers computerized snapshots of their back-home work groups (see Appendix B) from responses to 26 items on the instrument. Subordinates perceived by respondents were represented on the diagrams by circles, code-initialed on the lower right rim. The larger the circle the more dominant the person was perceived; the smaller the circle, the more submissive the person was perceived. Managers were similarly portrayed by *YOU*-initialed circles. Circles for the concepts *WISH*, *REJECT*, *EXPECT*, and *MOST EFF* represented values respondents (a) *WISH* to show in the group, (b) *REJECT* in themselves and others, (c) *EXPECT* others in the group to find them showing, and (d) find showing in the *MOST EFF* leader they have known.

Field diagrams served two purposes. First, managers in peer-teams used their pre-treatment diagrams to analyze relations with subordinates (e.g., coalitions/cohesiveness, and polarizations/divisiveness). Second, pre and post-treatment field diagrams were compared in this study for patterns and changes emerging from treatment group managers' field diagrams.

Feedback Process Analysis. Managers shared their field diagrams and disclosed thoughts about LES with peer-team members, round-robin, in this manner: (a) Managers described conclusions and incidents involving their problem subordinates

(5 minutes); (b) In turn, each member asked the manager/team leader one question regarding LES or the situation; then, (c) Using Feedback Process Analysis forms (see Appendix F), members reflected, wrote, and shared a one to two sentence analysis of what happened and why, and suggested possible solutions (10 minutes). Homework assignments asked managers to (a) plan and schedule a workplace feedback session with LES between weeks 3 and 4, (b) write an agenda for the meeting they scheduled, and (c) use the agenda for peer critiquing and role-playing in work group simulations.

Training Session 3 (5.5 hours)

First, peer-teams practiced using feedback skills and group process methods in simulations to prepare for their workplace group meeting. Taking turns, they practiced the role of facilitator/team leader using their agenda in the exercise. Supportively, peer-team members critiqued each manager's agenda and team management skills.

In simulated work group meetings, group process methods were critical for soliciting questions from team members (i.e., role-playing employees), and having manager-team leaders respond. It was stressed that FPA was designed to gain equal participation from everyone while preventing the dominance of any one team member. Workplace assignments for the week asked managers to (a) write and distribute a meeting agenda to their groups, (b) hold a scheduled team meeting and session with LES, and (c) fill out Critical Incident #2 after interacting with LES. Managers were asked to share an assessment of their team management skills at the last session.

Training Session 4 (6.5 hours)

Critical Incident #2, written as homework after a feedback exchange with LES, was collected from participants. First, managers debriefed their peer-teams on feedback sessions with LES, and then reported observations of their work group meetings. Managers also shared agenda used in team meetings, and analyzed how effectively they had used feedback skills and group process methods. This session was extended one hour for obtaining the posttesting data. Next, the SYMLOG instrument and Feedback Self-Assessment were completed and collected from participants, Time 2. Finally, each of the six peer-teams reviewed highlights of their learning, presented their ideas for transporting skills and methods to the work setting, and shared their evaluation of the training to bring closure to the course.

Assignments

As an important part of the treatment and transfer, managers engaged in a variety of *hands-on* experiential activities for learning and practicing feedback skills and methods before applying them in workplace assignments. These activities have just been detailed. Practice exercises and application of skills at work were essential for facilitating a transfer of learning. Because managers were informed pre-training (refer to letters in Appendix H) that workplace assignments were critical for learning feedback skills, managers' full compliance and participation was expected. Participants were also informed they would receive a certificate, which they did, for Team Management Effectiveness Training upon successful completion of the workshop.

The following experiential activities supported managers' transfer of learning from TMET to the work setting:

1. Writing an initial critical incident regarding their LES;
2. Practicing feedback with peers role-playing LES and work group members;
3. Giving/receiving feedback, and critiquing in simulated group meetings;
4. Holding a scheduled workplace feedback session with their LES;
5. Holding a scheduled group meeting using agenda and group methods;
6. Recording observations from workplace feedback sessions;
7. Reporting observations for critical reflection/feedback in peer-teams;
8. Consistently and regularly using feedback skills/methods in the workplace.

Instrumentation

This section provides descriptive information about various instruments used for data collection in this study. There are five subsections under instrumentation. The first section, *Personal Demographic Information*, describes participants. In the next three subsections, *SYMLOG: For Perceived Effectiveness*, *Critical Incidents: For Attributional Bias*, and *Critical Incidents: For Use of Feedback Skills*, reliability and validity of the scales are discussed for measuring pre and post-training variables. In the last subsection, *Feedback Self-Assessment*, a self-report instrument is discussed for measuring managers' consistent use of 15 feedback behaviors.

Personal Demographic Information

This instrument (see Appendix A) provided a detailed profile of participating managers and their employees which served as background information for this study. Managers provided their age, gender, race, education, job title, agency, duties, years supervising, and years in current job. Next, managers described their work group in size, gender, age, and race. Managers also specified how they were recruited for training; managers were either recommended by their supervisor or they volunteered. Finally, S-Levels (i.e., salary/grades) of the administrative and professional managers were supplied by the Office of Personnel.

SYMLOG: For Perceived Effectiveness

The SYMLOG System (refer to Appendix B for *Overview*) was developed and refined by Dr. Robert Freed Bales and colleagues at Harvard University over forty-five years of small group research (Bales, 1950, 1970, 1985, 1990; Bales et al., 1979). In response to 26 items on SYMLOG's Leadership Values Instrument, measures of workplace values of managers and work groups were provided. These measures were compared to SYMLOG's *MOST EFF* normative profile for leadership and teamwork effectiveness on three dimensions of U/Dominance, P/Friendliness, and F/Task-Orientation of Established Authority.

Value items on the instrument for Dominance in task-groups include personal prominence and power, strong management, and organizational unity. Dominance indicates the amount of influence and responsibility managers exert with employees.

Friendliness is described by collaboration, participation in decision making, and active teamwork toward common goals. This dimension measures managers' perceptions of personal relations; for example, how cooperative interactions are between members of a group.

A third dimension, Accepting the Task–Orientation of Established Authority, is described by items that include efficiency and active reinforcement of rules. This dimension measures task accomplishment of team members in the work group setting, judged from their managers' perspective.

These three dependent variables were used to answer the first research question. Measurement of the dependent variables relied on managers' responses to the 26–item self–rating instrument that explained their perceptions of good versus bad value/direction references (see chart in Appendix B). Likert ratings were made for themselves and for each person in the work group and for the normative concepts (i.e., *WISH, REJECT, EXPECT, and MOST EFF*).

Measures were obtained mathematically on three bipolar value dimensions (i.e., differences between two bi–polar scores in each direction) in the SYMLOG space: *Upward–Downward (Dominance), Positive–Negative (Friendliness), and Forward–Backward (Task–Orientation of Established Authority)*. Possible scores for each dimension range from –18 to +18. One set of dependent scores (i.e., U, P, and F) obtained mathematically represent managers' perceptions of their subordinates

and themselves in relation to norms judged to represent leadership and teamwork effectiveness. The concepts *WISH*, *REJECT*, *EXPECT*, and *MOST EFF* (i.e., not to be confused with dependent variables, U, P, and F), were arrived at in a similar fashion from managers' responses; they are discussed under Training Session 2 in this chapter. These concepts were included for the purpose of helping respondents interpret team relationships and consider possible needs for change.

Managers' profiles in this study were based on SYMLOG's *MOST EFF* normative profile (i.e., 3U, 6.4P, 6.4F, updated by Bales, 1990) for leadership and teamwork effectiveness (see Appendix B). Comparisons of treatment and control group managers' pre and post profiles were instructive as indicators of training effects on managers' self-perceptions of leadership (*YOU/MGR*) and perceived ideal (*MOST EFF*) for leadership and teamwork deemed most helpful for managing their teams under enormous pressures at work.

Visual comparisons of managers' pre and post-training diagrams also revealed changes in movement of circles on the bi-polar directions of the parameter inscription (i.e., line around the circle images). Other changes observed in the U, P, F, *MOST EFF* space (i.e., upper right-hand quadrant in the field diagrams) were the clustering together of manager and employee circles indicating team cohesiveness. Independent studies have been supportive of the concepts and three dimensional space (Rywick, 1987, Hare, 1988). In addition, Polley et al. (1988) have compiled detailed applications of SYMLOG in a variety of social contexts.

Expectations of These Data. It is necessary to clarify what can be expected to change in managers' perceptions of their back home work groups as a result of the intervention. Results of Pilot managers' perceived teamwork effectiveness norms (i.e., one set of U, P, and F final location scores), at Time 2, reflected improvements only where managers actually perceived positive change as a result of feedback. Change was not expected, at Time 2, where managers' perceived teamwork norms were already effective, at Time 1. Neither was change expected where managers' perceived teamwork norms showed no improvement, at Time 2, from the manager's perspective. A. P. Hare (personal communication, December 9, 1991) stated that--presumably, it is only that set of work groups that are in the middle range with regard to effectiveness that could be expected to show some improvement as a result of feedback from managers, and as a result change managers' perceptions of their teams' values.

Reliability. Bales et al. (1979) clarified that in practical use two poles of each of the three dimensions (i.e., U-D, P-N, and F-B) are not measured separately; they are combined into one dimensional measure based on 18-item scales as previously discussed. Bales and Koenigs (1983, 1984, 1986, 1990) stated:

The average empirical profiles obtained from numerous aggregated populations of raters in business task-oriented teams rating the value concepts used as the normative images for the SYMLOG (Most Effective) Profile (such as Ideal For Most Effective and Most Effective Leader Actually Known) are extremely similar to each other in their overall wave-like shape down the vertical profile. Correlations between the observed profiles and the SYMLOG Normative (Most Effective) Profile over the 26 item profile shape range in the .80's and .90's.

Significantly, for all practical uses of SYMLOG, satisfactory levels of reliability can be attained from comparatively small groups of users. Moreover, independent SYMLOG research demonstrates that individual items are highly similar in meaning from one group of users to another.

Critical Incident Report

Managers described a recent problematic event involving themselves and their Least Effective Subordinate, LES. Part I of the report asks managers to write a conclusion about LES in 1–2 sentences. Next, by answering a series of questions (refer to Appendix C), respondents reconstructed the incident (i.e., what happened and why) leading up to their initial conclusion. Part II of the incident report asked respondents to record dialogue they remembered exchanging with LES in response to three questions: A. In what manner did you approach LES? B. How did you gain information about the problem from LES? C. How did you explain the problem behavior to LES?

Critical Incidents: For Attributional Bias

Two dependent variables were used to answer the second research question. These provided measures of managers' causal analyses of employee behavior. Managers made inferences in critical incidents (i.e., protocols) about their poor performers in two ways: (a) blaming dispositional factors internal to employees (e.g., negative traits, poor ability, or bad attitude), or (b) blaming situational factors external to employees (e.g., policy constraints, lack of training, or lack of supervision).

Solomon (1978) advocated the use of separate internal and external attribution scales for measuring and reporting data for unequivocal interpretation (p. 590). He reported empirical data based on six studies, from 1973–1975, involving dispositional–internal and situational–external attributions to support his arguments. Based on these findings, Solomon submitted three propositions. First, internal and external attributions are not inversely related; second, they may vary along different dimensions; and third, to avoid ambiguous and erroneous conclusions, studies should measure and report internal and external attributions separately.

Because critical incidents document observable activities from which inferences and predictions may be made about the observed (Flanagan, 1954), this method for obtaining data was chosen. The critical incident reports captured managers' inferences and attributions about their LES. Two attribution scales were used to rate managers' responses on the protocols (i.e., Part I, pp. 1–2). Critical incidents written by managers before and after the intervention provided a comparison of feedback effects. Attribution scales for each of two dependent variables are displayed in Appendix D.

Two trained raters independently and blindly rated the attribution scales for the two variables to the extent that they corresponded globally to managers' protocols. Five–point scales anchored on None or Not Applicable (0) to High (4) were used by raters responding to items on each of the scales that completed the following header: *In problematic workplace situations, to what degree do managers' statements indicate a belief that . . .* Higher–numbered scores on the Likert scales denoted a possible

bias based on greater frequency of use of that variable of interest. Lower scores signaled the reverse. For each of the two variables, the final interval data scores of the raters were averaged for each of the two attribution scales.

Reliability. Using Number Cruncher Statistical System (NCSS, Hintze, 1990) to obtain a measure of interrater reliability, a Pearson correlation analysis was performed on the averaged scale scores from an initial 50 managers' protocols in the data bank analyzed by the two raters. Correlation coefficients ranged from a low of .65 to a high of .74 on the raters' two descriptive scales. Cronbach alpha coefficients were obtained for each rater's scores taken separately on the dispositional–internal and situational–external scales for 50 protocols. The resulting data for measuring managers' attributional bias from the first rater ranged from a low of .34 to a high of .75, and a low of .54 to a high of .78 for the second rater.

Because of somewhat inconsistent ratings, consensus was then obtained between the raters on their internal and external scales as applied to managers' 130 protocols. Where discrepancies occurred on their scale scores, the raters discussed each of these items, line by line, until they reached consensus; this produced a final single set of agreed upon scores.

Cronbach's alpha was calculated on the raters' final set of scores to test for internal consistency for each scale measuring managers' attributions of LES. Alpha coefficients on the internal scale were .65 on pretests and .71 on the posttest; for the external scale, data ranged from .61 on pretests to .55 on posttests. Although pre and

post alphas were computed separately, raters judged the set of 130 protocols blind (i.e., they were mixed and not identified as pre or post). Table 3 summarizes the reliability measures used for rating managers' critical incidents.

Validity. Miller, Smith, and Uleman (1981) reviewed research problems measuring internal and external causality (e.g., reasoning, motive) that provided data useful to this study. Namely, categories that explained internal and external causality must be defined in terms of what respondents had in mind. These categories must be interpreted for raters in the same unambiguous and consistent manner; yet even then inconsistencies of raters' interpretations can affect these data (refer to Table 3, Consensus Reliability for Internal Attribution, .65 to .71, and External Attribution, .61 to .55, pre to post).

Perhaps, these inconsistencies reflect the apparent ambiguity surrounding the raters' task: (a) using descriptive scales whose items may not all apply to managers' protocols, and (b) trying to infer what managers recalled from their initial encounter with LES and recorded in their critical incidents.

It would also seem likely that higher reliability scores on the attribution and feedback scales reflect items that can more easily be identified in the protocols. For example--of the feedback skills--inquiry takes the form of a question, empathy expresses concern, and specificity details with precision. Attributions, on the other hand, can be far more ambiguous commentaries to locate and then to judge.

Table 3

Reliability Measures for Critical Incident Ratings

Descriptive Scales	Rater X¹	Rater Y¹	Interrater Reliability²	Consensus Reliability³
Dispositional-Internal				
PRE	.47	.70	.65	.65
POST	.75	.77	.71	.71
Situational-External				
PRE	.51	.78	.74	.61
POST	.34	.54	.72	.55
Specificity				
PRE	.80	.79	.50	.82
POST	.82	.87	.60	.80
Empathy				
PRE	.76	.87	.54	.86
POST	.71	.78	.75	.88
Inquiry				
PRE	.82	.90	.91	.87
POST	.78	.73	.85	.82

Note: ¹Cronbach's alphas were obtained for consistency of raters' data on an initial 50 protocols taken separately. ²Pearson correlations for interrater reliability were obtained on these same 50 individual managers' protocols (i.e., 25 treatment group and 25 control group managers). ³Cronbach's alphas for internal consistency of the scales were obtained on 130 managers' protocols from a final set of scores obtained through raters' line item consensus on 5 descriptive scales.

Critical Incidents: For Use of Feedback Skills

Three dependent variables were used to answer the third research question. These measures of the effects of training on managers' use of three key feedback skills were based on critical incidents (Part II, p. 3). Feedback scales for each of three skills are displayed in Appendix D. Critical incidents provided a comparison of feedback effects and were rated in a manner described in the previous section.

Reliability. Using NCSS to obtain a measure of interrater reliability, a Pearson correlation analysis was performed on the averaged scale scores from an initial 50 managers' protocols in the data bank analyzed by two raters. Correlation coefficients ranged from a low of .50 to a high of .91 on three feedback scales. As previously discussed in the last section, consensus was then obtained between the raters on each of the feedback scales for specificity, empathy, and inquiry as applied to 130 protocols. Where discrepancies occurred between their scores, raters discussed each of these items, line by line, until they reached consensus; this produced a final single set of agreed upon scores.

Next, Cronbach's alpha was calculated on raters' final set of scores to test for internal consistency for each of three scales measuring managers' use of key feedback skills with employees. Alpha coefficients for specificity were .82 on the pretest protocols and .80 on posttest scores. For the empathy scale, coefficients were .86 on pretests and .88 on posttests. For the last scale measuring inquiry, the alphas were .87 on pretests and .82 on posttest scores.

As previously stated, raters judged the complete set of 130 protocols blind (i.e., pre and post were mixed and unidentified). Refer to Table 3 in the previous section for a summary of reliability measures of critical incident ratings on the three feedback scales.

Feedback Self-Assessment Instrument

This pre and post-treatment, self-assessment instrument was custom-designed for this study (see Appendix E). Part I describes 15 positive feedback behaviors. Three choices were provided supervisors for indicating how frequently they employed these behaviors: Rarely = 0, Sometimes = 1, and Often = 2. Summed scores from 0 to 30 demonstrated respondents' consistent use of these behaviors with subordinates.

Part II was designed to evaluate how effective respondents perceived their (a) LES, (b) work group, and (c) self-efficacy using group process methods, post-training only, using a 7-point scale anchored on Disagree and Agree. Self-efficacy is defined as self-perceived competence of managers assessing their use of feedback skills training methods in the team setting. If gains in effectiveness were few, managers were asked to explain these perceptions. Some managers also volunteered rationales for perceived improvements in themselves and relations with employees.

Reliability. Cronbach's alpha was calculated on respondents' scores to test for internal consistency of the 15-item scale measuring managers' self-reported application of these feedback behaviors in the workplace. Alpha coefficients obtained were .73 on pretests and .80 on posttest scores.

Data Analysis

The raw data from managers' SYMLOG, critical incident, and feedback self-assessment instruments were loaded into the NCSS statistical software program to appraise three research questions of this study: What are the effects of training in feedback on managers' (a) perceived effectiveness of their work groups, (b) attributional bias of their Least Effective Subordinate, and (c) use of three key feedback skills with employees?

Means and standard deviations for all factors in the sample were computed to provide descriptive demographic data for managers and their subordinate work groups. Comparisons between the groups were analyzed using t-test, chi-square, and two-way ANCOVA to search for possible differences based on demographic characteristics.

Cronbach's alpha was calculated separately on each rater's data; then, alpha correlations were used to determine if deleted line items would increase reliability for each of the five descriptive scales. Pearson correlation analyses were performed for interrater reliability on raters' data. Cronbach's alpha for raters' final set of scale scores yielded measures of consensus reliability for critical incident ratings.

Cross-tabulations between each descriptive scale item and comparison group percentages were run to search for trends or patterns; then, interpretations were made from these data that were meaningful in terms of this study. Preliminary t-test analyses were performed on each variable of interest to investigate possible pre to post change, separately, for each of the comparison group's scores.

Finally, analysis of covariance (ANCOVA) was performed on these data to determine whether there were differences between the groups over and above those differences that could be accounted for at pretest time so as to interpret relationships of dependent factors both statistically significant and meaningful as the result of the treatment:

1. *U/Dominance, P/Friendliness, and F/Task–Orientation scores* for managers' perceived effectiveness of their back home work groups, referencing managers' *MOST EFF* profiles for leadership and teamwork effectiveness provided by SYMLOG data;
2. *Scale scores for Dispositional–Internal and Situational–External* for managers' attributional bias provided by data from Part I of the critical incidents;
3. *Scale scores for Specificity, Empathy, and Inquiry* for managers' use of feedback skills provided by data from Part II of the critical incidents; and,
4. *Scale scores for Consistent Use of Feedback Behaviors* for managers' self–reported use of feedback behaviors with employees.

CHAPTER IV

RESULTS

*I find the great thing in this world is not so much where
we stand, as in what direction we are moving.*
(*Oliver Wendell Holmes, 1893, p. 136*)

In this chapter the results are presented that document differences between the comparison groups, and directions are described in which treatment group managers appear to be moving. Discussion of the findings will focus on significant and meaningful cause-effect outcomes important to this study. Results are organized into sections which describe the sample, personal demographic profile of managers and their work groups, and data pertaining to research questions of this study. Other findings will be addressed in sections that include preliminary analysis of the data, final analysis performed, and results obtained. The last section will be a summary of results.

Sample

Twenty-two Fairfax county government organizations provided 65 supervising managers in the sample who shared a common bond of employment. Four cross-county divisions provided this common core; they are *Human Services, Management and Budget, Planning and Development, and Public Safety*. Refer to Table 4 for a listing of numbers of agency participants recruited from these four divisions of Fairfax county government.

Table 4

Cross-County Agency Divisions Represented in the Sample

N = 65 MGRS	TREATMENT GROUP N = 33	CONTROL GROUP N = 32
22 AGENCY DIVISIONS	N	N
<i>Human Services</i>		
Aging	1	2
Community Action	-	1
Human Development	4	4
Health	4	1
NW Mental Health Center	1	-
Fairfax House (Children's Shelter)	1	-
Housing/Community Development	4	4
Juvenile	-	3
Judicial Operations	1	-
Offender Aid & Restoration (Restitution)	-	1
Library	1	1
Office for Children	2	2
<i>Management & Budget</i>		
Assessments	4	2
Communications	-	1
Personnel	-	1
<i>Planning & Development</i>		
Capital Facilities	1	-
Project Engineering	-	1
Comprehensive Planning	2	3
Transportation	3	1
Environmental Management	1	-
<i>Public Safety</i>		
Police	-	1
Sheriff's Office	3	3

Note: Majority participation from Human Services was represented nearly equally in the comparison groups (TRT = 58%, CTL = 60%).

