MANAGEMENT DEVELOPMENT TRAINING: AN EVALUATION OF A
PROGRAM FOR FIRST LINE STAFF SUPERVISORS

THESIS

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A pre- and postexperimental design with a control group was used to evaluate the effectiveness of a management development program. Subjects were 48 first line staff supervisors employed by a major manufacturing company. The training group subjects (n = 24) attended the company's 1-week training program. Subjects in the control group (n = 24) were similar with respect to plant location, job assignment, etc.

A 42-item employee-opinion questionnaire was constructed to measure supervisory style and work-group climate. The subjects' subordinates (n = 313) completed the questionnaire before and after training. Eleven items identified by content analysis as most relevant to the training content comprised the measure of training effectiveness.

An analysis of covariance was performed using the pretest as the covariate. Results indicated no significant training effects.
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MANAGEMENT DEVELOPMENT TRAINING: AN EVALUATION OF A PROGRAM FOR FIRST LINE STAFF SUPERVISORS

Over the past 30 years, the number of management training and development programs has continued to grow at an ever-increasing rate. Almost without exception, every major corporation has some type of program aimed at furthering its organizational goals by enhancing the abilities, attitudes, motives, and skills of its managers (Campbell, Dunnette, Lawler, & Weick, 1970).

Unfortunately, as Bunker and Cohen (1977) have noted, "the increases in organizational efforts to develop and implement company training programs have not been accompanied by equally important increases in the amount and quality of evaluation research conducted to determine the efficacy of such programs" (p. 526). Training evaluation has remained as one of the most under-researched and neglected areas of industrial psychology (Bunker & Cohen, 1977), and relatively few empirical studies have been published in recent years to correct this situation.

One of the reasons for a lack of empirical research has been the reluctance of business to evaluate its own training programs. Wallace and Twichell (1953) conjectured that management was hesitant to "waste time" testing the effectiveness of training programs which they already had deemed
to be worthwhile. McGehee and Thayer (1961) blamed the absence of evaluation research on upper-management's negative attitude toward training. Management has tended to view training as a "necessary evil" of doing business, which required no special skills or knowledge, and therefore, no formal evaluation. Finally, Bunker and Cohen (1978) suggested that managers have avoided the evaluation issue by the use of faulty rationale, e.g., "We know our training works," "Better evaluations are impossible to do," and "Why risk self-evaluations?"

Despite these rationalizations, many industrial psychologists (Bunker & Cohen, 1977, 1978; Campbell et al., 1970; Kirkpatrick, 1976; Miner, 1965) have agreed that the time for serious evaluation of management training has arrived. The question remains as to what type of evaluation effort is necessary.

MacKinney (1957) has provided a framework which can be used to critically review the literature in search of an appropriate experimental design. According to his model, there were three progressive levels of evaluation with better evaluation information provided at the so-called higher levels. At the lowest level, an "after-only" criterion measure was administered to the training group. However, the data yielded by this type of design was considered by MacKinney to be virtually worthless. The next level of evaluation used a measure "before and after" training.
This design was at least capable of detecting whether or not a change had taken place. However, the occurrence of a change could be attributed to factors other than the intervention of the training. Lastly, at the highest level, a "before and after" design was employed with a "control" group. Using this design, any changes which occurred in the experimental group (but not in the control group) could be attributed to the training. MacKinney stated that this last procedure was the only method of training evaluation which was worth the effort.

While this is clearly the most desirable model for training evaluation, few studies have been published which use MacKinney's "highest" level design. Two comprehensive reviews of the training evaluation literature (Campbell et al., 1970; Miner, 1965) revealed that out of more than 50 published studies, fewer than a third used a pre- and post-experimental design with controls.

Cantor (1951) developed a human relations training program for use of three large insurance companies. The course format was primarily lecture, and dealt with studies of human nature, personality, motivation, attitude, leadership, and group dynamics. Subjects in the training group were 18 first line supervisors who met for 2 hours each week for a total of 10 weeks. The control group supervisors (n = 18) were similar with respect to age, sex, and education. Six tests were administered to both groups before and after
training. In addition, supervisors in the training group were ranked by their peers and superiors at the conclusion of training. Results of the study were generally positive, and showed that the training group scored significantly higher (at the .10 level) on a majority of the criteria measures.

