

**MULTI-SOURCE (360 DEGREE) FEEDBACK:  
A CASE STUDY AND EVALUATION**

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## **MULTI-SOURCE (360 DEGREE) FEEDBACK: A CASE STUDY AND EVALUATION**

### **Abstract**

This study examines the two-year experience of an organization using multi-source (360 degree) feedback as an integral part of its effort to address a number of critical issues being faced. These included: (1) a projected turnover through retirement of over 40% of their managerial staff; (2) a need to develop a succession system to replace these managers with qualified and competent individuals; and, (3) a need to create an organizational culture and environment which would foster higher levels of employee motivation and performance. The study examines the initial strategy and plan for addressing the situation, the role of multi-source (360 degree) feedback in this plan, the results of using multi-source feedback, managers perceptions of their feedback constituency groups, and managers perceptions of their experience with this process. Limitations of the study are discussed and recommendations offered for management training and development as well as future research directions.

## **MULTI-SOURCE (360 DEGREE) FEEDBACK: A CASE STUDY AND EVALUATION**

### **INTRODUCTION**

In the beginning of the two-year study period, a large, state-wide, public-sector organization located in the Midwest participated in the first phase of a multi-year management development program and research study. An interesting feature of the program was the use of multi-source (360 degree) feedback, involving an initial bench marking assessment followed by a reassessment one year later.

The program was designed to address a number of critical issues being faced by the organization. These included: (1) a projected turnover through retirement of over 40% of their managerial staff; (2) a need to develop a succession system to replace these managers with qualified and competent individuals; and, (3) a need to create an organizational culture and environment which would foster higher levels of employee motivation and performance.

A Human Resource Development Committee was formed and appointed to develop a long-term formal management development plan, focusing on the need to ensure an ongoing supply and delivery of management team candidates across various levels, and at upcoming points in time in light of retirements. In this regard, management development in the organization was approached as a process, not just a training event, which would require multiple solutions and constant oversight, and dedication of resources. Such a plan was expected to involve: career development planning, multi-source (360 degree) appraisal, self-development action plans, performance evaluation, and management training. Top management was committed to implementing recommendations made by the committee. Agreement was reached to conduct a longitudinal research study into the process to examine impacts of the program. Results of the study would be used as a basis for revision and refinement of the program for a new group of managers who would be participating three years later.

### **THE MANAGEMENT DEVELOPMENT STRATEGY AND PLAN**

Figure 1 presents the initial management development strategy and plan. The first phase involved a program overview, mentoring, career planning, and management skills assessment including multi-source (360 degree) feedback. The second phase emphasized skills development with attention being paid to a performance management combination of assessment data, individual action plans, career planning goals, and training programs. The third phase involved an evaluation process based on a combination of course evaluations, reports to the supervisor, exam processes, and periodic questionnaires.

(Figure 1)