With few exceptions (e.g., Personnel, Communications) the work of participating County organizations involves citizen/client service and, therefore, front-line employee supervision. Because of revenue shortfalls, participants faced major budget cuts and reduction-in-forces of a magnitude never before experienced in Fairfax county government organizations. "The demands of providing first rate service in times of rapidly declining resources have put tremendous pressures on staff and, in particular, upon our managers and supervisors" (Mauter, Personal Communication, March 25, 1992, in Appendix H). It does not overstate the case to say, the setting in Fairfax county government during the period of training was stressful and austere.

Demographic Profile of Participants

Table 5 summarizes the demographic data provided by Personal Demographic forms (see Appendix A) submitted by managers at the time of pretesting. First, these data show that managers (43) and subordinates (40-44) were comparable in age in both treatment and control groups. Second, although the County work force is predominately male (see Table 1, Chapter 3), managers were predominately female in the sample. Third, treatment supervisors were predominately administrative (64%), and recruited (61%) for training by their managers. Fourth, in the control group, there was a more even split between recommended and volunteered, with slightly more professionals (i.e., higher S-Levels) than administrators; while in the treatment group, two-thirds were administrative level.

Table 5

Personal Demographic Statistics of the Sample (N = 65)

Variable	TREATMENT GROUP N = 33		CONTROL GROUP N = 32	
	Mean	SD	Mean	SD
Age:				
Manager	42.67	7.25	42.97	6.59
Subordinates	39.60	6.44	41.90	6.78
LES	39.61	11.87	43.88	11.08
MGR:				
Yrs. Supervising	6.79	4.95	9.38	6.85
Yrs/In This Job	3.24	2.96	3.79	3.24
Education (Yrs/College)	3.39	1.87	3.88	1.64
Size of Work Group	7.00	2.00	7.00	1.70
	N	%	N	%
Sex:				
Female	19	58%	18	56%
Male	14	42%	14	44%
Race:				
White	29	88%	27	81%
Minority = Black, Asian, Hispanic, Other	4	12%	5	16%
S-Level (Salary/Grade):				
Administrative	21	64%	15	47%
Professional	12	36%	17	53%
Recruitment:				
Recommended	20	61%	16	50%
Volunteered	13	39%	16	50%

Table 5 shows a slightly higher edge in supervisory experience (2.6 years) for the control group; however, this difference is moderated by greater variability in the control group (6.85) over treatment group (4.95) managers.

Cross tabulations by gender of manager and LES (see Table 6) demonstrated a fairly close equivalency of the comparison groups. Female manager–female LES combinations predominated the groups for both treatment (74%) and control (56%). Least common in both groups were female manager–male LES combinations for treatment group (26%) and control group (44%) managers. Table 6 also provides manager–LES combinations by race.

Table 6 appeared to show, at first glance, a systematic bias of managers choosing a LES of their own gender and race; however, this sample was too small and lacking in representativeness of minority groups to support that assumption. After further examination, however, it appeared more likely that these data were the result of a sample more female than male, with work groups drawn from a sizable population of full–time (42.3) and part–time (89.8) female subordinates employed by Fairfax county government (see Table 1, Chapter 3).

Table 7 shows the demographic profile by gender and race of manager–work group combinations in the sample. Note that 86% of managers in the sample were White; moreover, their work groups were made up of 75% White subordinates. The 14% non–White managers (only 9) supervised groups that were only 65% White, while the 57% female managers supervised subordinates that were 75% female.

Table 6

Percent of Managers With Same or Different Characteristics as Their LES

N = 65 TRT = 33, CTL = 32 MGR/GENDER¹		LES/GENDER				
		FEMALE %	MALE %	TOTAL N		
FEMALE	TRT	74	26	19		
	CTL	56	44	18		
MALE	TRT	57	43	14		
	CTL	50	50	14		
MGR/RACE²		LES/RACE				
		WH %	BLK %	HIS %	ASN %	TOTAL N
WHITE	TRT	62	38	0	0	29
	CTL	69	15	4	12	27
BLACK	TRT	100	0	0	0	4
	CTL	50	50	0	0	4
HISPANIC	TRT	0	0	0	0	0
	CTL	0	0	0	0	0
ASIAN	TRT	0	0	0	0	0
	CTL	0	0	0	100	1

Note: ¹Female managers in the control group were about evenly split between having a female or male LES, but almost three-quarters of treatment group female managers had a female LES. ²Non-White managers (at 14 %) in the sample reflect the Non-White manager population (at 15%) in County government (see Table 1, Chapter 3).

Table 7

Percentages of Manager-Work Group Combinations by Gender and Race

N = 65 TRT = 33, CTL = 32			WORK GROUPS/GENDER		
MGR/GENDER			FEMALE %	MALE %	TOTAL N
FEMALE	N = 19 N = 18	TRT CTL	75 76	25 24	115 114
MALE	N = 14 N = 14	TRT CTL	51 49	49 51	86 88
MGR/RACE			WORK GROUPS/RACE		
			WH %	NON-WH %	TOTAL N
WHITE	N = 29 N = 27	TRT CTL	72 78	28 22	178 169
NON-WHITE	N = 4 N = 5	TRT CTL	65 67	35 33	23 33

Note: There are a total 403 subordinates in managers' work groups in treatment and control comparison groups.

Findings and Discussion

A t-test analysis was performed on each of eight dependent factors to examine pre and posttest scores of each group taken separately. Analyses were undertaken to investigate differences in mean scores that may have occurred (a) in treatment as the result of training, and (b) in control as random changes or pretest sensitization. Means, standard deviations, results of t-test, chi-square, two-way ANCOVA, cross tabulations, and final ANCOVA analysis are summarized and discussed in major sections for each of three research questions. The first section is *Perceived Effectiveness*, the second is *Attributional Bias*, the third is *Feedback Skills*; the last section provides additional results from managers' *Feedback Self-Assessment*.

Perceived Effectiveness

Scores from SYMLOG data for dimensions of Dominance, Friendliness, and Task-Orientation could range from -18 = low to +18 = high. These scores are used to answer the first research question: What are the effects of training in feedback on managers' perceived effectiveness of their work groups?

Teamwork Effectiveness

Table 8 presents average managers' scores from pre-post responses to SYMLOG instrumentation. Mean scores are discussed through referencing managers' scores for work groups and *MOST EFFECTIVE (MOST EFF)* profiles in Appendix B. Teamwork effectiveness in this study is defined by managers' perceptions of themselves and subordinates working together as a team.

Table 8 Comparisons of Average Managers' Perceived Teamwork Effectiveness

N = 65 TRT = 33 CTL = 32	PRE Mean ¹ (S.D.)	POST Mean ¹ (S.D.)	PRE-POST Comparisons ²	ANCOVA Adjusted Posttest Means
U/DOMINANCE				
TRT	1.1 (1.6)	2.3 (1.4)	t = 6.4 p = .0000	2.2
CTL	.8 (1.7)	1.0 (1.8)	t = .7 p = .46	1.1
Group Comparison ³	t = .8 p = .45			F = 18.3 p = .0001
P/FRIENDLINESS				
TRT	3.6 (1.7)	4.9 (2.7)	t = 3.6 p = .001	5.2
CTL	4.4 (2.1)	4.4 (2.2)	t = .2 p = .82	4.1
Group Comparison ³	t = -1.7 p = .09			F = 5.4 p = .02
F/TASK-ORIENTATION				
TRT	5.5 (3.4)	5.2 (3.8)	t = .6 p = .57	4.9
CTL	4.7 (2.9)	4.3 (3.5)	t = -1.1 p = .30	4.7
Group Comparison ³	t = 1.0 P = .34			F = .1 p = .78

Note: ¹Mean scores from SYMLOG responses of managers for values of Dominance, Friendliness, and Task-Orientation as they relate to teamwork effectiveness. ²Paired t-tests comparing pre- and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

U/Dominance. In reference to Table 8, initially, there was no difference between treatment and control groups on average scale scores ($t = .8, p = .45$) for Dominance. While there was no significant change, pre to post, for the control group ($t = .7, p = .46$), the treatment group showed a PRE-POST change ($t = 6.4, p = .0000$) on the Dominance dimension.

An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 18.3, p = .0001$) for Dominance. It should be noted, however, that in all cases the means were relatively low, with a constant average of .9 for the control group and a change from 1.1 to 2.3 for the treatment group. This indicates that the treatment appears to have been effective from managers' perspectives; although, effectiveness must be interpreted cautiously in terms of managers' expectations for their subordinate teams on that dimension. It is likely that managers would approve a moderate increase for Dominance that would not pose a threat of employee insubordination (e.g., overbearing or raucous). An increase on this dimension indicates an energy generated by Dominance where managers perceived their group members actively speaking up and taking more responsible roles for team activities.

P/Friendliness. For Friendliness, there was no pretest difference between treatment and control on average scale scores ($t = 1.7, p = .09$). While there was no significant change, pre to post, for the control group ($t = .2, p = .82$), the treatment group showed a pre-post improvement ($t = 3.6, p = .001$) on this dimension.

An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 5.4, p = .02$) for Friendliness. There was a change, pre to post, of 3.6 to 4.9 for the treatment group, while in the control group the means remained the same (4.4), pre to post. Apparently, this indicates that managers perceived a moderately positive change in their employee teams toward participation and collaboration on that dimension.

F/Task-Orientation. There was no significant difference between treatment and control groups on average scale scores ($t = 1.0, p = .34$). There was no change, pre to post, for the treatment group ($t = .6, p = .57$), nor for the control group ($t = -1.1, p = .30$). An ANCOVA on posttest means, adjusted for pretest scores, showed no significant difference between the groups ($F = .1, p = .78$) for Task-Orientation. Although mean scores in both groups were moderately high, there was relatively high variance and little movement across the means. Because increases of task-orientation and acceptance of established authority were not the focus of training, significance for this dimension was not expected.

Manager Effectiveness

Table 9 summarizes average managers' self-perceptions of their effectiveness (i.e., self-efficacy and leadership) for Dominance, Friendliness, and Task-Orientation. As previously discussed, leadership value contributors to teamwork are based on SYMLOG's normative categories listed under *MOST EFF* profile [value categories] in Appendix B.

Table 9 Comparisons of Average Managers' Self-Perceived Effectiveness

N = 65 TRT = 33 CTL = 32	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
U/DOMINANCE				
TRT	1.2 (2.8)	3.1 (2.8)	t = 3.7 p = .0008	3.1
CTL	1.2 (3.2)	1.3 (2.7)	t = .2 p = .88	1.3
Group Comparison³	t = 0.0 p = .98			F = 10.3 p = .002
P/FRIENDLINESS				
TRT	5.6 (4.1)	7.0 (2.5)	t = 2.0 p = .06	6.8
CTL	5.2 (4.0)	4.9 (4.6)	t = -.6 p = .58	5.1
Group Comparison³	t = .4 p = .69			F = 6.2 p = .02
F/TASK-ORIENTATION				
TRT	8.4 (4.3)	8.4 (4.3)	t = .1 p = 1.0	7.6
CTL	6.0 (5.7)	6.0 (5.9)	t = -0.0 p = 1.0	7.0
Group Comparison³	t = 1.9 p = .07			F = .5 p = .48

Note: ¹Mean scores from SYMLOG responses of managers for values of Dominance, Friendliness, and Task-Orientation as they relate to leadership effectiveness. ²Paired t-tests comparing pre- and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

U/Dominance. Initially, there was no significant difference between treatment and control groups on average managers' perceived effectiveness scale scores for Dominance ($t = 0.0, p = .98$); this was the case for Friendliness ($t = .4, p = .69$) and Task–Authority ($t = 1.9, p = .07$) as well. There was no significant pre–post change ($t = .2, p = .88$) for the control group on the Dominance dimension; while the treatment group showed a significant change ($t = 3.7, p = .0008$), pre to post, on that dimension. An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 10.3, p = .002$) for Dominance. It is noteworthy that the means in the treatment group changed from 1.2 to 3.1, pre to post, while the means in the control group remained virtually the same, pre to post. This indicates the treatment appears to have been effective for helping supervisors assume a more Dominant team leadership role.

P/Friendliness. There was a significant pre–post improvement for the treatment group ($t = 2.0, p = .06$), while there was no significant change for the control group ($t = -.6, p = .58$). Significantly, an ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 6.2, p = .02$) for Friendliness. Mean scores averaged 5.1 with high variability (4.3) for the control group, while mean scores changed, pre to post, for the treatment group (5.6 to 7.0), pre to post. This indicates that treatment group managers moved in the direction of positive change—toward motivating and effecting greater collaboration of employees in the team setting.

F/Task–Orientation. There was no significant change, pre to post, in either the treatment group ($t = .1, p = 1.0$) or in the control group ($t = -0.0, p = 1.0$). An ANCOVA on posttest means, adjusted for pretest scores, showed no significant difference ($F = .5, p = .48$) for Task–Orientation. Mean scores and variability were moderately high, with little change, pre to post, for the treatment group or control group. This was not surprising because managers came to the pretest already highly task-oriented, and no part of the treatment was directed to this dimension.

Least Effective Subordinate, LES Effectiveness

Table 10 provides mean score comparisons of average managers' perceived effectiveness of LES for Dominance, Friendliness, and Task–Orientation.

U/Dominance. There was a difference, initially, between the groups on average scale scores ($t = 2.6, p = .01$). This difference at pretest between the comparison groups is probably due to a random effect; there was a slight age difference—a mode 10 years higher in the control group's histogram—that may have affected how their LES was viewed. There was no significant pre–post change for the treatment group ($t = 1.8, p = .09$) or the control group ($t = .4, p = .66$). An ANCOVA on posttest means, adjusted for pretest scores, showed no significant difference between the groups ($F = 3.3, p = .08$). The means were relatively low, with a constant average of -1.4 for the control group and a change from 1.0 to 1.9 for the treatment group, with relatively high variability. This indicates some movement of the treatment group LES for Dominance, while the control group remained virtually the same.

Table 10 Comparisons of Average Managers' Perceived Effectiveness of LES*

N = 65 TRT = 33 CTL = 32	PRE Mean ¹ (S.D.)	POST Mean ¹ (S.D.)	PRE-POST Comparisons ²	ANCOVA Adjusted Posttest Means
U/DOMINANCE				
TRT	1.0 (4.0)	1.9 (4.2)	t = 1.8 p = .09	1.0
CTL	-1.4 (3.6)	-1.3 (3.8)	t = .4 p = .66	-3
Group Comparison ³	t = 2.6 p = .01			F = 3.3 p = .08
P/FRIENDLINESS				
TRT	.5 (4.7)	1.5 (5.8)	t = 1.3 p = .21	2.4
CTL	2.7 (6.8)	3.0 (6.7)	t = .4 p = .68	2.1
Group Comparison ³	t = -1.6 p = .13			F = .1 p = .73
F/TASK-ORIENTATION				
TRT	.4 (6.6)	1.3 (6.3)	t = .9 p = .39	1.4
CTL	.6 (6.1)	.3 (7.0)	t = -.42 p = .68	.3
Group Comparison ³	t = -.15 p = .88			F = .9 p = .35

Note: ¹Mean scores from SYMLOG responses of managers perceptions of their LES on dimensions of Dominance, Friendliness, and Task-Orientation for teamwork effectiveness. ²Paired t-tests comparing pre- and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means. *LES = Least Effective Subordinates.

P/Friendliness. Initially, there was no difference between the groups on average scale scores ($t = -1.6, p = 1.3$) on this dimension. Again, there was no significant change, pre to post, for the treatment group ($t = 1.3, p = .21$) or the control group ($t = .4, p = .68$). An ANCOVA on posttest means, adjusted for pretest scores, showed no significant difference between the groups ($F = .1, p = .73$) for Friendliness. The means were relatively low, averaging about 3.0 for the control group. The treatment group showed a pre to post change of .5 to 1.5, with great variability around the means.

F/Task-Orientation. There was no significant difference between treatment and control groups on average scale scores ($t = -.15, p = .88$). There was no change, pre to post, either for the treatment group ($t = .9, p = .39$) or for the control group ($t = -.42, p = .68$). As expected, an ANCOVA on posttest means, adjusted for pretest scores, showed no significant difference between the comparison groups ($F=.9, p = .35$) for Task-Orientation. Mean scores in both groups were low with high variance little movement for the control group, while pre-post scores for the treatment group were .4 to 1.3.

Overall, significant effects for treatment group managers' perceptions of LES were restrained by relatively high variance around the means on all three dimensions of Dominance, Friendliness, and Task-Orientation. This may well be due to the large perceptual variance of managers as they viewed their LES on both interpersonal (Dominance and Friendliness) and task-performance (Task-Orientation) dimensions.

More Effective Subordinates, MES Effectiveness

Table 11 summarizes average managers' perceived effectiveness of their More Effective Subordinates, MES, for Dominance, Friendliness, and Task–Orientation.

U/Dominance. There was no difference between the groups on average scale scores ($t = -.1, p = .95$) on this dimension. However, there was a significant change for the treatment group ($t = 5.1, p = .0000$), pre to post, and nonsignificance for the control group ($t = .2, p = .84$). An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 11.6, p = .001$) for Dominance. It should be noted, however, that the means showed a constant average of 1.3 ($t = .2, p = .84$) for the control group, and a pre–post change from 1.2 to 2.3 for the treatment group ($t = 5.1, p = .0000$). This indicates that managers perceived MES as actively working toward common goals. This is especially meaningful in terms of effects MES can exert on LES for participating more fully in team activities.

P/Friendliness. Initially, there was no difference between the groups on average scale scores ($t = -1.2, p = .24$). There was a significant change, pre to post, for the treatment group ($t = 3.4, p = .002$), and nonsignificance for the control group ($t = .6, p = .57$). An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 4.1, p = .05$) for Friendliness. The means showed a constant average of 4.6 for the control group, and a change from 3.8 to 5.3, pre to post, for the treatment group. From the managers' perspective, this indicates a positive trend for MES collaborating even with LES.

Table 11 Comparisons of Average Managers' Perceived Effectiveness of MES*

N = 65 TRT = 33 CTL = 32	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
U/DOMINANCE				
TRT	1.2 (1.7)	2.3 (1.5)	t = 5.1 p = .0000	2.3
CTL	1.2 (1.8)	1.3 (2.1)	t = .2 p = .84	1.2
Group Comparison³	t = -.1 p = .95			F = 11.6 p = .001
P/FRIENDLINESS				
TRT	3.8 (2.3)	5.3 (3.2)	t = 3.4 p = .002	5.5
CTL	4.5 (2.4)	4.7 (2.3)	t = .6 p = .57	4.4
Group Comparison³	t = -1.2 p = .24			F = 4.1 p = .05
F/TASK-ORIENTATION				
TRT	5.9 (4.0)	5.3 (4.4)	t = -1.3 p = .22	5.1
CTL	5.3 (3.3)	5.0 (3.8)	t = -1.0 p = .33	5.2
Group Comparison³	t = .6 p = .54			F = 0.0 p = .84

Note: ¹Mean scores from SYMLOG responses of managers perceptions of MES on the dimensions of Dominance, Friendliness, and Task-Orientation for teamwork effectiveness. ²Paired t-tests comparing pre and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means. *MES = More Effective Subordinates (minus LES).

E/Task–Orientation. On the Task–Orientation dimension, initially, there was no difference between the groups on average scale scores ($t = .6$, $p = .54$). There was no significant change, pre to post, for either the treatment group ($t = -1.3$, $p = .22$) or for the control group ($t = -1.0$, $p = .33$). An ANCOVA on posttest means, adjusted for pretest scores, showed no significant difference between the groups ($F = 0.0$, $p = .84$) for Task–Orientation. It should be noted, however, that there was virtually little movement across the means, with relatively high variance in the comparison groups.

Attributional Bias

Scores from two attribution scales provided measures of managers' protocols for attributional bias. This bias was made operational in terms of personally blaming LES (internal), and blaming factors beyond LES' control (external). These scores are used to answer the second research question: What are the effects of training in feedback on managers' attributional bias of their Least Effective Subordinate?

Dispositional–Internal

Table 12 provides comparisons of average managers' dispositional–internal (i.e., personally blaming) bias of LES in problematic workplace situations. Initially, there was no difference between treatment and control groups on average scale scores ($t = 1.3$, $p = .20$). While there was no significant change, pre to post, for the control group ($t = 1.1$, $p = .29$), treatment group managers showed a significant decrease in personally blaming LES ($t = -4.4$, $p = .0001$).

Table 12

Comparisons of Average Managers' Dispositional Attributional Bias

N = 65	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
Treatment Group N = 33	2.2 (.9)	1.5 (.8)	t = -4.4 p = .0001	1.4
Control Group N = 32	1.9 (.9)	2.0 (1.0)	t = 1.1 p = .29	2.1
Group Comparison³	t = 1.3 p = .20			F = 14.5 p = .0003

Note: ¹Mean scores from seven items ranging from 0 = low to 4 = high, where high represents managers' frequently blaming their subordinates personally in problem situations. ²Paired t-tests comparing pre and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 14.5$, $p = .0003$), with managers blaming LES less personally in problematic work events. Although in all cases the means were relatively low, with a constant average of about 2.0 for the control group; there was a decrease in dispositional bias from 2.2 to 1.5 for the treatment group. This indicates that the treatment appears to have been significantly effective on the internal dimension. This effect is especially meaningful because blaming subordinates less personally in problem situations suggests a cognitive change in managers' underlying values as well as in behavioral actions. Second, although this study was testing feedback for intercepting managers' automatic bias of employees, which it did; this purpose was never stated during the training.

Table 13 provides the mean pre–post difference and percent of managers whose statements were rated as displaying a fair amount of dispositional attributional bias. Scores on seven items in the scale could range from 0 = low to 4 = high. Higher scores imply a predisposition on the part of managers to attribute problems personally to LES. Considering individual item means on the internal scale, there was no significant pre–post difference for the control group; although, the treatment group showed a significant improvement on the first four items. These items seem to be *characterological* (e.g., LES lacked the proper attitude); the remaining items showed slight but nonsignificant improvement, and were more *behaviorally* referenced (e.g., LES lacked follow–through or had problems attending to the task).

Table 13

Group Changes Across Time on Average Dispositional Attributional Bias and Percentages Making Highly Biased Statements

In problematic workplace situations, to what degree do the manager's statements indicate a belief that . . .						
	TRT			CTL		
	MEAN DIFF	PRE	POST	MEAN DIFF	PRE	POST
		High	High		High	High
1. LES lacked initiative to complete job duties.	-.7*	45.5	24.0	.3	34.4	43.8
2. LES lacked follow-through to complete job duties.	-.5	45.0	36.0	.3	37.6	46.9
3. LES had difficulty following verbal and/or written instructions.	-.5	51.5	37.0	.2	37.6	43.7
4. LES had problems paying attention to details of the task.	-.2	45.0	42.0	-.2	46.9	43.7
5. LES was self-interested, not a team player.	-.9*	51.6	27.0	.2	43.8	50.0
6. LES lacked the proper attitude to perform effectively on the job.	-.8*	63.6	39.0	.3	56.3	65.6
7. LES lacked personal characteristics to perform effectively on the job.	-1.2*	57.5	24.0	-.1	31.3	37.6

Note: Percent of respondents who were rated 3 or 4 (High) by raters using the 5-point scale (see Appendix I) on managers' protocols. *Significant at $p \leq .05$.

In contrast, control managers showed an increase of 6% to 10% in making highly dispositional attributions about LES on all but one statement (see Table 13, item 4, a 3% drop). Significantly, a smaller percentage of treatment group managers made highly internal attributions about LES after training. Decreases in attributions ranged from 22% to 34% for four items that showed a significant mean difference, and from 3% to 15% on the remaining three items. An eighth item was omitted to increase reliability of the scale.

Situational-External

Table 14 provides comparisons of average managers' situational attributional bias (e.g., lack of training, information, or supervision) of LES in problematic workplace situations. There was no difference between treatment and control groups on average scale scores ($t = -.7, p = .52$). In addition, there was no significant change, pre to post, for either the control group ($t = .7, p = .52$) or the treatment group ($t = 1.1, p = .29$).

An ANCOVA on posttest means, adjusted for pretest scores, showed no significant difference between the groups ($F = 0.0, p = .96$) for managers' situational attributional bias. In all cases the means were quite low, averaging .5 for the control group and .4 for the treatment group, with a constant average variance of .6 across all of the means. There is very little evidence that external attributions were made at all; this is reflected by the number of zeros raters used for assessing managers' protocols on this dimension.

Table 14

Comparisons of Average Managers' Situational Attributional Bias

N = 65	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
Treatment Group N = 33	.3 (.6)	.4 (.5)	t = 1.1 p = .29	.5
Control Group N = 32	.4 (.6)	.5 (.6)	t = .7 p = .52	.4
Group Comparison³	t = -.7 p = .52			F = 0.0 p = .96

Note: ¹Mean scores from six items ranging from 0 = low to 4 = high, where high represents managers' attributing blame on factors beyond subordinates' control in problem situations. ²Paired t-tests comparing pre and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

Table 15 summarizes scores of six items on the situational attribution scale that could range from 0 = low to 4 = high. Higher scores imply a predisposition on the part of managers to attribute problems to external factors beyond LES' control. Considering individual item means on the external attribution scale, there were no significant differences, pre to post, for either the control group or the treatment group. Pre-post changes in percentages of control managers who had high external scores showed no increase or small increases of about 3% in making such statements about LES for all but one item on this scale (see Table 15, item 6, a 3% drop). In contrast, for this same item (i.e., *LES was affected by constraints of the organization*), treatment managers showed a relatively substantial gain (18%) which made sense in light of budget deficits. Treatment managers showed little (3%) or no increases on three of the same items as the control group, except in two cases that may be interrelated.

In the first of these two cases, a lower percentage (6%) of managers stated after treatment *LES lacked supervision to do the work this job required* (item 2). In the second of the two cases, there was a tendency toward a significant item means ($t = 2.0, p = .0533$) for *LES lacked the information to adequately complete the work* (item 1). A relationship between items 1 and 2 may have occurred because treatment managers focused during training on interpersonal feedback skills for generating and clarifying information, which they successfully did, in feedback sessions with LES. Presumably, the post-training treatment group placed a higher priority than the control group on supplying information to and interacting frequently with LES.

Table 15

Group Changes Across Time on Average Situational Attributional Bias and Percentages Making Highly Biased Statements

In problematic workplace situations, to what degree do the manager's statements indicate a belief that . . .						
	TRT			CTL		
	MEAN DIFF	PRE	POST	MEAN DIFF	PRE	POST
		High	High		High	High
1. LES lacked the information to adequately complete the work.	.5	6.0	12.1	-.0	12.5	12.5
2. LES lacked supervision to do the work this job required.	-.2	9.1	3.0	.2	6.3	9.4
3. LES lacked training to do the work this job required.	.2	6.0	9.1	.2	12.6	15.6
4. LES had a workload that was more than one person could be expected to do.	.2	6.1	9.1	0.0	3.1	3.1
5. The task was unrealistic.	-.1	3.0	3.0	.2	3.1	6.3
6. LES was affected by constraints of the organization.	.1	3.0	21.3	-.2	9.4	6.2

Note: Percent of respondents who were rated 3 or 4 (High) by raters using the 5-point scale (see Appendix I) on managers' protocols.

Though not statistically significant, there were signs of change where managers assigned external causes in problem situations, rather than routinely blaming subordinates personally. Subsequently, as a result of engaging in frequent interactions with LES, managers began to look beyond employees, in some cases, and beyond lack of supervision to fault lack of information in the system as a key factor blocking LES' performance. Again, to increase reliability of the scale, a seventh item was omitted.

Feedback Skills

Scores from the specificity, empathy, and inquiry feedback scales provided measures of managers' use of these skills in their protocols. These scores are used to answer the third research question: What are the effects of training in feedback on managers' use of three key feedback skills with employees?

Specificity

Table 16 provides comparisons of average managers' use of specificity in problematic exchanges with LES. There was no difference between treatment and control groups on average scale scores ($t = .5$, $p = .63$). Also, there was no significant change, pre to post, for either the control group ($t = -.8$, $p = .45$) or the treatment group ($t = 1.5$, $p = .14$). However, an ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 5.7$, $p = .02$). Although, in all cases the means were relatively low with an average of about 1.3 for the control group, and a change from 1.4 to 1.7 for the treatment group, indicating that the treatment appears to have been somewhat effective for specificity.

Table 16

Comparisons of Average Managers' Use of Specificity in Feedback

N = 65	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
Treatment Group N = 33	1.4 (.8)	1.7 (.9)	t = 1.5 p = .14	1.7
Control Group N = 32	1.3 (.9)	1.2 (.8)	t = -.8 p = .45	1.2
Group Comparison³	t = .5 p = .63			F = 5.7 p = .02

Note: ¹Mean scores from nine items ranging from 0 = low to 4 = high, where high represents managers' frequent use of specificity in feedback interactions with poor performers. ²Paired t-tests comparing pre and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

Table 17 provides the mean pre to post difference and percent of managers whose statements were rated as demonstrating specific feedback behaviors in discussions with their ineffective subordinates. Scores on nine items in the scale could range from 0 = low to 4 = high. Higher scores imply that managers more frequently used specificity to make their interpersonal communication with LES explicit and concise.

Considering individual item means on the specificity scale, there was a significant difference, pre to post, on one statement (Table 17, item 5) for which there appears to be an inverse relationship between the comparison groups. For this item--*Informed LES of the policies, rules or regulations that applied in this situation*--there was a significant decline (13%), pre to post, for the control group; while there was a significant improvement (24%), pre to post, for the treatment group. Of all the specificity scale items, this one is particularly relevant for these managers whose job it is to provide policy guidelines regulating task performance; this is particularly the case in problem situations. Treatment group managers were especially sensitive to this issue because of downsizing occurring in their organizations; in fact, discussion in training sessions often hinged on the importance of providing policy guidelines during the County government's budget crisis. Perhaps, without the advantage of training, control group managers may have disregarded as unnecessary providing policy information on staff reduction they thought their employees already knew and understood.

Table 17 Group Changes Across Time on Average Use of Specificity in Feedback And Percentages of Interactions Using Highly Specific Statements

In problematic workplace situations, to what degree do the manager's statements indicate that the manager . . .						
	TRT			CTL		
	MEAN DIFF	PRE	POST	MEAN DIFF	PRE	POST
		High	High		High	High
1. Detailed the information LES needed to get the job done.	.3	27.3	36.4	-.1	25.0	31.2
2. Specified the goals of the task.	.4	21.2	33.3	-.3	31.3	21.9
3. Described expectations explicitly.	.3	45.5	60.6	-.4	43.7	34.4
4. Identified data sources.	.2	36.4	48.4	.0	37.5	37.5
5. Informed LES of the policies, rules or regulations that applied in this situation.	.7*	18.2	42.5	-.6*	21.9	9.4
6. Outlined the critical procedures for LES to follow.	-.1	33.3	24.2	.1	12.6	18.7
7. Explained the rationale to LES for using procedures.	.3	27.3	39.4	-.1	28.1	18.7
8. Demonstrated how to perform the duties of the job.	.1	3.0	6.0	-.1	3.1	0.0
9. Provided feedback regarding performance of duties.	.1	51.5	48.4	.2	40.7	46.9

Note: Percent of respondents who were rated 3 or 4 (High) by raters using the 5-point scale (see Appendix I) on managers' protocols. *Significant at $p \leq .05$.

Moreover, for the majority of scale items, pre to post changes in percentages of control managers were down from 3% to 13% for use of specificity. However, increases for the control group were constant at 6% for 3 items (e.g., detailing, outlining, and providing LES feedback).

In comparison, treatment group managers showed an increase in specificity for all scale items except for two; these were items for which the control group showed a small increase. The first of these--*Provided feedback regarding performance of duties* (Table 17, item 9) usually refers to evaluating completed tasks. While performance feedback is important, this current treatment centered on process feedback (not summary feedback) for detecting and correcting errors before task completion.

A second decrease (9%) of the treatment group was for *Outlined the critical procedures for LES to follow* (item 6). This item appears to be especially meaningful as it relates to item 7--*Explained the rationale to LES for using procedures*--for which treatment group managers showed a 12% improvement. In this case, explaining the rationale would seem to be more substantively meaningful than merely outlining procedures for LES. Overall, the treatment group showed an improvement (13%) in 7 of 9 scale items for giving specific feedback to LES.

Empathy

Table 18 provides comparisons of average managers' use of empathic feedback in problematic exchanges with LES. There was a difference found at pretest between treatment and control groups on average scale scores ($t = 2.4, p = .02$).

Table 18**Comparisons of Average Managers' Use of Empathy in Feedback**

N = 65	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
Treatment Group N = 33	1.2 (1.1)	1.7 (1.1)	t = 1.8 p = .08	1.6
Control Group N = 32	.7 (.7)	.9 (.9)	t = 1.8 p = .08	1.0
Group Comparison³	t = 2.4 p = .02			F = 6.3 p = .02

Note: ¹Mean scores from seven items ranging from 0 = low to 4 = high, where high represents managers' frequent use of empathy in feedback interactions with poor performers. ²Paired t-tests comparing pre and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

A difference at pretest (refer to Table 18) between the comparison groups is probably due to a random effect because it does not appear to be attributable to any other specific cause. Also, there was no significant change, pre to post, for either the treatment group or control group ($t = 1.8$, $p = .08$) on this dimension.

An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 6.3$, $p = .02$) for empathy. The means were relatively low, with an average of .8 for the control group, and a change from 1.2 to 1.7 for the treatment group. This change, pre to post, indicates the treatment was moderately effective for the treatment group; although, the control group showed some movement as well. One interpretation for this movement could be a reaction to the pretest (i.e., sensitization); a second could be natural responses to environmental stress in the workplace. Additionally, a predominance (60%) of comparison group managers in the sample were recruited from the County's Human Services division. This, too, may explain the presence of empathy in control group managers who in number (19) equaled the treatment group managers employed by Human Services agencies.

Table 19 provides the mean pre to post difference and percent of managers whose statements were rated as displaying empathic feedback while interacting with LES. Scores on seven items in the scale could range from 0 = low to 4 = high. Higher scores imply that the supervising managers more frequently use empathic feedback in their communication demonstrating a desire to understand LES' problems.

**Table 19 Group Changes Across Time on Average Use of Empathy in Feedback
And Percentages of Interactions Using Highly Empathic Statements**

In problematic workplace situations, to what degree do the manager's statements indicate that the manager . . .						
	TRT			CTL		
	MEAN DIFF	PRE	POST	MEAN DIFF	PRE	POST
		High	High		High	High
1. Attempted to understand LES' point of view.	.4	27.3	39.4	.6*	3.1	25.0
2. Let LES know of her/his concern.	0.0	33.3	45.5	-.2	40.7	31.3
3. Let LES know that s/he cared about helping LES succeed.	.8*	10.2	39.4	.3	6.3	12.5
4. Demonstrated a willingness to listen to LES' questions, ideas or concerns.	.1	39.4	39.4	.3	12.5	29.1
5. Let LES know s/he was sensitive to LES' needs and feelings.	.5	9.1	21.3	-.1	6.3	6.3
6. Let LES know that s/he was open to discuss problems that impacted work.	.5	27.2	33.4	.3*	6.3	15.6
7. Let LES know that s/he supported LES' efforts to perform tasks effectively.	1.0*	21.3	42.4	.2	18.8	9.4

Note: Percent of respondents who were rated 3 or 4 (High) by raters using the 5-point scale (see Appendix I) on managers' protocols. *Significant at $p \leq .05$.

Considering individual item means on the empathy scale (see Table 19), there were two significant differences each, pre to post, for the comparison groups; however, these were on different scale items. For item 1--*Attempted to understand LES' point of view*--there was a significant increase (22%) for the control group. There was a second significant improvement (9%) for the control group on item 6--*Let LES know that she/he was open to discuss problems that impacted work*. In contrast, significant increases in empathy for the treatment group were for item 3--*Let LES know that she/he cared about helping LES succeed* (29%), and item 7--*Let LES know that she/he supported LES' efforts to perform tasks effectively* (21%).

Changes, pre to post, in percentages of treatment group managers who had high empathic scores showed an increase (6% to 29%) in making such statements on virtually all scale items. In comparison, changes, pre to post, in percentages of control group managers increased on only four items from a low of 9% to a high of 22%, while decreasing on another item (Table 19, item 2, a 9% drop).

Although not statistically significant, the control group percentages increased (17%) for item 4--*Demonstrated a willingness to listen to LES' questions, ideas, or concerns*. This item and the two significant statements (items 1 and 6) for the control group seem to represent an *action-oriented* approach (i.e., attempted to understand, and open to discuss). In contrast, managers after treatment showed in their significant mean scores (items 3 and 7), a more multifaceted use of empathy in a *feelings-oriented* approach (i.e., letting LES know of h/his support and concern).

For reasons given previously it was anticipated that empathic expression would surface in the control group. However, the data suggest that training in feedback skills broadened the versatility of treatment group managers for using empathic expression.

Inquiry

Table 20 presents comparisons of average managers' use of inquiry in problematic feedback interactions with subordinates. These scores are used, with those of specificity and empathy, to answer the third research question: What are the effects of training in feedback on managers' use of three key feedback skills with employees?

Initially, there was no difference at pretest between treatment and control groups on average scale scores ($t = 1.3, p = .19$). There was no significant change, pre to post, for either the control group ($t = -.8, p = .41$) or treatment group ($t = 1.3, p = .19$). An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 9.1, p = .004$) for inquiry. However, in all cases the means were relatively low with a constant average of about .6 for the control group, and a change from .9 to 1.2 for the treatment group.

Table 21 provides the mean pre to post difference and percent of managers whose statements were rated as indicating a spirit of inquiry while interacting with their LES in problematic situations. Scores on seven items in the scale could range from 0 = low to 4 = high. Higher scores imply that managers more frequently used inquiry in feedback exchanges with employees (e.g., seeking clarification or confirmation).

Table 20

Comparisons of Average Managers' Use of Inquiry in Feedback

N = 65	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
Treatment Group N = 33	.9 (1.1)	1.2 (1.0)	t = 1.3 p = .19	1.2
Control Group N = 32	.6 (.9)	.5 (.7)	t = -.8 p = .41	.6
Group Comparison³	t = 1.3 p = .19			F = 9.1 p = .004

Note: ¹Mean scores from seven items ranging from 0 = low to 4 = high, where high represents managers' frequent use of inquiry in feedback interactions with poor performers. ²Paired t-tests comparing pre and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

Table 21

Group Changes Across Time on Average Use of Inquiry in Feedback and Percentages of Interactions Using Highly Inquiring Statements

In problematic workplace situations, to what degree do the manager's statements indicate that the manager . . .						
	TRT			CTL		
	MEAN DIFF	PRE	POST	MEAN DIFF	PRE	POST
		High	High		High	High
1. Asked for LES' perspective of what occurred.	.2	42.4	45.5	-.3	28.1	18.8
2. Asked LES for clarification.	-.0	39.4	36.4	.3	21.9	18.8
3. Confirmed that LES understood the parameters of the job.	.4	9.1	27.2	-.2	9.4	3.1
4. Probed for information that would explain why LES held a particular view.	.2	12.1	18.2	-.1	6.3	3.1
5. Probed for information that would explain why LES behaved in a certain way.	.6*	6.0	24.3	.1	12.5	6.2
6. Asked for responses from LES that s/he understood the concerns about her/his work.	.2	21.2	21.2	-.0	12.5	6.3
7. Asked for responses that LES agreed with the stated concerns about her/his work.	.5	6.1	24.3	-.4	15.6	0.0

Note: Percent of respondents who were rated 3 or 4 (High) by raters using the 5-point scale (see Appendix I) on managers' protocols. *Significant at $p \leq .05$.

Considering individual item means on the inquiry scale (refer to Table 21), there was no significant difference, pre to post, for the comparison groups. However, a higher percentage of treatment managers made inquiring statements on virtually all seven scale items, while the control group decreased its use of inquiry for all scale items ranging from 3% to 16%. Treatment group managers showed an 18% improvement on items 3, 5, and 7 (i.e., confirming, probing, and asking for responses from LES). Statistical significance ($t = 2.0$, $p = .05$) for item 5--*Probed for information that would explain why LES behaved in a certain way*--is especially meaningful as it reflects treatment group managers' heightened use of inquiry with employees.

Because inquiry is at the core of two-way feedback when correctly applied, it is important to examine differences between comparison group percentages. It is necessary to remember that treatment group managers were trained to use inquiry in two-way feedback interactions to probe for detailed responses. An example on the inquiry percentages scale (Table 21) which illustrates this dichotomy between the groups is item 7--*Asked for responses that LES agreed with the stated concerns about her/his work*. While treatment group managers showed an 18% improvement in the use of inquiry for this item, control group managers showed a substantial drop (16%).

Of the feedback skills highlighted in this section, presumably, inquiry is the most naturally occurring and frequently applied skill in the workplace. If this were true, control group managers could be expected to display an increased use of inquiry.

Instead, declining control group managers' percentages on every scale item (refer to Table 21) do not support this "use of inquiry" assumption. In stark contrast, there was a significant difference and meaningful increase for treatment group managers use of two-way inquiry with their LES as a result of training.

Feedback Self-Assessment

It is also noteworthy to consider that of all instruments used to gather data in this study, the feedback self-assessment was the only measure that directly asked for managers' self-perceptions and self-evaluations for use of feedback. Therefore, this fact should be kept in mind while examining the results of this measure.

Table 22 provides comparisons of average managers' consistent use of feedback behaviors in the workplace according to their self-assessments. Initially, there was no difference between treatment and control groups on average scale scores ($t = 1.1$, $p = .28$). There were significant changes, pre to post, for the treatment group ($t = 5.3$, $p = .0000$) and the control group as well ($t = 2.2$, $p = .04$). An ANCOVA on posttest means, adjusted for pretest scores, showed a significant difference between the groups ($F = 12.9$, $p = .001$) for consistent use of these 15 feedback behaviors. However, the control group means were low with a constant average of 1.5 across the means, while the treatment group means changed from 1.5 to 1.7. This indicates that according to treatment managers' self-reports they were *selectively consistent* using feedback in a meaningful way with employees on nearly half of the items (i.e., 7 out of 15 on the instrument).