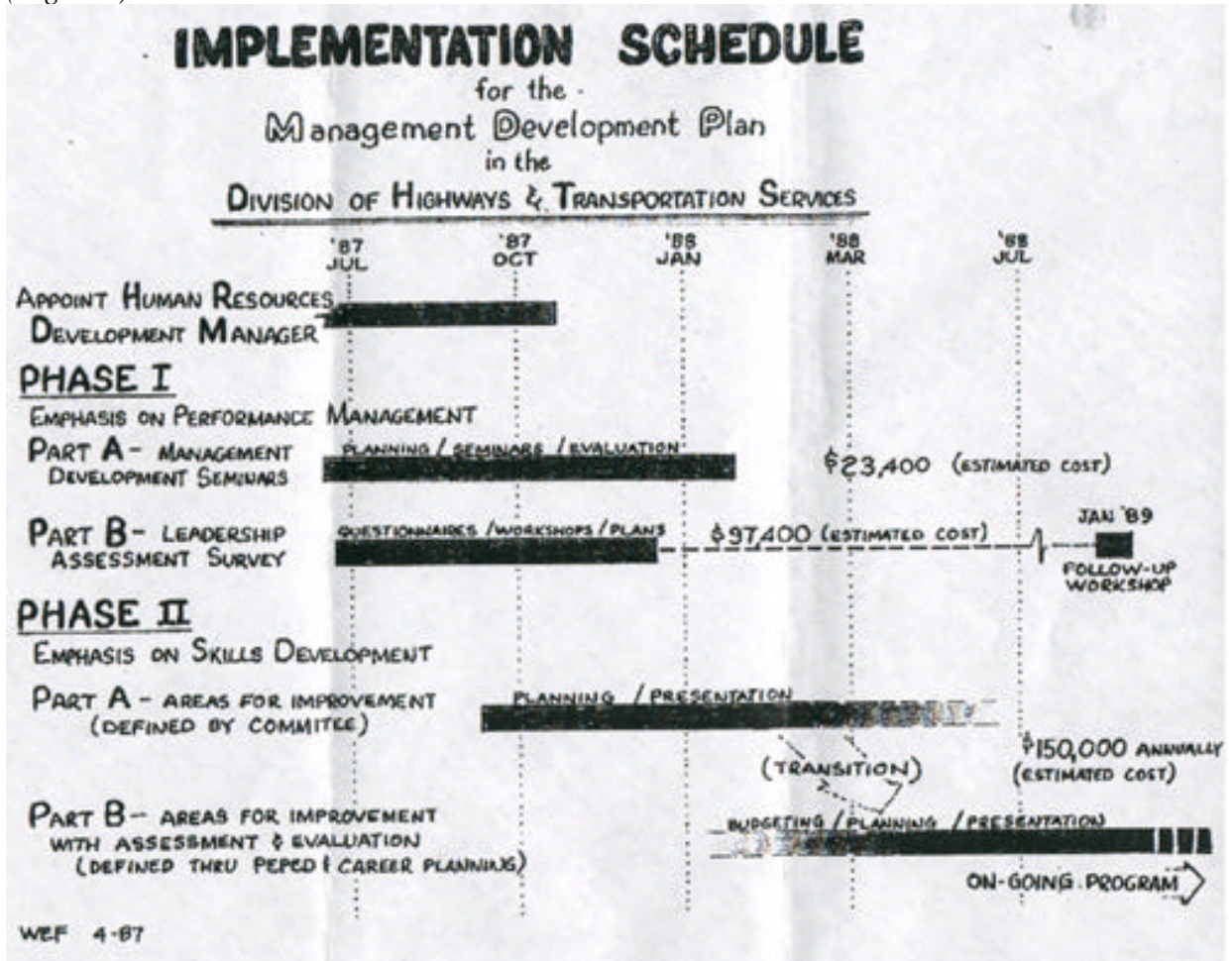


Figure 2 presents the “Multi-Source Leadership Assessment 8-Step Model” developed by Dr. John Keenan upon which the program was based.. It was conducted over a two-year period. It involved the following: (1) a two-day introductory program on performance management and a briefing on the series of assessment activities to follow; (2) confidential assessments of

each manager on 16 skill areas and 99 leadership behaviors by their supervisors, peers, and

**MULTI-SOURCE LEADERSHIP ASSESSMENT**  
**8-STEP MODEL (Figure 2)**

**Step 1**

Pre-Program Strategic Planning Meetings  
Top-Level Managers, Line Managers  
Training Department  
University Director

**Step 2**

Performance Management Program  
(2 days)

**Step 3**

Assessment by Boss, Peers and  
Staff of Each Manager  
(confidential/anonymous)

**Step 4**

Leadership Assessment Program  
(Feedback from Step 3 and  
Development of Individual  
Action Plans - (2 days)

**Step 5**

Development of Leadership  
Enhancement Training Programs  
(based on Composite Profile from Step 4)

**Step 6**

Training Program  
(based on topics: identified in Step 5)

**Step 7**

Reassessment by Boss, Peers and  
Staff of Each Manager  
(same as step 3)

**Step 8**

Leadership Assessment Program  
(Feedback from Step 7 and  
Development of New Individual Action Plan)

subordinates; (3) two-day workshops where the survey results were presented to each manager and "action plans" initiated for on-the-job improvements; (4) meetings between each manager and his/her supervisor, peers, and staff to discuss action plans and gain support for improvements in leadership behaviors identified in the action plan; (5) presentation of five days of training on the five leadership skill areas identified by a composite profile of the entire group of managers as being the areas needing most improvement (i.e. conflict management, planning/delegation, creativity/innovation, coaching, and interpersonal communication); (6) completion of a survey

which included items measuring perceptions of feedback groups (supervisor, peers, and staff), and perceptions of the program in terms of fairness, value, and impact on leadership effectiveness; (7) reassessments of each manager one year later by his/her supervisor, peers, and staff through completion of the same confidential leadership assessment used before; and (8) presentation of new survey results and completion of new "action plans".