Table 22

Comparisons of Average Managers' Use of Feedback Behaviors (Self-Assessment)

N = 65	PRE Mean¹ (S.D.)	POST Mean¹ (S.D.)	PRE-POST Comparisons²	ANCOVA Adjusted Posttest Means
Treatment Group N = 33	1.5 (.3)	1.7 (.2)	t = 5.3 p = .0000	1.7
Control Group N = 32	1.4 (.3)	1.5 (.3)	t = 2.2 p = .04	1.5
Group Comparison³	t = 1.1 p = .28			F = 12.9 p = .001

Note: ¹Mean scores from fifteen items ranging from 1 = low to 30 = high, where high represents managers' consistent use of 15 feedback behaviors with their employees. ²Paired t-tests comparing pre and post scores. ³Independent t-test comparing groups on pretest, and ANCOVA comparing adjusted posttest means.

Table 23 provides the mean pre to post difference and percent of managers whose self-assessment showed a consistent use of feedback behaviors with employees. Scores on 15 items in the feedback self-assessment scale could range from 0 = low to 2 = high. Higher scores imply a consistent use of feedback behaviors with employees. Considering individual item means on this scale, there was no significant difference, pre to post, for the control group. In contrast, the treatment group showed their greatest consistency (38%) in using feedback for item 1--(i.e., *I pick the right time and place to give feedback to employees*). Moreover, treatment group managers showed significance for six additional behaviors on the scale (i.e., items 3, 5, 10, 13, 14, and 15).

For one of these statements--*I provide feedback and time to question in meetings* (item 5)--the treatment group managers showed considerable improvement (28%); they also demonstrated an equally improved consistency (22%) for using the other four feedback behaviors (i.e., items 3, 13, 14, and 15) on the scale. Even though these data indicate some apparent inconsistencies of treatment group managers' applications, the items that were significant substantiate effects of feedback skills training methods. Furthermore, because of an emphasis during training on feedback within the team setting, a difference in perspective may account for sizable inconsistencies between the groups. For example, there was a -18% shown for the control group compared to a significant 18% improvement for the treatment group on item 12--*I encourage employees to ask questions by not rushing or interrupting them*.

Table 23 Group Changes Across Time on Average Use of Feedback Behaviors

And Percentages of Highly Consistent Feedback Interactions (Self-Assessment)

	TRT			CTL		
	Mean Diff	Pre	Post	Mean Diff	Pre	Post
		High	High		High	High
1. I pick the right time and place to give feedback to employees.	.4*	46.9	84.4	.2	39.4	54.5
2. I limit my feedback to specific skills employees can do something about.	.2	53.1	78.1	.2	39.4	54.5
3. I avoid giving one-way feedback and inquire about what concerns employees.	.3*	56.3	78.1	.2	48.5	57.6
4. I provide positive as well as negative feedback to motivate employees.	.1	78.1	87.5	.1	57.6	57.6
5. I provide individuals feedback and time to question in group meetings.	.5*	53.1	81.3	.1	42.4	57.6
6. When giving feedback I focus on task and behaviors, not employees' personalities.	-.0	71.9	68.8	.1	69.7	75.8
7. I encourage two-way feedback to clarify what people need to know.	.1	75.0	78.1	.0	57.6	54.5
8. I avoid saving up criticisms to deliver at one time.	.2	46.9	56.3	-.1	54.5	45.5
9. When giving feedback I try to understand things from the other's point-of-view.	.2	65.6	81.3	.1	72.7	78.8
10. I avoid giving feedback if I am angry, busy, or tired.	.2*	25.0	40.6	-.0	39.4	39.4
11. I refrain from using sarcasm or feedback to prove my point.	.3	71.9	65.6	.1	51.5	54.5
12. I encourage employees to ask questions by not rushing or interrupting them.	.2	46.9	65.6	-.2	51.5	33.3
13. I provide detailed feedback using verbal direction and written instruction.	.3*	34.4	56.3	.1	33.3	39.4
14. I help employees understand my feedback especially when they are upset.	.2*	46.9	68.8	.1	69.7	78.8
15. I promote two-way feedback in the team setting to promote member interactions.	.3*	50.0	71.9	.1	45.5	54.5

Note: Percent of respondents who were rated 3 or 4 (High) by raters using the 5-point scale (see Appendix K) on managers' protocols. *Significant at $p \leq .05$.

This could well reflect the treatment's focus on group process methods because, in team meetings, Feedback Process Analysis (FPA) not only promotes but requires employee questions and manager responses until each team member has participated.

Additional information was collected from the treatment group on this instrument. Respondents made Likert ratings (1 = low and 7 = high) on three statements regarding effectiveness of training (refer to Appendix E, Part II): (a) I have held a feedback session with my Least Effective Subordinate, and I believe LES is more effective than before the training (Mean = 4.7, S.D. = 1.3); (b) I have held a feedback session with my work group and I believe my team is more effective than before the training (Mean = 4.9, S.D. = .9); and, (c) I have used group process methods, and I believe group process feedback improves team effectiveness (Mean = 5.9, S.D. = 1.1).

A number of treatment group managers qualified their ratings of LES (at 4.7) by stating LES was more participatory than before (i.e., characterological) traits, but not necessarily more effective in task performance (i.e., behavioral) factors. In addition, several managers made the comment—"It's too soon to judge!" Managers evaluated their teams as more effective (at 5), and rated their demonstrated self-efficacy in team management skills the highest (6 of a possible 7) for applying the group process feedback methods. This was not surprising because feedback skills training focused on fostering leadership and self-efficacy, first, in manager peer-teams in class, and second, in subordinate team applications at the work site.

Summary of Results

This study was designed to determine cause-effect relationships of training in feedback in response to three research questions regarding managers' (a) perceptions of their work group's effectiveness, (b) attributional bias of their Least Effective Subordinate, and (c) use of feedback skills for influencing their interpersonal relations with employees. This section will report findings to each research question examined in this chapter. It is useful to summarize these findings before drawing conclusions from this study; refer to Table 24 which summarizes significant differences and meaningful relationships between the dependent variables.

Research Question 1

There was a significant difference between the groups for treatment group managers' perceived effectiveness of their work groups on the Dominance and Friendliness dimensions. This difference can be explained by effects of the treatment on the amount of influence and responsibility managers exerted while interacting with employees in the team setting. The treatment group managers' aggregated *MOST EFF* profiles (i.e., their ideal for effectiveness), pre (2.1U, 6.2P, and 8.6F) to post (3.4U, 7.9P, and 8.5F) supports the effects of the treatment for Dominance and Friendliness, and is consistent with SYMLOG's normative profile (3U, 6.4P, 6.4F). In comparison, the control group managers' aggregated *MOST EFF* profile, pre to post, remained exactly the same for Dominance (2.4U) and Friendliness (6.9P), but decreased for Task-Oriented (8.7F to 7.7F) on this dimension.

Table 24 Summary of Significant and Meaningful Relationships

Variables^{1, 2, 3} TRT/ N = 33	ANCOVA⁴	
Teamwork Effectiveness Dominance¹	F = 18.3	p = .0001
Teamwork Effectiveness Friendliness¹	F = 5.4	p = .02
Manager Effectiveness Dominance¹	F = 11.1	p = .002
Manager Effectiveness Friendliness¹	F = 5.7	p = .02
MES Effectiveness Dominance¹	F = 11.6	p = .001
MES Effectiveness Friendliness¹	F = 4.1	p = .05
LES Effectiveness Dominance¹	F = 3.3	p = .08
LES Effectiveness Friendliness¹	F = .1	p = .73
Dispositional-Internal Attributional Bias² of LES	F = 14.5	p = .0003
Situational-External Attributional Bias² of LES	F = .0	p = .96
Specificity in Feedback³ with LES	F = 5.7	p = .02
Empathy in Feedback³ with LES	F = 6.3	p = .02
Inquiry in Feedback³ with LES	F = 9.1	p = .004
Feedback Behavior Manager Self-Assessment³	F = 12.9	p = .001

Note: ¹Treatment group dependent variables for *Research Question 1*. ²Treatment group dependent variables for *Research Question 2*. ³Treatment group dependents for *Research Question 3*. ⁴ANCOVA for statistical significant difference between the comparison groups.

There was no significant difference between the groups for Task–Orientation, nor was this expected because feedback training was not aimed at increasing the task dynamic. Additionally, because of severe conditions at work, previously described in this chapter, managers came to the pretest already highly Task–Oriented. While the focus of training was not on increasing task efficiency, it did seek to improve communication and interpersonal relations between manager and subordinates. Importantly, the training sought to improve managers' leadership and self–efficacy in team management. The training also sought to increase employees' collaboration and participation on the team, which it succeeded in doing.

These results support the interpretation that, as a result of training in feedback, managers perceived themselves and their work groups to be more effective in at least two aspects. The increase in Dominance suggests that managers perceived that they, as well as subordinates, engaged in behavior that reflected a greater sense of responsibility for individual and team activity. An increase in Friendliness suggests a greater trust level and quality of interaction as a result of more effective feedback.

Although the treatment may have had a small effect on managers' perceptions of their LES, the between group difference was not significant due to great variability in the scores. Feedback may have confirmed managers' conclusions about LES. If LES did not respond with efforts to improve performance, managers would be expected to perceive LES as even less effective in their performance than before the training.

There was a significant difference between the groups for the treatment group managers' perceptions of MES on the Dominance and Friendliness dimensions. The treatment had a moderately-large effect on managers' perceptions of their MES minus LES. This can be explained by managers' perceptions of their More Effective Subordinates taking responsible roles in team activities and actively working together to achieve common team and organizational goals.

Research Question 2

Of the indicators for attributional bias, there was a significant difference between the groups on the internal dynamic demonstrating that these supervisors blamed their Least Effective Subordinate less when rated on scale items that implied characterological, rather than behavioral, traits after treatment. Alternatively, a significant difference for managers' external attributions of their employees did not occur in the comparison groups. These findings reinforce the explanation that training in feedback can intercept managers' automatic and causal attributional bias of LES. In addition, significance shown for internal and not for external attribution as well, supports the use of two separate scales rather than one internal-external continuum.

Research Question 3

A significant difference was found for the treatment groups' use of specificity. This significant scale item--*giving feedback on policy guidelines*--was especially meaningful, particularly since the control group showed a decrease at the same time when feedback on County policy guidelines would seem to be extremely relevant.

There was also a significant difference for empathy between the groups. In this regard, the treatment appears to have had a moderately meaningful effect on managers' use of empathy. However, it is difficult if not impossible to separate effects of environmental factors from those of feedback skills training. Suffice it to say, the control group showed a significant change, pre to post, on two behavioral-oriented scale items--*for attempting to understand LES' viewpoint, and openness to discuss problems that impacted LES' work*. This effect may have been contributed to by pretest sensitization in combination with environmental factors. In contrast, the treatment group showed a significant pre to post change on two feelings-oriented scale items--*for letting LES know she/he cared about. . . . and supported LES' efforts to succeed*. This indicated an expanded awareness for understanding and applying empathy with greater versatility as a result of the feedback treatment.

For inquiry, there was a significant difference between the groups although there was a moderately small treatment effect. It is highly likely that managers after treatment thought they were consistently applying two-way inquiry when they were not. This may be so because what often passes in the workplace for two-way inquiry is often the use of one-way messages instead. Possibly, the more modest effects of specificity and inquiry reflect the reality of short-term treatment. Lengthier treatment may have resulted in heightened awareness, extended practice sessions, increased skills applications, and therefore, greater treatment effects.

A significant difference between the groups was also found for managers' consistent use of self-reported feedback which showed that the treatment group was selectively consistent on about half (7) of the items. Because the treatment focused on team feedback, these items were rated primarily for use in groups; therefore, the control group without training may have assumed feedback to mean person-to-person for most of the items. While personal feedback is important (e.g., disciplinary cases), the most unique contributions of this training is its use of two-way feedback in the team setting, and group process methods for transporting feedback to the workplace.

No statistically significant relationships between the groups on personal demographic and background variables were found, demonstrating the equivalence of the treatment and control groups. The search for possible cause-effect relationships of the treatment ranged from small to relatively large meaningful effects. For example, there were large effects for managers' perceptions of their groups' effectiveness for Dominance, and a moderate effect for Friendliness. For managers' leadership effectiveness, there was a moderately large effect for Dominance, and a moderate one for Friendliness. This indicates successful effects of training in feedback, at least for the short-term, on managers' enhanced perceptions of their workers in team activities, and of themselves as leaders and facilitators of their subordinate teams. Significantly, this treatment opens up interesting training possibilities for effectively intercepting managers' attributional bias, and affords opportunities for enhancing informal and incidental workplace learning in the team setting as well.

CHAPTER V

SUMMARY OF THE STUDY

At the heart of a learning organization is a shift of mind--from seeing ourselves as separate from the world to connected to the world, from seeing problems as caused by someone or something "out there" to seeing how our own actions create the problems we experience.

(Senge, 1990a, pp. 12-13)

This chapter is organized into five sections. First, there are conclusions based on results from the previous chapter, and in light of past research, to determine the results that answer three research questions: What are the effects of training in feedback on managers' (a) perceived effectiveness of their work groups, (b) attributional bias of their Least Effective Subordinate, and (c) use of three key feedback skills with employees? The following four sections will provide implications of the findings, recommendations for professional practice, recommendations for future research, and a final summary.

The findings in this study are based on measures that were chosen and developed to insure a high degree of reliability. SYMLOG is well documented and validated in small group research. The feedback and attribution scales designed for this study were carefully constructed, pilot-tested, analyzed for reliability, and used in a blind rating procedure. Only a feedback self-assessment instrument measured directly managers' self-perceptions and self-reports.

Participants in this study were not laboratory specimens but real people who were confronted by pressures of downsizing while they were learning feedback in class and applying skills at the work site. Their organizations, like many others across the country, were struggling with how to provide quality client service with fewer resources than before. One way suggested in this research is promoting teamwork effectiveness through feedback skills training applied in subordinate work groups. A second way suggested is dealing with managers' dysfunctional attributional bias through feedback skills training applied in peer-teams in the workshop.

In this experimental field study, using a pretest–posttest control group design, 65 supervising managers were randomly assigned to two comparison groups (i.e., 33 in treatment and 32 in control). Summarily, this study was designed to test the effects of training in feedback on improving interpersonal communication and relations between managers and subordinates in the workplace. Participating managers supervised work groups of 5 to 10 directly reporting subordinates in 22 local government agencies. Four feedback skills training sessions, totaling 23 hours, were conducted one day each week over four consecutive weeks. Workplace assignments using feedback skills with employees helped managers transport skills and methods to the work site during the month of training. Data was sought to confirm that training in feedback affected a change in managers' perceptions. These data, summarized in the last section of Chapter 4, are discussed as they relate to three research questions in this chapter's first section under the subheading, *How Effective Was the Training?*

The following section not only draws conclusions from results, but it makes comparisons to past research as it addresses this study's key issues of managers' perceived teamwork effectiveness of their work groups, biased perceptual-judgments of their Least Effective Subordinate (LES), and use of feedback skills with employees.

Conclusions and Comparisons to Past Research

Conclusions drawn from this study can perhaps be discussed most appropriately by reversing the order of the central issues which reflect the research questions. To consider feedback skills first is a necessary reversal; without feedback there would be no interception of managers' bias, nor a difference in managers' perceptions of their work groups as it occurred in this study. Therefore, the crux of this research depended on a treatment that would produce a significant difference in the comparison groups, and a meaningful experience for treatment group managers who applied feedback skills training methods in their organizations.

Why Feedback?

It is somewhat surprising that earlier concerns for lack of feedback (Couger & Zawacki, 1980; Hackman, 1983; Hackman & Oldham, 1975) have not, until now, occasioned research to test the effects of feedback skills training on superior-subordinate relations in the workplace. Yet, the robust connection of feedback has been affirmed over the years between employee motivation, job performance, and feedback from managers (Hackman, 1987; Jablin, 1979, 1985; Locke et al., 1968; Locke et al., 1981; Nadler, 1977, 1979; Weisbord, 1985).

Treatment managers applied feedback skills training in the workplace to encourage two-way interactions with employees through coaching and instructing, questioning, exchanging information, listening to ideas, and reflecting/responding to others' requests. In this manner, as in this study, feedback at times initiated while it also maintained continuous, informal learning in the workplace (Brookfield, 1987; Deming, 1986; Drucker, 1988; Kouzes & Posner, 1990; Marsick & Watkins, 1990; Nadler, 1977; Wiswell, 1987, 1990).

The operational concept of feedback builds upon the research of others. In this study, feedback is defined as--information given to and sought by people that helps them make decisions, follow directions, detect/correct errors, and confirm beliefs about themselves and others. In organizations, interactive feedback is a moderator of participative decision making, problem solving, and information transmission (Argyris, 1964, 1982; Bales et al., 1979; Gioia & Sims, 1986; Hackman, 1987).

Three Key Feedback Skills

For purposes of this study, managers were trained in three key feedback skills and given a rationale for why these particular skills were selected for training. It was critical that these skills were carefully defined and understood before attempting to apply them. This was important because feedback is often carelessly used and ambiguously defined in supervisory training--no wonder lack of feedback and poor quality feedback often prevail in the work setting. Past research has validated three feedback skills designated as *key* skills in this study.

Specificity. This skill strengthens the impact of feedback; defines and accurately conveys information; prevents misperceptions and inflated self-perceptions of performance; leaves less room for distortion; and is harder to deny (Ilgen et al., 1979; Nadler, 1979; Torbert, 1972; Wood & Mitchell, 1981). However, what passes for specific feedback communication in organizations is often vague and disjointed, not clearly defined and precise.

Empathy. This skill imparts authenticity to relationships through promoting mutual perspectives; depends on active listening and sharing with others; and signifies patience, understanding, and supportiveness without dominating or evaluating others (Gibb, 1961; Jablin, 1978; Smircich & Chesser, 1981). Environmental workplace conditions often set the stage for productive empathic expression.

Inquiry. This skill can open up communication; confirm data; affirm relationships; and connect error detection to strategies and assumptions for performance. Inquiry can also provide incremental learning based on openness and trust (Argyris & Schön, 1978; Ashford & Cummings, 1983; Ilgen et al., 1979; Weisbord, 1985). Although, what passes as inquiry for many workplace interrogators is "Why? or Why not?" queries that do not seek replies. Action learning (Revens, 1980) in the workplace depends on constructive uses of inquiry.

Managers Report Self-Efficacy Using Feedback Skills. In Part II of the self-assessment, managers made Likert ratings for LES, team, and self-efficacy. These scores were a direct result of training and application of skills during the intervention.

The goal for managers' assignments in feedback sessions with LES was to set cooperative task and interpersonal goals. Post-training observations by managers of LES ranged from "no change," to "some change," or "it's too soon to judge." Interestingly enough, where managers' view of LES had not changed, their strategy for dealing with LES had.

In the case of positive change, managers explained that LES was probably perceived as improving because they were now actively seeking contact with LES; whereas, before training the tendency was to avoid LES instead. Even where no change was expected, LES' behavior was viewed by managers in a more benign way rather than as a source of irritation. A direct application of feedback skills in the workplace was crucial to the learning process and results of this study. However, there was observed variance in the practice of group process methods during the training that likely was reflected in the managers' application of feedback skills with subordinate groups.

Significantly, in problem situations with LES, managers successfully applied the feedback treatment. Managers helped LES (a) understand what triggered the problem situation, (b) examine the problematic role she or he played, and (c) reflect on how to rectify the problem situation now and in the future. Consequently, managers' responses dialoguing with LES were more open, optimistic, empathic, and focused than before. Managers increased their use of specificity when dialoguing with LES, and focused their attentions on substantive issues instead of personal debates.

Managers used empathy in more versatile ways for expressing concern and for building trust. Managers increased their use of inquiry when seeking interactions with LES; moreover, they were openly supportive, willing to discuss task issues, available to oversee corrective actions, and ready to give positive feedback when it was earned.

Overall, significance of the data supports the effective use of feedback by treatment group managers who demonstrated improved supervision by dealing with employees in a more equitable and participative way. Feedback also generated a flow of energy that dominated the work group's activities. In general, according to participant evaluation at the final session, this training intervention helped managers focus on several feedback training strategies and rationales for their use.

First, managers applied more specific feedback skills with LES, More Effective Subordinates (MES), and in the team setting. Second, they applied group process methods and had employees fill out feedback process analysis forms for structuring the team meeting. In most cases, managers requested these forms filled out before the meeting to give employees time to prepare questions and suggestions in advance; this method helped employees feel prepared and confident to participate fully at the time of the meeting. Third, managers focused on using carefully pre-planned agenda/memorandum for organizing meetings. These practices bolstered the self-confidence of participating managers in team activities. This training also helped employees and managers express their frustrations and fears, and work together to make a positive difference.

Why Attributional Bias?

The belief that managers operate from a position of inference and attributional bias is verified by research as a common way of dealing with supervisory problems. Managers' attributions are likely to be inappropriate and dysfunctional when linked to untested, automatic, and unconscious processing of employees (Feldman, 1981; Green & Mitchell, 1979; Heider, 1944, 1958; Jones & Nisbett, 1971; Kahneman & Tversky, 1973; Mitchell & Wood, 1980; Taylor & Fiske, 1978).

It is surprising, given the considerable amount of research demonstrating the effects of feedback on task and interpersonal behavior, that relatively few studies have been concerned with attributional factors that influence the delivery of feedback. Fewer still are those studies that have proposed strategies for modifying bias and improving social effectiveness in work relationships (Hamilton, 1979; Kelley & Michela, 1980; Larson, 1984; Mitchell, 1982), even though causal attributional bias is at the root of innumerable workplace barriers and misunderstandings.

Defining Attributional Bias. In this present study, attributional bias is defined as a tendency to assign blame for causality in problem workplace situations. Based on past research, attributional theory proposes that subordinates (actors) tend to attribute their own problematic behavior to situational–external constraints beyond their control; while managers (observers) tend to attribute the problem behaviors of perceived employees to dispositional–internal, personal characteristics and abilities (Heider, 1958; Jones & Nisbett, 1971).

In attribution research, there are studies that measured data on an internal–external continuum. However, in this study, separate scales were custom–designed for measuring managers' internal and external attributional bias and reporting these data. Solomon (1978) advocated the use of separate internal and external attribution scales to avoid ambiguous and erroneous conclusions because data may vary along different dimensions. This current study supports Solomon's findings. Statistically significant data validated that training in feedback skills successfully intercepted managers' tendency to personally blame LES; at the same time, there were no significant differences between the groups for managers' use of external attributions to explain LES' behaviors.

Managers Report Change in Perceptual–Judgments. As for meaningful change in the workplace after treatment, managers reported several insights. First, managers appeared to operate from a broader perspective; their responses and perceptions were less narrowly defined and negatively biased toward employees. Managers blamed subordinates in a less personal accusatory manner.

Second, although not statistically significant, there were some managers who offered alternative external factors that might explain what contributed to LES' problems. Frequently mentioned were external contributors to employee problems such as lack of sufficient information, lack of training, and lack of close supervision. However, most curious of all the findings in this study, were perhaps the significant improvements on characterological factors of managers' perceptions of LES.

Managers showed a marked tendency to blame LES less personally for being self-interested, or lacking the proper attitude (i.e., characterological factors). This pattern of blaming LES less did not apply where LES lacked follow-through, or had problems paying attention to details of the task (i.e., behavioral factors). This is not surprising because the training emphasized 15 behaviors listed on the Feedback Self-Assessment; among these, items 2 and 6 address this issue in manager-employee feedback: *When giving feedback I focus on task and behaviors, not employees' personalities* (characterological, item 6); and, *I limit my feedback to specific skills employees can do something about* (behavioral, item 2). In the first instance, indicating to employees they must change their personality is not only hopeless but demeaning, and generally closes down communication. On the other hand, skill-specific feedback about the task is objective, correctable, and effective when given in a caring, supportive, interactive mode.

Why Teamwork Effectiveness?

A major part of this study and a primary focus of the intervention, Team Management Effectiveness (TMET) training, was feedback in the team setting. In this study, feedback is central to teamwork and leadership effectiveness. The research literature confirms that feedback is characteristic of effective team leaders. These leaders work constructively to promote their teams' effectiveness. In this study, effectiveness is linked to perceived efficiency, high work morale, and good relations of team members (Hackman, 1987; Knowles, 1980; Senge, 1991; Weisbord, 1985).

Historical Underpinnings of Feedback. The powerful legacy of feedback in groups extends to earlier small group research, t-groups, and sensitivity training (Bales, 1950, 1970; Benne et al., 1964; Lewin, 1947, 1951). Lewin pioneered action research and early training in feedback. Another pioneer, Bales (1985, 1990; Bales et al., 1979) and colleagues at Harvard University created SYMLOG--a new social field theory and tool used in this research for measuring managers' observations of work groups on three bipolar dimensions (i.e., *Dominance vs. Submissiveness, Friendliness vs. Unfriendliness, and Acceptance vs. Non-Acceptance of Task-Authority*).

Interpreting Teamwork Effectiveness Data. A significant difference was found for treatment group managers' perceptions of their own and their teams' effectiveness on the Dominance and Friendliness dimensions. Perceptions of their work groups became more consistent with managers' ideal (*MOST EFF*) profile and SYMLOG's normative profile for Dominance and Friendliness; these changes support the validity of what the instrument is measuring as well as the effectiveness of feedback training.

Presumably, movement toward Dominance indicates an increased amount of influence managers were able to exert with employees after applying feedback skills training methods in assigned work group meetings. Several factors may have contributed to managers' perceptions that their work groups were more effective after training than before. Through providing opportunities in group meetings that required every subordinate to participate (e.g., asking questions and offering suggestions), managers may have perceived an increase in employees' level of competence.

A second factor for perceived Dominance may be explained by a corresponding increase in team leadership and self-efficacy, and by a perceived increase in status or personal influence with the group. These factors taken together may have improved managers' assessment of themselves and their groups' performance overall.

Perceived team effectiveness on the Friendliness dimension was observed and interpreted as a more productive "proactive" employee attitude by managers in group meetings. In the team setting, input from employees was requested through feedback exchanges regarding specific workplace topics announced by pre-meeting agenda.

Managers Report Improved Work Group Participation. In particular, managers noted the participative responses of all subordinates, and a collaborative sharing of the whole group including their LES. In general, managers who applied feedback skills methods in team meetings during the period of training perceived that their work groups demonstrated less dependency on them, and an increased interdependency on each other.

SYMLOG was instrumental in displaying the *big picture* to managers of relationships among members of their teams. Underlying values in problem situations were more easily discussable using SYMLOG field diagrams as a frame of reference instead of blaming employees for perceived right or wrong behaviors. In general, managers perceived revitalized work groups after applying feedback training for managing their teams. Feedback from managers reported during the training included the following observations of their team meetings:

1. Everyone participated in the discussion, even those who have never been vocal before.
2. Utilizing inquiry and soliciting ideas for solving problems has helped create a calmer atmosphere to work in; employees know that problems can be resolved without pushing the panic button--but rather through reflecting together before acting.
3. The work group is more focused, team oriented, and collegial.
4. Team members are contributing more and influencing each other in ways that are acceptable to everyone (e.g., informing, assisting, and cross-training).
5. Productivity and motivation are on the rise; pre-meeting agenda informed about what needs to be accomplished, and team members are willing to share task-leadership roles.

One manager reported after holding the assigned work group meeting:

I wanted to report some very positive feedback on LES, and more importantly my use of the feedback skills training methods in the group setting. LES seems to be more under control--busy and less inclined to start trouble, and more team oriented after attending my "revamped" staff meetings. I save a minimum of half an hour to have a team discussion where I do not serve as leader of the group but more as a moderator of the discussion. I assign roles to various personnel--timekeeper, recorder, etc. After each staff meeting we plan to publish and distribute to all employees handouts which the entire group has helped develop. The training really forced me to look at my approach more carefully, focus on the feedback skills and group methods, and make some needed adjustments.

Another manager made the following observation:

Using group process methods in the team meeting, I observed group members responded with a strong "pitch-in" attitude to "get the job done." I also perceived an increase in the quality of the work accomplished. I didn't need to "push" as much as I ordinarily do-- I was often "pulled" along with the positive energy of the group. I plan to continue using group process methods once a month at regularly scheduled staff/team meetings. As for using feedback skills, I find opportunities usually present themselves on a daily basis for individual interactions with staff or customer/citizens.

When managers-in-training were asked to commit their mental models of teamwork effectiveness to paper, their collaboration produced lists like the following:

TEAMWORK EFFECTIVENESS PROFILE

- Allocating resources wisely
- Setting and meeting goals in a timely fashion
- Employees participating in decision making (ownership/commitment)
- Regular group process feedback meetings, collaborating, cross-training
- Achieving a high level of quality through two-way feedback
- Striving for accuracy, clarity, and precision
- Balancing thoroughness with efficiency
- Making a positive difference in the workplace

How Effective Was the Training?

In response to the first research question--What are the effects of training in feedback on managers' perceived effectiveness of their work groups?--where perceived change occurred in their work groups after holding post-training team meetings, it appeared directly related to managers' elevated self-efficacy using feedback skills and team management methods. In general, managers who applied feedback training perceived that their groups exhibited qualities of teamwork approaching those just cited in the profile. Group process feedback was motivating in itself as it allowed participants to vent their fears and frustrations; its flexible format, refocused on relevant topics, could make a positive difference in the workplace. It is difficult to gauge how important the training was for each manager; supervisors ranged from first-line, to mid-level, to those who were previously trained in team management. During the training, managers were deliberately placed in heterogeneous groups to include managers of relatively more extensive team training with those who had little experience. It is not known how much this added to the gain of the least experienced supervisors.

Of the more seasoned team leaders who perceived their groups effective at the start, even these managers found the structure in TMET useful for its instruction on: *planning* (e.g., issues, ground rules, and team roles); *preparing* (e.g., agenda/memo, warm-up exercises, and feedback forms); *participating* (e.g., action learning and communicating); and, *processing* (e.g., critical reflecting, dialoguing, and discussing).

Groups That Worked. Successful work teams from Mills' (1967) *groups that grow* to Hackman's (1990) *groups that work* depended on two-way feedback for collaborating, interpreting, drawing conclusions, and reducing ambiguity in task and interpersonal relations. In this study, managers reported their successes (and failures) at the fourth and last training session after holding their team meetings. Groups that appeared to work well, from the manager's perspective, shared a common core of leadership, commitment, team responsiveness, and upper management supportiveness. As Nadler (1982, p. 239) stipulated, "Job linkage bridges the training and the job." Pre-planning support from management for post-training applications at the job site are essential for training skills and methods to survive (Brinkerhoff & Gill, 1992).

As far as can be determined, all participating managers had back home support to hold their initial team meeting. Although, teams in this study were manager-led groups (not autonomous), the restructuring of roles (e.g., taking turns as leader, recorder, and so forth) was important in two ways. First, flexibility (individual) and adaptability (group process) was necessary since managers could not count on keeping all their employees due to downsizing. Second, crisis meetings for managers often occurred last minute; this training helped managers prepare their groups to be self-managed in their absence, once managers set directions and conditions. Thus, groups that worked had managers who employed a pre-meeting agenda, set ground rules for meetings together with employees, and instructed employees in group process methods practiced in feedback training.

However, because this training was short-term with no follow-up, future success can be predicted only on speculation. Presumably, groups that continue to work on the long-term will do so if supervising managers are allowed to *grow* and develop their own groups on a regular and consistent basis. This expectation is based on certain stable factors in the workplace: (a) support for teams at a higher level (i.e., supervisors' managers to agency directors), (b) work group size that supports a team effort, and (c) continued use of process feedback skills training methods. A caution is raised that merely placing people together in the work site does not make a team. Supervisors must be trained to be team leaders; feedback skills training methods are suggested in this study.

In response to the second research question--What are the effects of training in feedback on managers' attributional bias of their Least Effective Subordinate?--where biased attributions dramatically decreased on the part of managers after treatment, it appeared to be inversely related to an increase in feedback interactions between supervisors and LES. Although, LES may not have been perceived as more effective in task performance, post-training managers certainly blamed their LES less personally; they also took steps to understand, coach, and support LES in more positive ways than before. In addition to increasing their feedback interactions, managers not only encouraged but required subordinates to actively participate through their questions and suggestions in team meetings.

In response to the third research question--What are the effects of training in feedback on managers' use of feedback skills with employees?--after applying skills of specificity, empathy, and inquiry in feedback sessions and team meetings, managers reported more purposive and confident employees; subordinate groups demonstrated less dependency on supervisors and greater interdependency on team members.

Group process methods formed the structure for team meetings. Managers perceived their teams responded more efficiently because of pre-planned goals and agenda which gave direction and purpose to every meeting. Team members took ownership of the process by participating in setting future agenda, collaborating on ground rules, and functioning in team roles. Members shared differing points of view, and generated new ideas using process feedback for gaining maximum participation.

Consequently, managers perceived and reported improvements supporting positive results of feedback skills training methods. Team cohesiveness had improved through a strengthened understanding that all team members were connected by a common bond--through working together toward organizational goals, serving client needs, sharing work interests, and maintaining social relations in the group.

Furthermore, the agenda/memorandum supported the team effort by notifying employees of issues that must be confronted and management expectations that must be met. Some managers laid the groundwork for cross-training by having team members share their specialized task knowledge. Informal and incidental workplace learning was encouraged through dialoguing on agenda topics in meetings.

Finally, throughout this period of what respondents referred to as *bad budget news*, solving problems together in the team setting helped employees feel somewhat more comfortable, certain, and in control of their future. Team members were perceived as willing collaborators, fully accountable for participating in and committing to a viable solution. A big part of the solution was mobilizing the remaining personnel to get the job done with fewer human and monetary resources. Heightened self-efficacy of treatment managers who practiced and applied feedback in the workplace was the key turning point before a significant and meaningful impact of training could be successfully achieved.

Managers responded enthusiastically to TMET because it bolstered their self-confidence through its adaptable structuring of roles for team leadership and member participation. Throughout the intervention, Fairfax county government's shrinking budget was uppermost in managers' minds. Thus, managers' interactions with employees in the team setting were not only helpful but crucial during this period of stress--for confronting anxieties, collaborating on new assignments, and providing client services with fewer employees and resources than before.

A final conclusion of this study consistent with past research is that: feedback changed managers' perceptual-judgments which precipitated other changes as well. The results from this study showed that where significant change occurred as the result of training, feedback promoted change in managers' perspectives, attributional bias, management practices, and manager-employee relations.

Implications of the Findings

This study contributes to empirical feedback and causal attribution literature of superior–subordinate relations in organizations. Feedback Process Analysis (FPA), a training model outlined in Chapter 2, was designed to advance research and seek change in patterns of social relations for promoting teamwork. Data from this study suggested that in work groups where change occurred (i.e., perceived as more effective by managers), relationships and roles were redefined using group process methods. Using feedback methods (i.e., questioning, reflecting, and analyzing) supported growth and continuous learning in work groups as it did in manager peer–teams in training.

The findings also suggested that, in response to feedback skills training, work groups appeared to head in a new direction—functioning as professional and interpersonal support groups in the workplace. Building upon a substantial body of research, this study indicated change in managers through feedback skills training:

- *feedback changed managers' perceptual–judgments* through detecting and correcting erroneous information;
- *feedback changed managers' perspectives and attributional bias* through interacting with others, reflecting, and thus, broadening their viewpoint;
- *feedback changed management practices* through promoting employee participation in the team setting;
- *feedback changed manager–employee relations* through shared understanding, collaboration, and continuous workplace learning.

Significantly, this research using training in feedback skills and group process methods successfully affirmed the tenets of researchers who advocated:

- Closing the gap between theory and professional practice by applying interactive feedback in the group setting (Bales et al., 1979; Hackman, 1987; Knowles, 1980, 1985; Lewin, 1947; Mills, 1967; Senge, 1990);
- Expanding the role of trainer to adult educator/human resource developer by moving toward reflective, transformative learning in organizations (Knowles, 1985; Marsick & Watkins, 1990; Mezirow, 1981, 1990; McLagan, 1983; Schön, 1983);
- Using critical thinking and reflective learning to help surface and transform underlying values and beliefs by making the undiscussables discussable (Argyris & Schön, 1978; Brookfield, 1987; Mezirow, 1981, 1991);
- Linking experiential training activities to informal and incidental learning opportunities in the workplace (Argyris, 1982, 1985; Marsick & Watkins, 1990; Revans, 1980; Torbert, 1972; Wiswell, 1987, 1990).
- Turning feedback loops (Nadler, 1977) into task and interpersonal professional development support groups (Chalofsky, 1992) for formal, informal and incidental workplace learning (Marsick & Watkins, 1990; Wiswell, 1987, 1990).

Recommendations for Professional Practice

Implications of the findings, in the previous section, suggested the important and positive impact that practical applications of training in feedback can promote in the workplace. Results of this study challenge human resource development professionals to incorporate feedback training in their programming; the Feedback Process Analysis (FPA) model can be instructive in this respect. These findings also

imply that training in feedback skills, accompanied by group process methods to support the transfer of learning, can be applied in ways limited only by client/learners' needs and practitioner/adult educators' creativity.

Using a multifaceted approach for learning and applying feedback skills as described in this present study, practitioners could instruct adult learners in a variety of work-related settings in the community, educational institutions, business organizations, and in the political and international arenas.

Feedback skills training can benefit practically any work relationship in any occupational situation where information must be conveyed specifically, empathically, and in a spirit of inquiry to insure its accuracy and acceptance by both senders and receivers. Learning feedback skills can enhance interpersonal relationships through practiced interactions which support mutual respect, openness, honesty, trust, and shared understanding. Particularly, in organizations where performance is evaluated (e.g., manager-subordinate, doctor-nurse, principal-teacher, professor-student), feedback can be mutually beneficial for the continuous growth and development of adult learners in superior-subordinate relationships.

Recommendations for Future Research

While the design of this study only looked at short term transfer of relatively brief training, the results obtained were promising indications that effective feedback skills can be acquired in a relatively short time. These findings suggest that SYMLOG can be a useful framework and instrumentation for assessing managerial

and team behavior in the workplace. However, a caution is raised as to the staying power of the transported skills. Future studies will be necessary to determine the long term effects and ultimate impact of this type of intervention.

Another caution is that this study presents the superior–subordinate story from the perspective of supervising managers. Future studies could collect SYMLOG data from subordinates as well; a times series design could track effectiveness beyond the period of treatment. Qualitative case studies could also provide meaningful transfer–of–training follow up research.

Finally, this study has successfully structured and tested feedback for practical instructional purposes. The defining skills and methods are easily understandable and usable in a variety of applications. Although developing assessment tools was not a central purpose of this study, feedback and attribution scales were developed to measure data. While the three feedback scales showed high reliabilities for specificity, empathy, and inquiry (.80's), reliabilities on the attribution scales were lower for dispositional–internal and situational–external (.55 to .71). Validation of these scales might be achieved through managers rating their protocols directly; this should reduce ambiguity derived from using secondhand interpreters (raters). Future testing of these scales could be instructive, and make a further contribution to research.

Summary

Perhaps, this research has made its most unique contributions in several significant ways. First, this study filled a gap in research through testing the effects of feedback skills training, and provided practitioners and managers a tested rationale for supporting interpersonal skills training. Next, this study tested group process methods, applied by managers during training, for transporting feedback skills to the workplace in the team setting. Third, this study showed that managers' automatic bias can be intercepted, that the use of feedback skills can result in blaming Least Effective Subordinates less using characterological (i.e., personal) traits in problematic situations. Finally, this study illustrated how interactive feedback skills and group process methods led managers to perceive their work groups as more effective than before. In addition, on a more personally relevant level, this research incorporated a treatment that seemed to actually help supervising managers adapt to change during a difficult transition in local government agencies.

Implications have been drawn for human resource development programming and research in business and educational organizations. While it is necessary to remember that short-term training in feedback may have limited retention effects, this study sets an empirical precedence that future research can extend and embellish.

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APPENDICES

APPENDIX A

Personal Demographic Information

Background data collected from the managers in this study

DIRECTIONS: Complete the Personal Demographic Information form for up to seven of your direct subordinates. If you have more than seven, select the highest and poorest performers, then fill in with average performers to balance your group of seven. Record unique 3-letter initials for each employee's CODE NAME in the spaces designated below. You cannot change these employees or their code initials once recorded. The race, age and gender information provides background data the trainer is collecting for tracking the training.

ALL INFORMATION COLLECTED IS CONFIDENTIAL.

PERSONAL DEMOGRAPHIC INFORMATION

1. Full Name _____ Tel.(O) _____
2. Code Name _____ Tel.(H) _____
3. Age _____ Sex _____ Code Name of LES _____
4. Race: White ___; Black ___; Asian ___; Hispanic ___; Other _____
5. Job Title/Agency _____
6. Job Duties _____
7. Years Supervising _____; Years in this Position _____
8. Number of Coded Subordinates _____ Total Work Group _____
9. Education _____
10. Give Code Name, Age, Gender, Race for Each Subordinate:

CODE NAME _____
 AGE _____
 GENDER _____
 RACE _____

CODE NAME _____
 AGE _____
 GENDER _____
 RACE _____

CODE NAME _____
 AGE _____
 GENDER _____
 RACE _____

CODE NAME _____
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CODE NAME _____
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CODE NAME _____
 AGE _____
 GENDER _____
 RACE _____

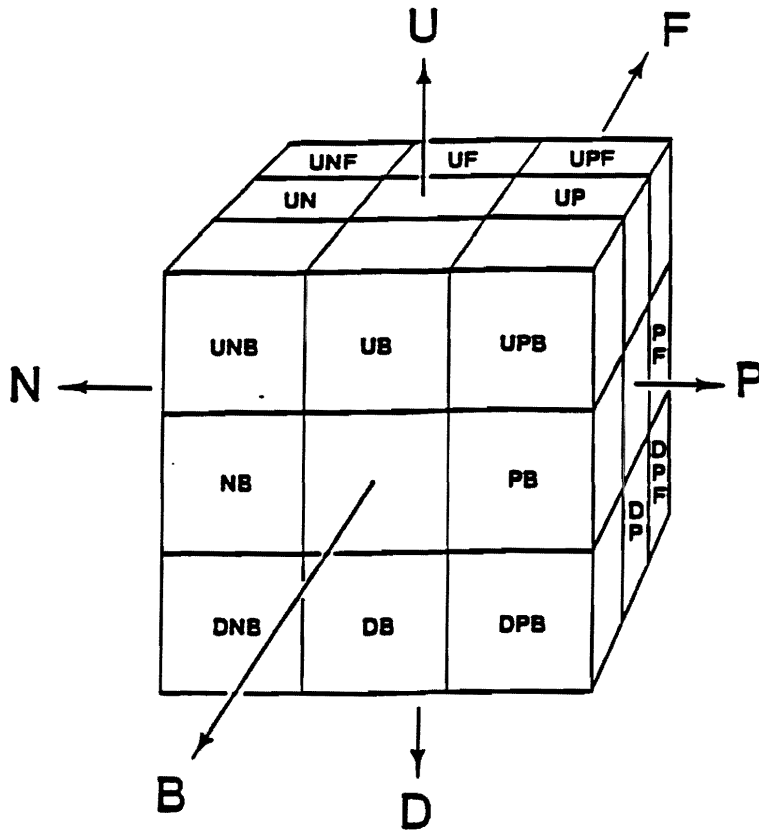
CODE NAME _____
 AGE _____
 GENDER _____
 RACE _____

CHECK: I was recommended _____
 I volunteered _____ for this training.