### **Multi-Source (360 Degree) Feedback**

A major feature of the strategy and program was to use multi-source (360 degree) feedback involving an initial bench mark assessment followed by a reassessment one year later. The use of multiple sources of feedback has been recommended among management scholars and practitioners alike (Ulrich, 1993). There are a number of benefits to be gained from using multi-source appraisals: more observations of the ratee's work behaviors, greater reliability of assessment scores, and increased ratee acceptance of scores and the scoring process (Harris & Schaubroeck, 1988). Interest in using leadership assessment both before and after managers receive leadership training has recently increased. General Electric, for example, gives managers leadership assessments before and after training (Tichy, 1989). Usually leadership assessment questionnaires are completed by multiple raters: the manager (self), a supervisor, peers, and more recently, staff. The multiple source appraisal provides managers with a fuller range of feedback from important constituents (Bernardin, 1986; Bernardin & Beatty, 1987).

It was expected that the use of a confidential assessment in the beginning stages of the program would result in two major benefits. First, individual managers would be provided with a baseline assessment of others' perceptions of their current leadership behaviors. Through a study of "gap analysis" (the difference between current and desired behaviors), managers could understand the expectation of their appraisers, thus pinpointing specific leadership behaviors which needed improvement (Moses, Hollenbeck & Sorcher, 1993). They could develop "action plans" which targeted those behaviors deemed most critical to improve on the job.

A second benefit from use of an assessment in the beginning stages of the program concerned helping determine the content of the leadership skills training component of the program. This would allow managers to receive training pertinent to developing skills which would help them be successful on-the-job with their action plans. The linking of action plans with training was another critical component of the program since prior research by Nemeroff and Wexley (1979) found that trainees who set developmental goals in conjunction with a management training program significantly transferred more learning than trainees in a control group.

All managers were asked to meet with all who provided feedback on their leadership behaviors. It was expected that this would allow managers an opportunity to gain clarification and more specific information than was originally received (Likert, 1961). They could also share with those providing them feedback an overview of the assessment results and their goals and action plans for improvement. The meetings were also expected to improve communication between all parties and increase willingness to openly discuss perceptions and expectations in the future.

Predicted outcomes from linking multi-source feedback, actions plans, and training would be improvements in leadership behaviors of managers as measured through a reduction in gap sizes between current and desired behaviors in the reassessment to be conducted a year later. The follow-up assessments would also provide managers with feedback about changes in their leadership behaviors as well as provide human resource training directors with information about the degree to which managers transferred training back to the job.

## **Feedback Sources**

This study was also interested in examining whether managers will more often select their staff, supervisors, or peers as being in the best position to observe their leadership behaviors and what feedback group they felt was in the best position to accurately evaluate their leadership behaviors. This study examined what feedback group managers valued the most.

Feedback source credibility is important for the feedback recipient. Ilgen, Fisher and Taylor (1979) stated that recipients of feedback will perceive a source as credible if the source is familiar with the recipient's task and performance. For example, a study on student versus supervisor feedback to teachers demonstrated that teachers significantly improved their performance following feedback from students while feedback from the teachers' supervisors actually decreased performance (Tuckman and Oliver, 1968). In that study, teachers regarded students as more credible because students were believed to have more opportunity to observe teaching behaviors.

Most middle and upper-level managers spend a great deal of time working with their peers. Peers have an opportunity to observe leadership behaviors that are not visible to superiors (DeNissi and Mitchell, 1978). Peers tended to evaluate managerial behaviors accurately because they were in a position to observe many different dimensions of work behaviors (DeNissi and Mitchell, 1978). Mumford (1983) claimed that peer appraisal feedback as an additional feedback source is valid because multiple raters counterbalance observational errors. Holzbach (1978) claimed that people respond more strongly to evaluations from peers than to superior evaluations because peer feedback is perceived as more ability-task relevant. Staff have recently been included in the manager's feedback constituency. There are several reasons to include subordinates as a feedback source. Bernardin (1986) claimed that subordinates were more qualified to evaluate some of their manager's behaviors because they have greater opportunity than superiors to observe the manager's behaviors. Mintzberg (1973) found that upper level managers believed subordinates of middle level managers were more qualified to evaluate the manager's leader and information disseminator behaviors than they were themselves. The results of another study indicated that managers respected subordinate feedback because they felt such feedback helped them improve their supervisory behaviors (Hegarty, 1973). Experimental studies demonstrated that subordinate feedback helped improve not only the manager's supervisory behaviors (Hegarty, 1974), but also improved the manager's work unit productivity (Shipper & Neck, 1991). A recent study found that managers believe subordinates were in the best position to observe leadership behaviors (Antonioni and Keenan, 1990).