APPENDIX B

SYMLOG System

1. *SYMLOG Cube*
2. *SYMLOG Value
Direction References*
3. *Overview of the SYMLOG System*
4. *SYMLOG Field Diagram*
5. *SYMLOG Bargraph*
6. *Manager's Pre-Post SYMLOG Field Diagrams*
7. *SYMLOG's MOST EFF Profile
Value Categories*



Directions in the Physical Space Model

Metaphorical names for the physical directions coordinated with names for describing the Value directions for Individual and Organizational Values

- | | |
|----------------|---|
| U = "Upward" | = Values on Dominance |
| D = "Downward" | = Values on Submissiveness |
| P = "Positive" | = Values on Friendliness |
| N = "Negative" | = Values on Unfriendliness |
| F = "Forward" | = Values on Acceptance of Authority |
| B = "Backward" | = Values on Non-Acceptance of Authority |

The SYMLOG Cube Diagram

SYMLOG Value/Direction References

Value/ Directions	Coded Combinations	Bargraph Items
U/Dominant	UP, UPF, UF, UNF, U UN, UNB, UB, UPB	1, 2, 3, 4, 5 6, 7, 8, 9
P/Friendly	UP, UPF, UPB, PF, P PB, DP, DPF, DPB	2, 3, 9, 10, 11 17, 18, 19, 25
F/Task Oriented*	UPF, UF, UNF, PF, F NF, DPF, DF, DNF	3, 4, 5, 11, 12 13, 19, 20, 21
D/Submissive	DP, DPF, DF, DNF DN, DNB, DB, DPB, D	18, 19, 20, 21, 22, 23, 24, 25, 26
N/Unfriendly	UNF, UN, UNB, NF, N NB, DNF, DN, DNB	5, 6, 7, 13, 14 15, 21, 22, 23
B/Non-Task Oriented*	UNB, UB, UPB, NB, B PB, DNB, DB, DPB	7, 8, 9, 15, 16 17, 23, 24, 25

Note: *F = Accepting Task-Oriented of Established Authority;
*B = Opposing Task-Oriented of Established Authority.

Overview of the SYMLOG System

Note: From **Overview of the SYMLOG System** by R. F. Bales, 1983, Woodland Hills, CA: *SYMLOG Consulting Group*. Copyright 1983 by Robert F. Bales, SYMLOG Consultants. Permission has been granted to reproduce this segment of the **Overview** and the SYMLOG materials by the *SYMLOG Consulting Group*, San Diego, CA (refer to Appendix H).

SYMLOG is an acronym for the SYstematic Multiple Level Observation of Groups.

- Systematic because it allows participants to consider more variables in their own and others' values and behavior than would be possible in an unstructured, intuitive approach.
- Multiple level because it helps you think about individual personalities, values, behaviors, as well as overall team processes, while simultaneously considering the effects of the broader organizational culture and the inner workings of a group.
- Observation of groups, because it uses your own and others' observations about individual values and behaviors in real working groups.

Theoretical Underpinnings

A number of premises underlie SYMLOG theory and practice. To begin, there is the concept that any given behavior or psychological process always takes place in a larger context of other interactive processes. Only by considering the total picture, i.e., personal, interpersonal, and group dynamics simultaneously can we more completely understand or influence the way the individual parts affect the whole.

Second, it is possible to construct a map of the way the individual parts fit together in a group. The map provides a picture of the group members and images in a three-dimensional space called a SYMLOG Field Diagram. Third, there is evidence to show that the most effective, productive, and satisfied groups show characteristic patterns in their SYMLOG field diagrams.

Finally, there are systematic ways of increasing our understanding of groups and intervening to help conflicted groups move towards more effective and satisfying working relationships. These approaches can be learned in classroom settings; applied by external facilitators; or used by the group members themselves as they make informed choices about their own interactions and priorities.

The Field Diagram

A Three-dimensional Look at a Group

The SYMLOG field diagram (Exhibit 1) plots individual and group differences along three dimensions that have emerged repeatedly in research as critical in describing individual and group behavior. The location of each of the images shown on the diagram are based on the summary ratings made by individual and group members.

Together, the three dimensions give a comprehensive picture of the way most people tend to describe and experience human behavior and values. The field diagram is a descriptive rather than a normative depiction; that is, there are no "right" or "wrong" positions in the three-dimensional SYMLOG space.

The three critical dimensions shown in the Field Diagram are:

- *Dominance versus Submissiveness*
- *Friendliness versus Unfriendliness*
- *Accepting versus Opposing the Task-Oriented of Established Authority*

Dominance/Submissiveness

This dimension gives an indication of the relative importance an individual or group seems to place on factors like perceived status, power, and personal influence over the group.

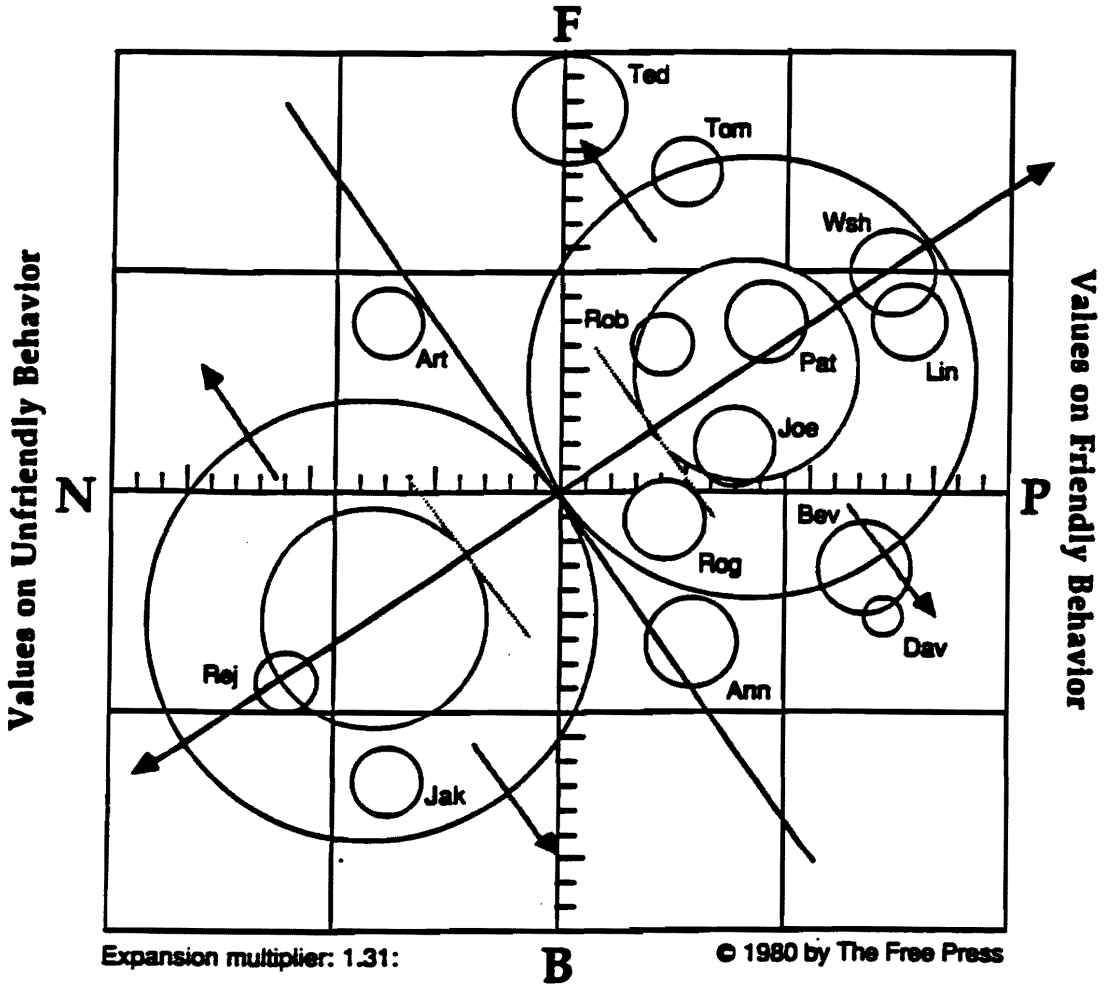
In the field diagram, each individual's location is represented by a circle, called an "image" with three letters set into the lower right rim. The larger the circle, the more dominant the image is perceived to be within the group.

Exhibit 1 shows a work group in which a few members seem to stand out as more dominant than the others. Notice that TED, BEV, and ANN have circle sizes larger than the rest of the group. Of these, TED has the largest circle, and is thus perceived by the group as the most dominant member. Conversely, ROB and MJM have very small circles and are seen as the most submissive members.

Dominant members may be high participators and/or extroverts; they may also show more of a tendency to impose their view on the group. The more submissive members may be seen as quiet, passive, or introverted. As will become apparent later, the full meaning of any single dimension becomes clearer when it is considered in concert with the other two dimensions.

SYMLOG FIELD DIAGRAM

Values on Accepting Task Orientation of Established Authority



Values on Opposing Task Orientation of Established Authority

Figure 1
An Example Field Diagram

Friendliness/Unfriendliness

This dimension taps into a second set of considerations that have been shown to affect the way people experience and describe each other's values and behaviors. The field diagram shows individual images somewhere on the continuum between Unfriendly (marked with a N) for "negative" on the left side of the diagram and Friendly or "positive" (noted with a P) on the right side of the diagram. Positive and negative are merely indications of a position in the SYMLOG space, and are not to be confused with "effective" or "ineffective." They simply describe an individual's orientation towards, or away from, personal relationships with other group members. For example, an image on the left side might be associated with behaviors perceived as self-interested and self-protective, while images on the right side might be associated with behaviors experienced as equalitarian, cooperative, or protective of others.

Looking again at our Exhibit 1, the image labeled LRK is the furthest toward the right of the diagram, and appears to be perceived as the most "positive" or friendly person in the group. ART and FRD have images on the "negative" side of the diagram, and the image of REJ is seen as the least friendly in the group.

Accepting/Opposing the Task-Orientation of Established Authority

Almost everyone knows someone who could be described as very concerned about following directives of those in authority, or doing things in a prescribed or "correct" manner. Most people also have associates who seem to have little regard for established procedures, preferring to challenge authority, innovate, create new approaches, and change the existing order of things. These two different orientations represent the extremes of the third SYMLOG field diagram dimension. In understanding this dimension, it is important to recognize that "task-orientation of established authority" means essentially the rules and procedures which have been set up by authorities external to the working group who will evaluate the performance of the group. These might be a boss, organizational or governmental constraints, society at large, or the like. Accepting and trying to meet these standards is at one end of the scale, on the top half of the diagram. Opposing, disregarding, or trying to chance and establish alternative standards is at the other end of the scale (the lower half of the diagram).

From Exhibit 1, TED and TOM have the most task-oriented images in the group, those most accepting of authority. Both of these members appear close to the top of the diagram, indicating they are perceived by others to have a high commitment to established authority. TED, however, is perceived by others to be somewhat impartial, neither friendly nor unfriendly with his circle on the line. Tom is seen as more friendly by the group.

By contrast, FRD and ANN are seen as closest to the bottom of the diagram, one on the positive side and one on the negative. These positions generally mean that the individual is either unconcerned with the task at hand, or actively opposing the work as it is currently defined. Because ANN is perceived as more positive, it is likely that ANN is more concerned with managing interpersonal needs and avoiding conflict in the group. For FRD, on the negative side of the space, it is more likely that the group experiences FRD as obstructing any progress the group tries to make by focusing attention elsewhere and disrupting the group's work.

The SYMLOG Group Profile

The group profile is a way of summarizing all of the information collected from the ratings individuals made on a person or concept. The profile shows the 26 items used in the ratings, as well as the frequency with which each item was rated by the group.

There is a great deal of summary information on the top of the bargraph. If you refer to our example, Exhibit 3 you can follow along with the explanation.

Exhibit 3 is a profile on the aggregated ratings of all members in our Exhibit 1 group which they made on each other. That is noted in the title "Your Group on Your Group." You will note on the top of the profile the number of Raters is 12. This indicates that the profile is the average of 12 people's ratings on each member of the group.

The Field Location is 2U 4P 2F. This is the location on the field diagram which denotes where all member images, averaged together, would fall. This is not indicated on the field diagram, but gives the reader of the profile a sense of where the combined group perceives itself overall.

The Final Type is noted as P. This notation could be any one of the 26 items depending on the group ratings made, and is derived from the Field Location. This "final type" gives a general idea as to where the group, averaged over all individual differences, perceives itself. In this case, the group sees characteristics most highly correlated to the values exhibited in item No. 10, P "Equality, democratic participation in decision-making." This tells another piece of the puzzle, but can appear overly simplified and should not be considered the "final" word.

It is crucial in understanding what the group is like when they are together, and on average, to consider the profile shown on the bargraph. The x's indicate what the average rating was for each item. The frequency scale is from Rarely to Often.

Notice that in Exhibit 3, item 1 has a great many x's. This means that most of the members who rated each other felt that members showed the characteristics of this item OFTEN. On item 26, however, where there are not nearly as many x's, very few members could have rated others as showing this item OFTEN.

The Es down the profile indicate where, on average, a most effective team in a business setting would rate itself and its members. The profile thus is able to give the reader a sense of where any particular group, on average, comes close to, surpasses, or falls short of this "normative" profile of business groups in a variety of settings. You may not agree with the "teamwork effectiveness profiles" for any given item. For example, your group's mission may require a somewhat different constellation of emphases. Or the group may shift its priorities and values at different points in time depending upon the work of the group and its members. Nevertheless, by making a comparison between a group's ratings of itself, and the normative group profile, any group can be in a position to discuss and make explicit choices about the way the group seems to be functioning.

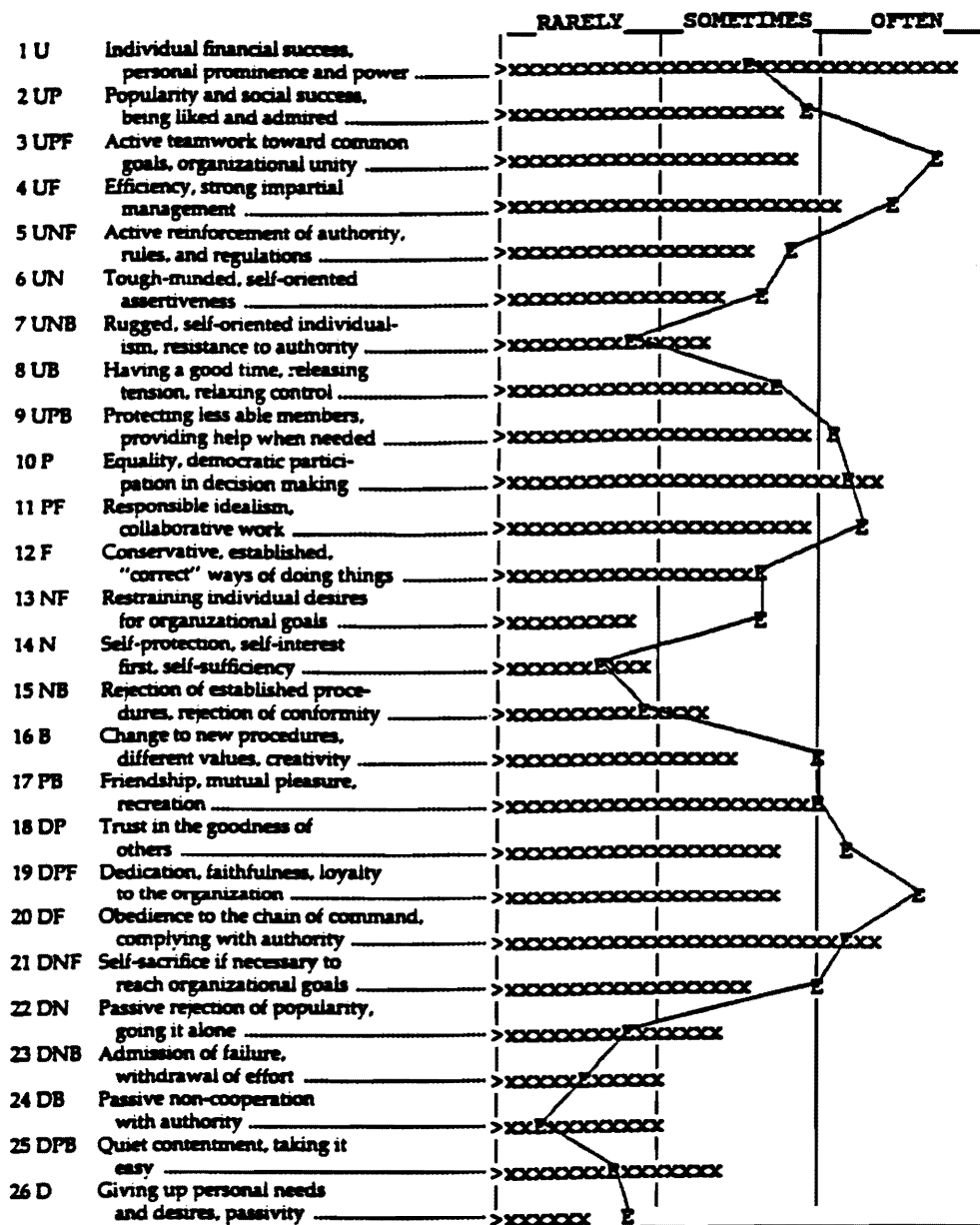
Figure 3 Bargraph: Your Group on Your Group

SCG Frequency Bargraph of Individual and Organizational Values
Based on the ratings made on: Your Group

Type: P Final Location: 2U 4P 2F Number of Raters: 12

E = optimum location for most effective

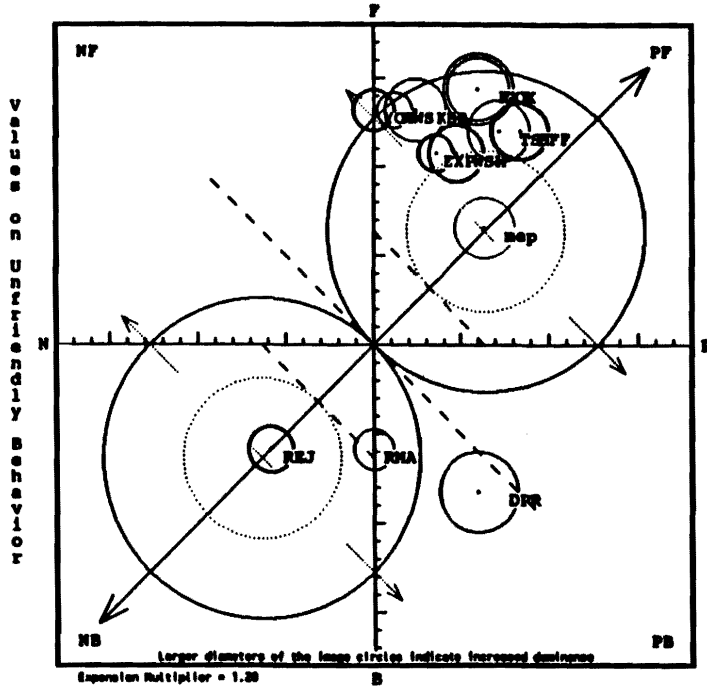
x = the average rating on each item



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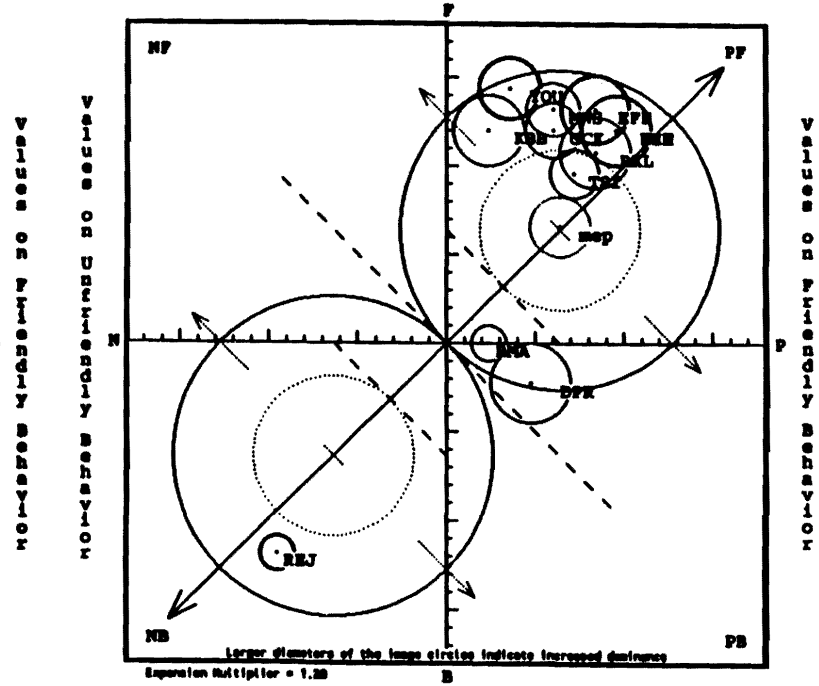
Values on Accepting Task-Orientation of Established Authority



Values on Opposing Task-Orientation of Established Authority

Pre-Training

Values on Accepting Task-Orientation of Established Authority



Values on Opposing Task-Orientation of Established Authority

Post-Training

SYMLOG Consulting Group 18508 Polvera Dr. San Diego CA 92128 619-675-2998
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Manager's SYMLOG Field Diagrams

Note: Least Effective Subordinate (RMA) and another poor performer (DPR) have moved from the pre-training position (near the concept REJECT) to the post-training position closer to the team in the upper quadrant.