The literature review above supports the need for multiple appraisal feedback. These studies indicated that both peers and subordinates were highly valued by managers as feedback

sources. Peers and subordinates are regarded as credible feedback sources because they have greater opportunity to observe the manager's behaviors than do supervisors.

## **METHODOLOGY**

### **Subjects**

The size of the organization was approximately 1700 civil engineers, engineering technicians, real estate and general administrative staff. Personnel were located at eight regional offices including a central administrative office. There were 205 managers, drawn from all eight regional offices, participating in the study. Ninety-seven percent of the managers were males. Their mean age was 48.1 years. Seventy-five percent held a undergraduate college degree, and sixteen percent held a graduate degree. Mean years of managerial experience was 10.9. Mean tenure in current position was 7.6. Six percent were upper-level managers (vice-president or above), thirty-four percent were middle-level managers, and sixty percent were first-level managers.

### **Measures**

All managers received assessments from their supervisor, peers, and staff, using the "Leadership Assessment Survey (LAS)" developed by Hickok and Cippola (1986). Reliability and validity of the LAS is discussed in Cippola (1990). Using five-point Likert scales (choices ranging from never = 1 to always = 5), the survey evaluated 99 leadership behaviors grouped into 16 skill areas. Survey items included questions such as: "Make certain others know what is expected of them before they begin the task," "Set measurable department goals," "Recognize others when they do things well," and "Display a genuine interest in you while you are speaking." Respondents were asked two questions with respect to each evaluated behavior: How often does (behavior) occur?; and, how often should this (behavior) occur? Skill areas examined included technical knowledge, delegation, motivation, coaching, planning, teamwork, problem solving, creativity, flexibility, and time management.

An eleven-item feedback constituency survey assessed managers' perceptions of feedback received from superiors, peers and staff in terms of whose feedback they valued the most, who was in the best position to observe their leadership behaviors, and who was in the best position to accurately provide them feedback on their leadership behaviors.

Another survey, using five-point Likert scales (choices ranging from strongly agree to strongly disagree), managers were asked whether they felt their evaluations were fair, whether they felt they had learned a great deal, and whether they felt they were a more effective leader because of the feedback and program.

### **Analyses**

The Leadership Assessment Survey data collected in late 1988 was compared to the same data collected in 1990 with respect to "improvements" achieved by managers participation. Improvements were measured through reduction in the "gap size" in each of the sixteen skills

areas under evaluation. “Gap size” is defined as the difference between what managers are doing and what others want the manager to do.

Chi-square pairwise comparison was performed to determine which feedback source was in the best position to observe a manager’s leadership behaviors, the best position to accurately evaluate the behaviors, and which feedback source was most valued by managers. Lastly, percentages are provided for whether managers felt their evaluations were fair, whether they felt they had learned a great deal, and whether they felt they were a more effective leader because of the feedback and program.

## **RESULTS**

Figure 3 compares data at the beginning of the program against data two years later. These numbers reflect the total value for all 205 managers’ gaps for any particular skill area. The gap values for each of the 205 managers are totaled and these values become the points on each of the associated lines for each particular skill area. The skill areas with the smallest gaps (e.g. highest satisfaction level by others with managers) are listed first on the left. Findings indicate that as a composite, all 205 managers improved or reduced their gaps in all 16 skill areas. The average amount which a gap size decreased for all skill areas and all managers was 36%. The top skills areas in terms of improvement or decreased gap size were: (1) technical knowledge (45%); (2) problem solving (43%); (3) flexibility (41%); creativity (40%); and, time management (39%).

(Figure 3)

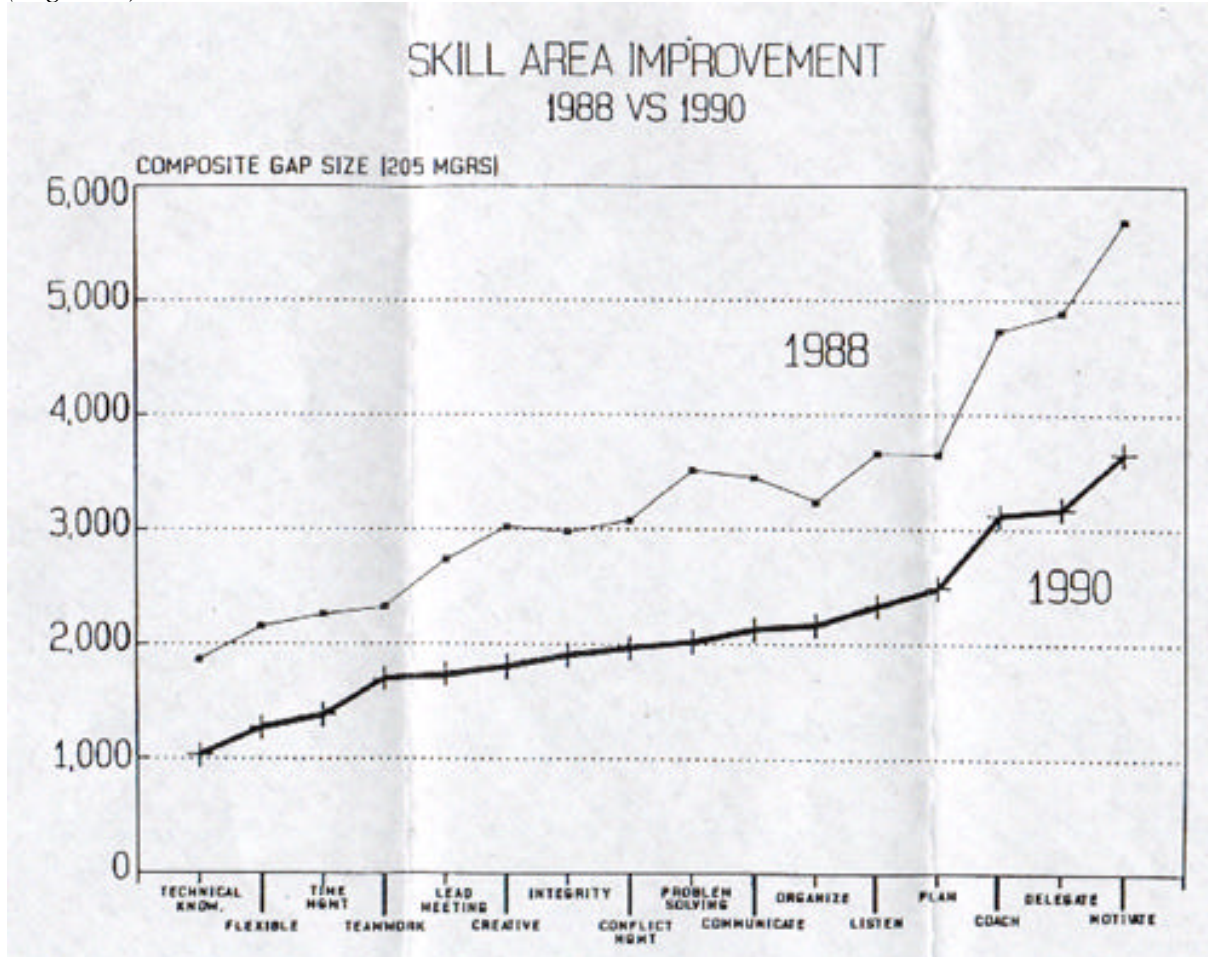
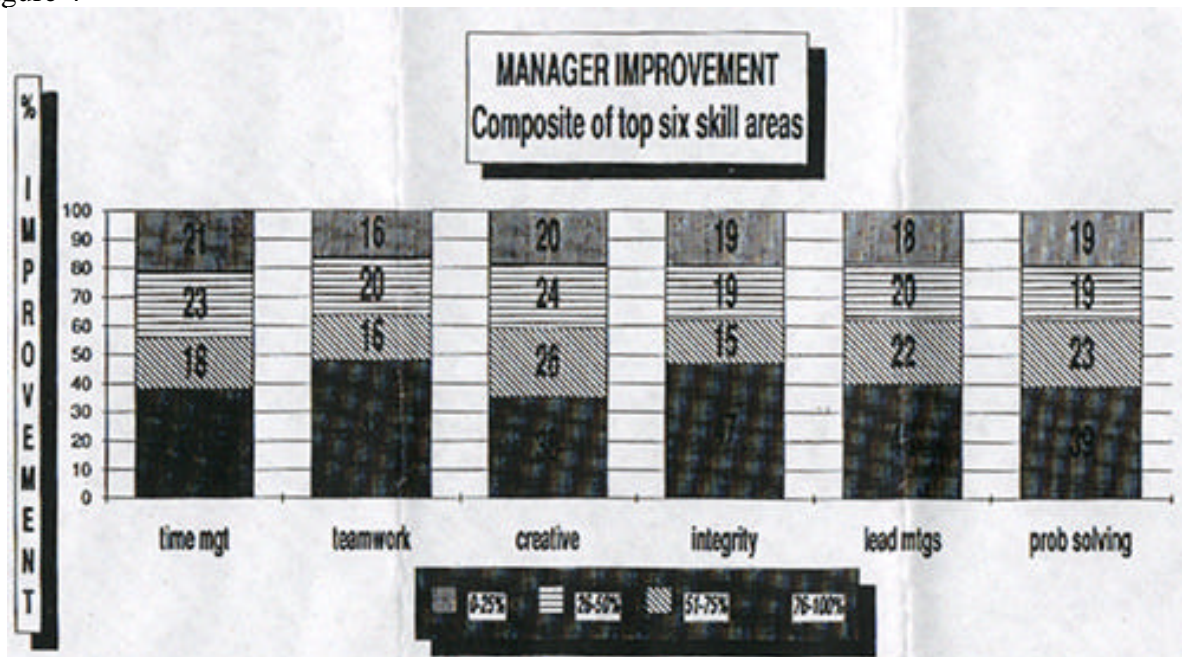