SYMLOG'S MOST EFFECTIVE PROFILE/ VALUE CATEGORIES

A. Value Contributors to Effective Teamwork:

2 UP	Popularity and social success, being liked and admired
3 UPF	Active teamwork toward common goals, organizational unity
4 UF	Efficiency, strong impartial management
8 UB	Having a good time, releasing tension, relaxing control
9 UPB	Protecting less able members, providing help when needed
10 P	Equality, democratic participation in decision making
11 PF	Responsible idealism, collaborative work
16 B	Change to new procedures, different values, creativity
17 PB	Friendship, mutual pleasure, recreation
18 DP	Trust in the goodness of others
19 DPF	Dedication, faithfulness, loyalty to the organization
20 DF	Obedience to the chain of command, complying with authority
21 DNF	Self-sacrifice if necessary to reach organizational goals

B. Values Necessary Sometimes But Dangerous to Teamwork:

1 U	Individual financial success, personal prominence and power
5 UNF	Active reinforcement of authority, rules and regulations
6 UN	Tough-minded, self-oriented assertiveness
12 F	Conservative, established, "correct" ways of doing things
13 NF	Restraining individual desires for organizational goals

C. Values Which Almost Always Interfere With Teamwork:

7 UNB	Rugged, self-oriented individualism, resistance to authority
14 N	Self-protection, self-interest first, self-sufficiency
15 NB	Rejection of established procedures, rejection of conformity
22 DN	Passive rejection of popularity, going it alone
23 DNB	Admission of failure, withdrawal of effort
24 DB	Passive non-cooperation with authority
25 DPF	Quiet contentment, taking it easy
26 D	Giving up personal needs and desires, passivity

APPENDIX C

Critical Incident Report

Part I (Scenario)

Part II (Dialogue)

Managers write a problem scenario and dialogue

pre- and post-feedback session with LES

(Least Effective Subordinate).

CRITICAL INCIDENT

MGR CODE_____

LES CODE_____

PART I: Please write a description about a recent problematic event involving you and your "Least Effective Subordinate" (LES). Begin by writing a conclusion about your subordinate in 1-2 sentences. Build the incident (what happened and why) leading up to that conclusion by briefly answering the following questions. Please print. Use three-letter initials of subordinates for CODE NAMES.

1. CONCLUSION ABOUT YOUR "LEAST EFFECTIVE SUBORDINATE":

2. WHO WAS INVOLVED?

3. WHERE AND WHEN DID THE PROBLEM TAKE PLACE?

4. WHAT HAPPENED?

5. WHY DID IT HAPPEN?

CRITICAL INCIDENT

6. HOW DO YOU ACCOUNT FOR THAT PERSON'S ACTIONS/
BEHAVIORS?

7. HOW DID THAT PERSON ACCOUNT FOR HER/ HIS ACTIONS?

8. WHAT EVIDENCE ARE YOU BASING YOUR CONCLUSIONS ON?

9. WHAT OTHER POSSIBLE EXPLANATIONS WOULD
ACCOUNT FOR THIS SAME OBSERVATION?

10. WHY WAS THIS INCIDENT SIGNIFICANT?

PART II. CRITICAL INCIDENT DIALOGUE

Write the exact dialogue you remember delivering face-to-face to your LES ("Least Effective Subordinate") responding to the following questions:

- A. IN WHAT MANNER DID YOU APPROACH LES?*
- B. HOW DID YOU GAIN INFORMATION ABOUT THE PROBLEM FROM LES?*
- C. HOW DID YOU EXPLAIN THE PROBLEM BEHAVIOR TO LES?*

YOU SAID THE FOLLOWING WORDS TO LES: (Use 6-8 sentences)

APPENDIX D

Critical Incident Descriptive Scales

Dispositional-Internal

Situational-External

Specificity

Empathy

Inquiry

*Two raters judged managers' pre and post critical incidents
using five descriptive 7-9 item scales and rater guidelines.*

Table D.1

Dispositional-Internal Rating Scale for Critical Incident (Part I)

In problematic workplace situations, to what degree do the manager's statements indicate a belief that . . .							
	N/A None					High	Comments
1. LES lacked initiative to complete job duties.	0	1	2	3	4		
2. LES lacked follow-through to complete job duties.	0	1	2	3	4		
3. LES had difficulty following verbal and/or written instructions.	0	1	2	3	4		
4. LES had problems paying attention to details of the task.	0	1	2	3	4		
5. LES was self-interested, not a team player.	0	1	2	3	4		
6. LES lacked the ability to perform tasks effectively on the job.	0	1	2	3	4		
7. LES lacked the proper attitude to perform effectively on the job.	0	1	2	3	4		
8. LES lacked personal characteristics to perform effectively on the job.	0	1	2	3	4		

Rater: Your overall rating for this manager on this dimension is:

LOW 1 2 3 4 5 6 7 8 9 10 HIGH

Table D.2

Situational-External Rating Scale for Critical Incident (Part I)

In problematic workplace situations, to what degree do the manager's statements indicate a belief that . . .						
	N/A				High	Comments
	None					
1. LES lacked the information to adequately complete the work.	0	1	2	3	4	
2. LES lacked supervision to do the work this job required.	0	1	2	3	4	
3. LES lacked training to do the work this job required.	0	1	2	3	4	
4. LES had a workload that was more than one person could be expected to do.	0	1	2	3	4	
5. The task was unrealistic.	0	1	2	3	4	
6. LES was affected by constraints of the organization.	0	1	2	3	4	
7. LES was affected by circumstances beyond her/his control.	0	1	2	3	4	

Rater: Your overall rating for this manager on this dimension is:

LOW 1 2 3 4 5 6 7 8 9 10 HIGH

Table D.3

Specificity Rating Scale for Critical Incident Dialogue (Part II)

In problematic workplace situations, to what degree do the manager's statements indicate that the manager						
	N/A					Comments
	None				High	
1. Detailed the information LES needed to get the job done.	0	1	2	3	4	
2. Specified the goals of the task.	0	1	2	3	4	
3. Described expectations explicitly.	0	1	2	3	4	
4. Identified data sources.	0	1	2	3	4	
5. Informed LES of the policies, rules or regulations that applied in this situation.	0	1	2	3	4	
6. Outlined the critical procedures for LES to follow.	0	1	2	3	4	
7. Explained the rationale to LES for using procedures.	0	1	2	3	4	
8. Demonstrated how to perform the duties of the job.	0	1	2	3	4	
9. Provided feedback regarding performance of duties.	0	1	2	3	4	

Rater: Your overall rating for this manager on this dimension is:

LOW 1 2 3 4 5 6 7 8 9 10 HIGH

Table D.4

Empathy Rating Scale for Critical Incident Dialogue (Part II)

In problematic workplace situations, to what degree do the manager's statements indicate that the manager . . .						
	N/A				High	Comments
	None					
1. Attempted to understand LES' point of view.	0	1	2	3	4	
2. Let LES know of her/his concern.	0	1	2	3	4	
3. Let LES know that s/he cared about helping LES succeed.	0	1	2	3	4	
4. Demonstrated a willingness to listen to LES' questions, ideas or concerns.	0	1	2	3	4	
5. Let LES know s/he was sensitive to LES' needs and feelings.	0	1	2	3	4	
6. Let LES know that s/he was open to discuss problems that impacted work.	0	1	2	3	4	
7. Let LES know that s/he supported LES' efforts to perform tasks effectively.	0	1	2	3	4	

Rater: Your overall rating for this manager on this dimension is:

LOW 1 2 3 4 5 6 7 8 9 10 HIGH

Table D.5

Inquiry Rating Scale for Critical Incident Dialogue (Part II)

In problematic workplace situations, to what degree do the manager's statements indicate that the manager						
	N/A				High	Comments
	None					
1. Asked for LES' perspective of what occurred.	0	1	2	3	4	
2. Asked LES for clarification.	0	1	2	3	4	
3. Confirmed that LES understood the parameters of the job.	0	1	2	3	4	
4. Probed for information that would explain why LES held a particular view.	0	1	2	3	4	
5. Probed for information that would explain why LES behaved in a certain way.	0	1	2	3	4	
6. Asked for responses from LES that s/he understood the concerns about her/his work.	0	1	2	3	4	
7. Asked for responses that LES agreed with the stated concerns about her/his work.	0	1	2	3	4	

Rater: Your overall rating for this manager on this dimension is:

LOW 1 2 3 4 5 6 7 8 9 10 HIGH

Guidelines for Rating Critical Incidents

Because the purpose of analyzing the content of the manager's responses is to produce usable data for the study, it is critical that the raters agree on what the managers meant by their responses. The critical incidents are 3 pages in length; the first two pages (Part I) of the manager's responses describe a problematic situation between the manager and LES ("Least Effective Subordinate") from the manager's perspective. The third page is a dialogue between the manager and LES, as the manager recalls this person-to-person exchange. The manager's were asked to leave out LES' responses, and write what they said to LES.

The descriptive scales provide a way to read and interpret the incidents for particular factors that can be transformed into quantitative data. From these data, cause and effect inferences can be discussed in terms of the effect of the feedback skills training on how these managers perceive and dialogue with their employees.

Each rater will read the identical critical incident for each of the five descriptive scales, separately scale by scale for (D.1) dispositional-internal, (D.2) situational-external, (D.3) specificity, (D.4) empathy, and (D.5) inquiry. The training process will proceed as follows:

- (a) Talk through the meaning of dispositional-internal using examples of the manager's responses from the Pilot study.
- (b) Raters rate critical incident #1 using D.1 scale, only, 8 items on a scale of 0 (None or N/A) to 4 (High), and an overall rating of 1 (Low) to 10 (High) of the manager's responses, making use of the "comment" section beside items they question.
- (c) With the raters permission, their discussion of their ratings, agreements and mismatches, will be tape recorded. After agreement is reached, the raters will rate critical incident #2. Once again the rater's item by item and overall ratings will be examined and discussed for mismatches and agreement before using the next scale.
- (d) When agreement has been reached, D.2 scale for situational-external is discussed in terms of meaning, then used for rating the critical incident #1 and #2 in turn, with mismatches and agreements between the raters discussed. This process continues using D.3, D.4, and D.5 descriptive scales.
- (e) Finally, critical incident #3 is read and analyzed using all 5 scales, looking for mismatches and agreements. If agreements (1 or 2 points difference) are obtained, the raters will take 50 incidents from the study to analyze (Agree on time frame).

Guidelines for Rating Critical Incidents

For Rating pp. 1 and 2,

Part I of the Critical Incidents:

- I. USE TABLE D.1, DISPOSITIONAL-INTERNAL
- II. USE TABLE D.2, SITUATIONAL-EXTERNAL

For Rating p. 3, Dialogue,

Part II of the Critical Incidents:

- III. USE TABLE D.3, SPECIFICITY
- IV. USE TABLE D.4, EMPATHY
- V. USE TABLE D.5, INQUIRY

Points to Remember:

1. To what degree do the manager's responses indicate the statements on the scales?
2. Rate the strength of the belief:

0 = NONE or N/A (NOT APPLICABLE) to 4 = HIGH
3. Volume is not an indicator of strength of belief; a single sentence could be just as high in strength of belief as a lengthy paragraph on a particular dimension.
4. Use the "comment" section beside each item, noting any questions or concerns about items on each of the five scales.
5. REMEMBER to duplicate the red identification numbers in precisely the same corner of each critical incident's first page.

APPENDIX E

Feedback Self-Assessment

Part I (Pre-and-Post)

Part II (Posttest Only)

Part I: Managers assess how consistently they use the feedback behaviors described in each of the 15 statements.

Part II: Managers assess their work group, LES, and their use of the group process methods (post-training).

FEEDBACK SELF-ASSESSMENT

Part I:

Write "R" (RARELY), "S" (SOMETIMES), or "O" (OFTEN)
for how consistent you are using these behaviors.

R S O

- | | |
|--|---------------|
| 1. I pick the right time and place to give feedback to employees. | /___/___/___/ |
| 2. I limit my feedback to specific skills employees can do something about. | /___/___/___/ |
| 3. I avoid giving one-way feedback and inquire about what concerns employees. | /___/___/___/ |
| 4. I provide positive as well as negative feedback to motivate employees. | /___/___/___/ |
| 5. I provide individuals feedback and time to question in group meetings. | /___/___/___/ |
| 6. When giving feedback I focus on task and behaviors, not employees' personalities. | /___/___/___/ |
| 7. I encourage two-way feedback to clarify what people need to know. | /___/___/___/ |
| 8. I avoid saving up criticisms to deliver at one time. | /___/___/___/ |
| 9. When giving feedback I try to understand things from the other's point-of-view. | /___/___/___/ |
| 10. I avoid giving feedback if I am angry, busy, or tired. | /___/___/___/ |
| 11. I refrain from using sarcasm or feedback to prove my point. | /___/___/___/ |
| 12. I encourage my employees to ask questions by not rushing and interrupting them. | /___/___/___/ |
| 13. I provide detailed feedback using verbal direction and written instruction. | /___/___/___/ |
| 14. I help employees understand my feedback especially when they are worried or upset. | /___/___/___/ |
| 15. I promote two-way feedback in the team setting to encourage member interactions. | /___/___/___/ |

APPENDIX F

Training Intervention

1. *Sample of Training Materials*

"Why Feedback?"

"Feedback Works"

2. *Feedback Process Analysis*

Four-Stage Training Model

Graphic Model

Conceptual Model

3. *Feedback Process Analysis Form*

used by managers in training

Sample of Research-Based Training Material: "Why Feedback?"

WHY FEEDBACK?

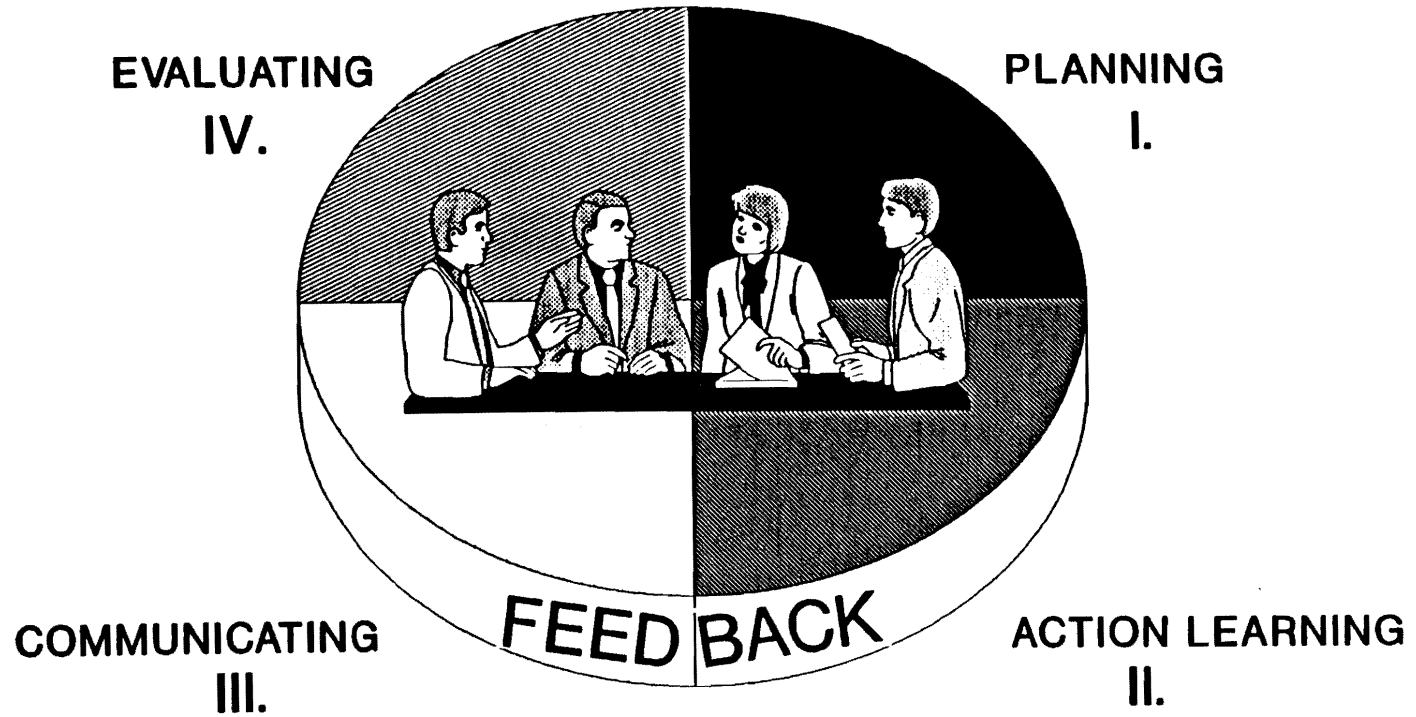
- FEEDBACK IS CHARACTERISTIC OF EFFECTIVE LEADERS
- FEEDBACK INFLUENCES DECISION MAKING, PROBLEM SOLVING, INFORMATION TRANSMISSION
- FEEDBACK LINKS TEAM ISSUES WITH RESULTS
- FEEDBACK FOSTERS HARMONY IN DIVERSE WORK GROUPS
- FEEDBACK CREATES ENERGY
- FEEDBACK INTERCEPTS UNCONSCIOUS AUTOMATIC MONITORING
- FEEDBACK IS A TOOL FOR LEARNING

Sample of Training Material: "Feedback Works"

FEEDBACK WORKS WHEN IT IS...

- HELPING EMPLOYEES CHANGE THEIR BEHAVIOR
- SOMETHING THEY DO NOT ALREADY KNOW
- POSITIVE, NOT JUST NEGATIVE
- SELECTIVE, ONE STEP AT A TIME
- DESCRIPTIVE, IN A NONJUDGMENTAL WAY
- GIVEN AT THE RIGHT TIME, RIGHT PLACE
- SPECIFIC, EMPATHIC, INQUIRING
- A TWO-WAY FLOW

FEEDBACK PROCESS ANALYSIS (FPA) FOUR-STAGE TRAINING MODEL



FEEDBACK PROCESS ANALYSIS (FPA)
FOUR-STAGE [CONCEPTUAL] TRAINING MODEL

<ul style="list-style-type: none">● STOP-PROCESS (AUTOMATIC BLAMING)
<ul style="list-style-type: none">● STAGE I - PLANNING: GOALS / OUTCOMES
<ul style="list-style-type: none">● STAGE II - ACTION LEARNING: REFLECT / ANALYZE
<ul style="list-style-type: none">● STAGE III - COMMUNICATING: INTERACT / 3 KEY SKILLS
<ul style="list-style-type: none">● STAGE IV - EVALUATING: TEST / ASSESS
<ul style="list-style-type: none">● GO-CHANGE PROCESS: (PRACTICES / ACTIONS)

FEEDBACK PROCESS ANALYSIS

GROUP MEMBER FORM:

- A. One question, in turn, is asked of manager by each team member*
- B. One to two sentence analysis is written and shared*
- C. Forms are given to manager/team leader after analysis is shared*

Manager/Team Leader's Name:

Team Member's Name:

Question:

Analysis:

APPENDIX G

Pilot Study

Pilot Study

A pilot study of ten mid-level managers who supervise work groups of five to ten supervisors was conducted on October 15, 22, 29, and November 18, 1991, at E-Systems, FOS Division--a high-tech firm in the Virginia suburbs. The purpose was to collect evaluative feedback from the managers regarding the materials, methods, facilitation, and timing of the sessions. These managers, predominately White males, averaged 40.6 years of age, with 2.8 years of college education. Their subordinates averaged 33 years, and were also predominately White males.

Eight managers completed the four training sessions. Their evaluations resulted in the following changes: (a) A confirmation letter will accompany and explain the Personal Data Sheet; (b) All forms will have a line for the manager's and their "Least Effective Subordinate's" CODE NAMES; (c) Agenda will be included with the training materials; (d) Materials will be numbered; (e) Videotaped skill modeling role-plays will be added, and role-play exercises increased; (f) Full day sessions will replace the half-day Pilot sessions; (g) Critical incident scripting will ask for managers' dialogue only; (h) SYMLOG information will be added; and, (i) A bibliography of research sources will be added to the notebook.

APPENDIX H

Communications

- 1. *Letter from the SYMLOG CONSULTING GROUP***
- 2. *Letter to Fairfax County Government Agency Directors***
- 3. *Letters of Confirmation to Fairfax County Government Supervising Managers (January/Treatment; February/Control)***
- 4. *Letter from the Fairfax County Government Training Administrator***

13 November 1991

Harriet V. Lawrence
Management By Communication
11138 Byrd Drive
Fairfax, VA 22030

Dear Harriet:

We are pleased that you are using SYMLOG in your dissertation research.

On behalf of Professor Robert F. Bales I grant you permission to use in your dissertation, as might be necessary and providing that you follow academic protocol regarding credits and copyrights, portions of the article Overview of the SYMLOG System: Measuring and Changing Behavior in Groups by Robert F. Bales (copyright 1983, 1987, 1988). Similarly, you may also use SYMLOG diagrams and figures produced by the SYMNET software in reporting the findings of your dissertation research for scholarly and academic purposes. Such permission does not apply to any use of SYMLOG materials for commercial purposes.