Figure 4 shows the percentage of the 205 managers who improved (reduced) their gap size. The six skill areas shown had the largest percentage of management improvement. The y axis displays the percent of managers, out of the 205, who reduced their gap size. The x axis lists the top skill areas of improvement based on the percentage of manager showing improvement. For example, 75% of the 205 managers experienced an improvement or reduction in their gap size from 1988 to 1990 in the "Time Management" skill area. Of this 75% of managers, 21% experienced an improvement anywhere from 0 to 25% in reducing their gap size. Twenty-three percent experienced an improvement anywhere from 26% to 50% in reducing their gap size. Eighteen percent experienced an improvement anywhere from 51% to 75% in reducing their gap size. Thirty-eight percent experienced an improvement anywhere from 76% to 100% in reducing their gap size. Findings indicate that the largest percentage of gap size reduction was in the 76-100% category. Sixty-seven percent (138 out of the 205 managers) improved in all 16 skill areas.

Figure 4



The chart shows the percentage of the 205 managers who had a positive improvement in reducing their gap size. The six skill areas shown had the largest percentage of management improvement.

**Y-AXIS-** This is the percent of managers out of the 205, who experienced nay type of positive improvement in reducing their gap size.

**X-AXIS-** This lists the top 6 skill areas of improvement based on the percentage of managers showing a positive improvement

**COLORS-** The colors represent the number of percentage of managers who achieved a certain improvement percentage in their gap size

Blue: Represents managers who achieved 0-25% improvement (i.e., percent reduction of their gap size)

Light Blue: Represents managers who achieved 26-50% improvement

Red: Represents managers who achieved 51-75% improvement

Green: Represents managers who achieved 76-100% improvement

As an example: Seventy-five percent of the 205 managers experienced an improvement or reduction in their gap size form 1988 to 1990 in the Time Management Skill area. Of this 75% of managers, 21% experienced an improvement anywhere from 0 to 25% in reducing their gap size. Twenty-three percent experienced an improvement anywhere from 26% to 50% in reducing their gap size. Eighteen percent experienced an improvement anywhere from 51% to 75% in reducing their gap size. Thirty-eight percent experienced an improvement anywhere from 76% to 100% in reducing their gap size.

#### **Significant Points Regarding This Chart**

1. The largest percentage of gap size reduction was in the 76-100% category.
2. The average number of managers who improved by some positive percentage in all 16 skill areas was 67% (138 out of the 205 managers).

Chi-square analysis indicated that subordinates were selected as being in the best position to observe leadership behaviors significantly more often than are supervisors ( $\chi^2(1) = 29.124, p < .05$ ) and peers ( $\chi^2(1) = 102.925, p < .05$ ). Again, subordinates were selected as being in the best position to accurately observe leadership behaviors significantly more often than supervisors ( $\chi^2(1) = 20.844, p < .05$ ) and peers ( $\chi^2(1) = 79.3365, p < .05$ ). Finally, subordinates were selected as being the most valued source of feedback on leadership behaviors significantly more often than are managers ( $\chi^2(1) = 38.0, p < .05$ ) and peers ( $\chi^2(1) = 75.977, p < .05$ ). Study findings also indicated that managers valued their subordinates feedback most (57%), felt the evaluations were fair (80%), and felt they had learned a great deal (64%). Seventy-two percent felt they were a more effective leader because of the feedback and program.

## **DISCUSSION**

The predicted improvements with respect to reductions in gap sizes between current and “desired” leadership behaviors of managers involved with this study suggests that the use of multi-source (360 degree) feedback was a success. Through the use of multi-source (360 degree) feedback combined with a study of “gap analysis” (between current and desired behaviors), managers were able to understand the expectation of their appraisers and thus pinpoint specific leadership behaviors which needed improvement. They could then develop “action plans” which targeted those behaviors deemed most critical to improve on the job. Subsequent meetings with those that provided them feedback on their leadership behaviors allowed them an opportunity to gain clarification and more specific information than was originally received. This also allowed them an opportunity to share an overview of the assessment results, their goals and action plans for improvement, and help create a better communication climate characterized by greater degrees of openness clarity about future expectations.

By receiving training pertinent to developing skills, managers were able to be successful with their action plans.

The study confirmed prior research with respect to the value placed on subordinate feedback (Mintzberg, 1973; Tuckman and Oliver, 1968). Findings also support Hegarty’s (1973) suggestion that managers respect subordinate feedback because they feel such feedback would help them improve their supervisory behaviors. Study findings also are in line with Bernadin’s (1986) claim that subordinates were more qualified to evaluate some of their manager's behaviors because they have greater opportunity than superiors to observe the manager-ratee.

Lastly, study findings indicated that managers generally felt positive about the program, believing that evaluations were fair, that they had learned a great deal, and that they were a more effective leader because of the feedback and program.

## **LIMITATIONS AND RECOMMENDATIONS**

The study faced a number of limitations. This study did not control for the content or completeness of trainees’ action plans and there is no control group. Other factors such as

attrition and maturation could have affected the outcomes and need to be controlled for in future longitudinal studies.

With respect to the general success of the use of multi-source (360 degree) feedback in this program, there are implications for improving current approaches to management training and development. For example, it is estimated that American industries spend over \$36 billion annually on training and development (Carnevale, 1986). It is estimated that only about 10% of the training actually transfers back to work situations (Baldwin & Ford, 1988). By using a process similar to the one adopted in this particular management development program, better results can be expected both for the development of leaders and the general success of organizations facing similar problems as the one in this study.

Concerning future research, Hand (1973) recommended that multiple intervals should be used for assessing the transfer of training. While such data was not available in this study, we recommend that future longitudinal study conduct a three as well as twelve month reassessment.

A new, revised program, based on research study conclusions, was inaugurated in 1991 for 113 new managers. A new longitudinal study is being conducted to examine impacts of the revised program. Key features of the new program include: (1) direct involvement of line managers in the training program; (2) inclusion of the Leadership Behavior Development Questionnaire (LBDQ) in a newly revised Leadership Assessment Survey (LAS); (3) inclusion of new scales to measure such areas as "feedback-seeking", identity as a manager, field dependency, achievement motivation, personality type, etc.; (5) revision of the categories within the LAS to include evaluation of such factors as: empowerment, diversity, quality, etc.; (6) development of training programs based on "action plans" rather than composite profiles; (7) establishing experimental and control groups to examine the effect of a special "coaching program" for selected supervisors of managers in the new program; and (8) a more sophisticated tracking program which involves all managers and all evaluators.

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