Sincerely,

Margaret Cowen
Vice President

Academic Advisors

Robert F. Bales, Ph.D. Harvard University	Kenneth D. Benne, Ph.D. Boston University Emeritus Louis B. Barnes, DBA Harvard Business School	Ola Skarva, Ph.D. Universitet i Oslo Oslo, Norway	Marc Pournadere, Ph.D. L'Institut SYMLOG de France Paris, France	A. Paul Hare, Ph.D. Ben-Gurion University BeerSheva, Israel
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SYMLOG: Systematic Multiple Level Observation of Groups

FAIRFAX COUNTY, VIRGINIA

MEMORANDUM

TO: Agency Directors November 18, 1991

FROM: Tom Mauter
Training Administrator
Office of Personnel

SUBJECT: Team Management Effectiveness Training

A special, twenty-three hour training course is being offered to 50 County managers and supervisors next January and February (dates listed below). This training, "Team Management Effectiveness," is designed for supervisors and managers who supervise work groups of five or more employees. The emphasis will be on successful techniques for managing individuals in a team setting.

This training program features a unique leadership instrument, SYMLOG--the SYstematic Multiple Level Observation of Groups--created by Dr. Freed Bales and colleagues of Harvard University. This instrument, which produces a snapshot of the cohesiveness of a team, is on the cutting edge of management development and is currently used at IBM and at the Center for Creative Leadership. This training is designed to promote the team concept and to give participants a team effectiveness approach that aims to bolster productivity, motivation, and satisfaction of both employees and managers.

This training will be conducted by Ms. Harriet V. Lawrence, consultant/trainer/owner of Management By Communication, who has trained in the County since 1983. She has been certified in the SYMLOG instrument by the SYMLOG Consulting Group, San Diego, California. Harriet is finishing her doctorate at Virginia Tech in Adult Education/Human Resource Development.

Training Dates, Times and Location

- January class will meet Jan. 8, 15, 22 and 29 from 8:30 AM to 3 PM with a two-hour pre-test held Jan 7th.
- February class will meet Feb. 5, 12, 19 and 26 from 8:30 AM to 3 PM with a two-hour pre-test held Jan. 7th.
- All classes and pretests will be held at the Virginia Tech Graduate Center, 2990 Telestar Court, Falls Church, VA.

To Apply

Submit names, with social security numbers and number of subordinates, to Training, Office of Personnel, not later than December 13. Written confirmation of training participation will be sent in December, 1991.

cc: Agency Training Coordinators

FAIRFAX COUNTY, VIRGINIA

MEMORANDUM

TO: Training Participants December 30, 1991

FROM: Tom Mauter
Training Administrator
Office of Personnel (246-3309)

SUBJECT: Confirmation of Training

I am pleased to notify you that you have been selected to participate in special training for supervisors and managers: "Team Management Effectiveness" training. (An AGENDA is enclosed for your review.) The focus of this seminar is on interpersonal communication and supervisory techniques for improving individual and team productivity.

Times and Dates This training will be conducted from 8:30 AM to 3:00 PM and will be held January 8, 15, 22, and 29 at the Virginia Tech Graduate Center, 2990 Telestar Court. The room number will be posted by the elevator in the first floor lobby. (Map enclosed). There will be a pre-test from 9 to 11 AM held Tuesday, January 7 in the Office of Personnel's training/testing room, B-1.

IMPORTANT Because data is being collected, if you cannot attend all four sessions please call me so I can replace you. All four sessions and testing must be attended because the training is sequential, and builds on the last session. The testing is for determining the training's effectiveness. Per the AGENDA, there are out-of-class assignments that accompany each of the first three session's work. These assignments will take approximately thirty minutes to an hour each to complete. If this time requirement will be a hardship because of your work commitments at this time, please let me replace you now. The SYMLOG instrument is expensive, the copies are limited to the exact number of participants selected and the County is not paying any of the costs associated with this training. This training requires a commitment to attend all four sessions, participate, practice, prepare and apply the skills in the workplace over the course of the four weeks. All information collected is confidential.

Enclosures (1) AGENDA; (2) PERSONAL DEMOGRAPHIC form to be filled out and two copies brought to the pre-test; and (3) a FEEDBACK PROCESS ANALYSIS form which you need 20 copies duplicated for the training sessions in a 3-ring binder with dividers and paper.

cc: Agency Training Coordinators
Harriet Lawrence, Consultant, Management By Communication



COMMONWEALTH OF VIRGINIA
COUNTY OF FAIRFAX
OFFICE OF PERSONNEL
SUITE 258
12000 GOVERNMENT CENTER PARKWAY
FAIRFAX, VIRGINIA 22035-0039



March 25, 1992

Ms. Harriet Lawrence
Management By Communication
11138 Byrd Drive
Chesapeake, Virginia 23328

Dear Harriet,

I want to extend my sincere thanks for all of your efforts in researching and delivering "Team Management Effectiveness" training to over sixty County supervisors and managers. The amount of time, energy, attention to detail and follow through that you devoted to this program is commendable.

In "normal" times, your training endeavors would be considered as a valuable addition to our employee development efforts. These are not, however, normal times. In light of significant revenue shortfalls, the County is faced with major budget cuts and reduction-in-forces. To put the magnitude of these events into perspective, the County has never laid off employees beginning with its creation in 1742 until the fall of 1990. Additionally, employee training and development activities have been greatly reduced. Currently, only legally mandated training is being funded virtually eliminating all supervisory and managerial development programs that have been part of our General Training Program since 1979.

In times when resources and staff morale are low, your program of enabling managers to improve both individual and team productivity could not have come at a more opportune time. The demands of providing first rate service in times of rapidly declining resources have put tremendous pressures on staff and, in particular, upon our managers and supervisors. Not only has your training been well received, it may be the only training these managers will receive in the foreseeable future.

As you may know, a minimum of 119 employees are being laid off on June 30, 1992. On April 27 the Board of Supervisors adopts the FY 1993 budget and it is expected that more employees will be let go when the final dollars are set. The need for effective interpersonal communication on the part of our managers has never been higher. Your efforts have already resulted in verified improvement in the performance of some our managers.

Again, on behalf of all the managers and supervisors who participated in your workshops, as well as their staffs and the citizens we serve, thanks for a job well done.

Sincerely,

Tom Mauter
Training Administrator

APPENDIX I

Cross Tabulations on Raters' Data

Using Descriptive Scales for:

Dispositional–Internal

Situational–External

Specificity, Empathy

Inquiry

Percentage of Managers Making Internal Attributional-Biased Statements

In problematic workplace situations, to what degree do managers' statements indicate a belief that . . .								
	N = 65 TRT = 33 CTL = 32	PRE			POST			
		Low	Mod	High	Low	Mod	High	
1. LES lacked initiative to complete job duties.	TRT	48.5	6.1	45.5	69.7	6.1	24.0	
	CTL	53.1	12.5	34.4	46.9	9.4	43.8	
2. LES lacked follow-through to complete job duties.	TRT	42.0	12.1	45.0	52.0	6.1	36.0	
	CTL	50.0	12.5	37.6	40.7	12.5	46.9	
3. LES had difficulty following verbal and/or written instructions.	TRT	48.5	21.2	51.5	48.5	15.2	37.0	
	CTL	43.7	18.8	37.6	46.9	9.4	43.7	
4. LES had problems paying attention to details of the task.	TRT	48.5	6.1	45.0	39.0	18.2	42.0	
	CTL	25.0	28.1	46.9	34.4	21.9	43.7	
5. LES was self-interested, not a team player.	TRT	45.5	3.0	51.6	63.6	9.1	27.0	
	CTL	43.8	12.5	43.8	37.5	12.5	50.0	
6. LES lacked the proper attitude to perform effectively on the job.	TRT	24.0	12.1	63.6	42.5	18.2	39.0	
	CTL	40.7	3.1	56.3	18.8	15.6	65.6	
7. LES lacked personal characteristics to perform effectively on the job.	TRT	30.0	12.1	57.5	60.6	15.2	24.0	
	CTL	37.5	31.3	31.3	46.9	15.6	37.6	

Note: To obtain percentages on the 5-point scales, 0 and 1 = Low, 2 = Moderate, 3 and 4 = High. High implies managers are personally blaming their subordinates frequently in problem situations.

Percentage of Managers Making External Attributional–Biased Statements

In problematic workplace situations, to what degree do managers' statements indicate a belief that . . .							
	N = 65 TRT = 33 CTL = 32	PRE			POST		
		Low	Mod	High	Low	Mod	High
1. LES lacked the information to adequately complete the job.	TRT	90.9	3.0	6.0	75.8	12.1	12.1
	CTL	78.2	9.4	12.5	75.0	12.5	12.5
2. LES lacked supervision to do the work this job required.	TRT	87.8	3.0	9.1	93.9	0.0	3.0
	CTL	93.7	0.0	6.3	87.4	3.1	9.4
3. LES lacked training to do the work this job required.	TRT	93.9	0.0	6.0	87.8	3.0	9.1
	CTL	87.5	12.5	12.6	78.1	6.3	15.6
4. LES had a workload that was more than one person could be expected to do.	TRT	93.0	0.0	6.1	84.8	6.1	9.1
	CTL	93.8	3.1	3.1	93.7	3.1	3.1
5. The task was unrealistic.	TRT	93.9	3.0	3.0	96.9	3.0	0.0
	CTL	96.9	0.0	3.1	93.8	0.0	6.3
6. LES was affected by constraints of the organization.	TRT	84.9	0.0	3.0	78.8	15.2	21.3
	CTL	84.4	6.3	9.4	87.5	6.3	6.2

Note: To obtain percentages on the 5–point scales, 0 and 1 = Low, 2 = Moderate, 3 and 4 = High. High implies managers frequently attribute problems to factors beyond subordinates' control.

Percentage of Managers Using Specific Feedback With Subordinates

In problematic workplace situations, to what degree do managers' statements indicate that the manager . . .							
N = 65	TRT = 33 CTL = 32	PRE			POST		
		Low	Mod	High	Low	Mod	High
1. Detailed the information LES needed to get the job done.	TRT CTL	57.6 62.5	15.2 12.5	27.3 25.0	45.5 53.2	18.2 15.6	36.4 31.2
2. Specified the goals of the task.	TRT CTL	63.6 46.9	15.2 21.9	21.2 31.3	36.4 53.2	30.3 25.0	33.3 21.9
3. Described expectations explicitly.	TRT CTL	36.4 34.4	18.2 21.9	45.5 43.7	33.3 53.1	6.1 12.5	60.6 34.4
4. Identified data sources.	TRT CTL	45.5 43.2	18.2 19.4	36.4 37.5	45.5 43.8	6.1 18.8	48.4 37.5
5. Informed LES of the policies, rules or regulations that applied in this situation.	TRT CTL	60.6 59.4	21.2 18.8	18.2 21.9	42.4 81.2	15.2 9.4	42.5 9.4
6. Outlined the critical procedures for LES to follow.	TRT CTL	51.5 68.8	15.2 18.8	33.3 12.6	51.6 65.6	24.2 15.6	24.2 18.7
7. Explained the rationale to LES for using procedures.	TRT CTL	57.6 68.8	15.2 3.1	27.3 28.1	54.5 65.6	6.1 15.6	39.4 18.7
8. Demonstrated how to perform the duties of the job.	TRT CTL	90.9 96.9	6.1 0.0	3.0 3.1	90.9 100.0	3.0 0.0	6.0 0.0
9. Provided feedback regarding performance of duties.	TRT CTL	36.4 46.9	12.1 12.5	51.5 40.7	30.4 28.2	21.2 25.0	48.4 46.9

Note: To obtain percentages on the 5-point scales, 0 and 1 = Low, 2 = Moderate, 3 and 4 = High. High implies managers frequently use specific feedback with subordinates.

Percentage of Managers Using Empathic Feedback With Subordinates

In problematic workplace situations, to what degree do managers' statements indicate that the manager . . .							
N = 65	TRT = 33 CTL = 32	PRE			POST		
		Low	Mod	High	Low	Mod	High
1. Attempted to understand LES' point of view.	TRT CTL	54.5 87.5	18.2 9.4	27.3 3.1	39.4 68.8	21.2 6.3	39.4 25.0
2. Let LES know of her/his concern.	TRT CTL	33.3 44.8	33.3 15.6	33.3 40.7	30.3 60.4	24.2 9.4	45.5 31.3
3. Let LES know that s/he cared about helping LES succeed.	TRT CTL	75.7 84.4	6.1 9.4	18.2 6.3	51.6 71.9	9.1 15.6	39.4 12.5
4. Demonstrated a willingness to listen to LES' questions, ideas or concerns.	TRT CTL	48.5 81.2	12.1 6.3	39.4 12.5	39.4 68.8	21.2 9.4	39.4 29.1
5. Let LES know that s/he was sensitive to LES' needs and feelings.	TRT CTL	81.9 84.4	9.1 6.3	9.1 6.3	60.6 90.6	18.2 3.1	21.3 6.3
6. Let LES know that s/he was open to discuss problems that impacted work.	TRT CTL	63.6 84.4	9.1 9.4	27.2 6.3	51.5 81.2	15.2 3.1	33.4 15.6
7. Let LES know that s/he supported LES' efforts to perform tasks effectively.	TRT CTL	72.8 78.2	6.1 3.1	21.3 18.8	45.4 71.9	12.1 18.8	42.4 9.4

Note: To obtain percentages on the 5-point scales, 0 and 1 = Low, 2 = Moderate, 3 and 4 = High. High implies managers frequently use empathy in feedback interactions with subordinates.

Percentage of Managers Using Inquiry in Feedback With Subordinates

In problematic workplace situations, to what degree do managers' statements indicate that the manager . . .							
N = 65	TRT = 33 CTL = 32	PRE			POST		
		Low	Mod	High	Low	Mod	High
1. Asked for LES' perspective of what occurred.	TRT CTL	51.5 62.6	6.1 9.4	42.4 28.1	32.4 71.9	12.1 9.4	45.5 18.8
2. Asked LES for clarification.	TRT CTL	45.4 75.0	15.2 3.1	39.4 21.9	48.5 62.5	15.2 18.8	36.4 18.8
3. Confirmed that LES understood the parameters of the job.	TRT CTL	81.9 90.7	9.1 6.3	9.1 9.4	69.7 93.8	3.0 3.1	27.2 3.1
4. Probed for information that would explain why LES held a particular view.	TRT CTL	87.9 87.5	3.0 6.3	12.1 6.3	75.8 90.6	6.1 6.3	18.2 3.1
5. Probed for information that would explain why LES behaved in a certain way.	TRT CTL	81.9 87.5	12.1 0.0	6.0 12.5	63.7 84.4	12.1 9.4	24.3 6.2
6. Asked for responses from LES that s/he understood the concerns about her/his work.	TRT CTL	69.7 84.4	9.1 3.1	21.2 12.5	66.7 87.6	12.1 6.3	21.2 6.3
7. Asked for responses that LES agreed with the stated concerns about her/his work.	TRT CTL	84.8 84.4	9.1 0.0	6.1 15.6	72.8 93.8	3.0 6.3	24.3 0.0

Note: To obtain percentages on the 5-point scales, 0 and 1 = Low, 2 = Moderate, 3 and 4 = High. High implies managers frequently use inquiry in feedback interactions with subordinates.

APPENDIX J

Summary Data for Managers' Perceived Effectiveness

Summary Data for Managers' Bias and Use of Feedback Skills

Summary Data for Managers' Perceived Effectiveness

	RESULTS OF ANCOVA		TREATMENT GROUP				CONTROL GROUP			
	F	p	PRETEST		POSTTEST		PRETEST		POSTTEST	
			Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
U/DOMINANCE										
TEAM	18.3	.0001	1.1	1.6	2.3	1.4	.8	1.7	1.0	1.8
LES	3.3	.08	1.0	4.0	1.9	4.2	-1.4	3.6	-1.3	3.8
MES	11.6	.001	1.2	1.7	2.3	1.5	1.2	1.8	1.3	2.1
MGR (SELF)	10.3	.002	1.2	2.8	3.1	2.8	1.2	3.2	1.3	2.7
MOST EFFECTIVE	6.7	.01	2.3	2.7	3.7	2.3	2.4	3.0	2.5	2.2
P/FRIENDLINESS										
TEAM	5.4	.02	3.6	1.7	4.9	2.7	4.4	2.1	4.4	2.2
LES	.1	.73	.5	4.7	1.5	5.8	2.7	6.8	3.0	6.7
MES	4.1	.05	3.8	2.3	5.3	3.2	4.5	2.4	4.7	2.3
MGR (SELF)	6.2	.02	5.6	4.2	7.0	2.5	5.2	4.0	4.9	4.6
MOST EFFECTIVE	.8	.40	6.5	3.6	7.9	2.8	6.8	3.5	7.3	4.0
F/TASK-ORIENTATION										
TEAM	.1	.78	5.5	3.4	5.2	3.8	4.7	2.9	4.3	3.5
LES	.9	.35	.4	6.6	1.3	6.3	.6	6.1	.3	7.0
MES	.0	.84	5.9	4.0	5.3	4.4	5.3	3.3	5.0	3.8
MGR (SELF)	.5	.48	8.4	4.3	8.4	4.3	6.0	5.9	6.0	5.7
MOST EFFECTIVE	1.3	.30	8.1	4.6	8.4	4.3	8.9	3.5	7.7	4.4

Summary Data for Managers' Bias and Use of Feedback Skills

N = 65, VARIABLE	TREATMENT		CONTROL		RESULTS OF ANCOVA	
	PRE	POST	PRE	POST	F	p
	Mean S.D.	Mean S.D.	Mean S.D.	Mean S.D.		
ATTRIBUTIONAL BIAS:						
DISPOSITIONAL- INTERNAL	2.2 .9	1.5 .8	1.9 .9	2.0 1.0	14.5	.0003 *
SITUATIONAL- EXTERNAL	.3 .6	.4 .5	.4 .6	.5 .6	0.0	1.0
FEEDBACK SKILLS:						
SPECIFICITY	1.4 .8	1.7 .9	1.3 .9	1.2 .8	5.7	.02 *
EMPATHY	1.2 1.1	1.7 1.1	.7 .7	.9 .9	6.3	.02 *
INQUIRY	.9 1.1	1.2 1.0	.6 .9	.5 .7	9.0	.004 *
FEEDBACK SELF- ASSESSMENT	1.5 .3	1.7 .2	1.4 .3	1.5 .3	12.9	.001 *

Note: * Significant at $p \leq .05$.

APPENDIX K

Cross Tabulations of Managers' Self-Assessment

Percentages of Highly Consistent Use of Feedback Behaviors With Employees

Cross Tabulations of Managers' Feedback Self-Assessment and Percentages of Managers' Use of Highly Consistent Feedback Behaviors With Employees

	TRT						CTL					
	Pre			Post			Pre			Post		
	0	1	2	0	1	2	0	1	2	0	1	2
1. I pick the right time and place to give feedback to employees.	3.1	50.0	46.9	0.0	15.6	84.4	6.1	54.5	39.4	0.0	45.5	54.5
2. I limit my feedback to specific skills employees can do something about.	0.0	46.9	53.1	3.1	18.8	78.1	9.1	51.5	39.4	3.0	42.4	54.5
3. I avoid giving one-way feedback and inquire about what concerns employees.	9.4	34.4	56.3	0.0	21.9	78.1	15.2	36.4	48.5	6.1	36.4	57.6
4. I provide positive as well as negative feedback to motivate employees.	0.0	21.9	78.1	0.0	12.5	87.5	9.1	33.3	57.6	0.0	42.4	57.6
5. I provide individuals feedback and time to question in group meetings.	18.8	28.1	53.1	0.0	18.8	81.3	15.2	42.4	42.4	18.2	24.2	57.6
6. When giving feedback I focus on task and behaviors, not employee personalities.	0.0	28.1	71.9	0.0	31.3	68.8	0.0	30.3	69.7	0.0	24.2	75.8
7. I encourage two-way feedback to clarify what people need to know.	3.1	21.9	75.0	0.0	21.9	78.1	6.1	36.4	57.6	0.0	45.5	54.5
8. I avoid saving up criticisms to deliver at one time.	15.6	37.5	46.9	6.3	37.5	56.3	12.1	33.3	54.5	15.2	39.4	45.5
9. When giving feedback I try to understand things from the other's point-of-view.	0.0	34.5	65.6	0.0	18.8	81.3	3.0	24.2	72.7	3.0	18.2	78.8
10. I avoid giving feedback if I am angry, busy, or tired.	15.6	59.4	25.0	0.0	59.4	40.6	9.1	51.5	39.4	12.1	48.5	39.4
11. I refrain from using sarcasm or feedback to prove my point.	0.0	28.1	71.9	0.0	34.4	65.6	15.2	33.3	51.5	9.1	36.4	54.5
12. I encourage employees to ask questions by not rushing or interrupting them.	6.3	46.9	46.9	3.1	31.3	65.6	6.1	42.4	51.5	3.0	63.6	33.3
13. I provide detailed feedback using verbal direction and written instruction.	12.5	53.1	34.4	6.3	37.5	56.3	18.2	48.5	33.3	15.2	45.5	39.4
14. I help employees understand my feedback especially when they are upset.	0.0	53.1	46.9	0.0	31.3	68.8	3.0	27.3	69.7	3.0	18.2	78.8
15. I promote two-way feedback in the team setting to promote member interactions.	6.3	43.8	50.0	0.0	28.1	71.9	9.1	45.5	45.5	6.1	39.4	54.5

Note: Percentages reflect ratings of 0 = low, 1 = moderate, 2 = high from the 3-point scale.

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