Castle (1952) reported on a series of 14 studies involving various experimental conditions. Some details of the studies were omitted including the specific number of subjects in most of the experiments. Only one of the studies used a control group (n = 38). Subjects in this experiment were supervisors in a medium-sized engineering firm located in London. Criteria measures included an attitude questionnaire and a standardized role-playing situation. Results showed that the training group improved significantly in the role-playing situation. However, only one reliable change was shown from the various scales of the attitude measure. No statistical data were reported.

In a study of blue-collar foremen, Hariton (1952) tested the effectiveness of a 30-hour human relations training program. Formal 2½ hour presentations were interspersed with group discussions, skits, films, and role-playing. The experimental group consisted of 23 foremen in the Overhead Line Department of a public utility company and the 140 employees in their work groups. The control group was made up of 18 foremen from another department and their 121
employees. An employee questionnaire of 38 items was administered on a before-and-after basis. The postmeasure was given 3 months after the completion of training. Overall results of the study were mixed. The author suggested that the results were related to the degree of upper-management support for new ideas derived from the training program. The more supportive management was "back on the job," the better were the training results.

DiVesta (1954) compared two methods of instruction, as well as the overall effectiveness, of a human relations course for Air Force administrators. The combined experimental groups totaled 94 supervisors who participated in a 20-hour human relations course in addition to their regular technical training. A control group of 24 administrative supervisors underwent only the technical training. Approximately one-half of the training subjects were taught by the student-centered method (primarily group discussions), while the remaining subjects were taught by the instructor-centered method (primarily lecture). A multiple criteria approach was used. Results showed that both human relations training methods produced an improved knowledge of the course content and an improved attitude of the participants. While the evidence did not show one teaching method to be superior, the discussion method (i.e., student-centered) did seem to facilitate improvements in leadership ability.

Fleishman, Harris, and Burtt (1955) and Harris and Fleishman (1955) reported on a series of four investigations
conducted at the International Harvester Company. Only the last two studies employed a control group. In a third study, 39 foremen participated in a human relations training course which was conducted at the company's central school. A control group of 59 foremen was used. An all-day training program used primarily lecture and group discussion, and lasted for a total of 2 weeks. The Leadership Behavior Description Questionnaire was completed by employees in both groups on a pre- and postexperimental basis 11 months apart. Results revealed no changes in mean scores on the leadership variable of Initiating Structure or Consideration for either group. However, based on the lower correlations between the experimental group's before-and-after scores, the authors concluded that training had in some way affected the stability of leadership patterns.

In the fourth study, 31 foremen were matched on their pretest Leadership Opinion Questionnaire scores, as well as age, education, seniority, and years of supervision. Subjects in the training group had completed a week-long refresher course involving primarily lecture and discussion. The average time since having attended the previous course was 3.2 months. Results of this study were largely negative in terms of behavior and attitude changes.

Goodacre (1955, 1957) conducted an evaluation of a management development program at the B. F. Goodrich Company involving key staff employees, general foremen, and company officers. A total of 800 subjects were randomly assigned to
two groups of equal size. The experimental group underwent a 27-hour training course with emphasis on understanding human behavior, decision-making, employee selection, and job evaluation. The training method was a combination of lecture and group discussion. Multiple criteria were used, including: an attitude measure, an achievement test, and superior ratings. Results showed a significant improvement in the knowledge area as measured by the achievement test. There was no improvement in attitude or job satisfaction. The author admitted that the superior ratings were possibly biased by the superiors' knowledge of who participated in the training program.

In a British study, Handyside (1956) reported the results of an evaluation of a human relations program in a London manufacturing plant. The experimental group consisted of 40 supervisors who underwent an 18-hour human relations course and 450 employees who reported to them. All of the remaining plant supervisors (number not given) and their 800 employees made up the control group. The course involved a study of individual differences, motivation, selection, and training. An employee-opinion questionnaire was administered before and 9 months after the start of training. Additional criteria measures included a productivity index, turnover and absence data, and an after-only supervisor interview. No statistical data were reported, and the overall results of the study were negative.
In a series of five studies, Lawshe, Bolda, and Brune (1958) attempted to measure the effectiveness of role-playing in human relations training. Only the fifth study used a control group. In this study, 29 supervisors from various industries were enrolled in a 5-week human relations course.

Subjects in the morning session \( (n = 14) \) were assigned to the experimental group, and participated in a total of four training sessions using role-playing techniques. Subjects in the afternoon session \( (n = 15) \) made up the control group, and were not exposed to any role-playing activities. The participants' answers to an incomplete human relations training care were used as pre- and postmeasure of Sensitivity and Employee-orientation. After training, subjects in the experimental group demonstrated a significant increase in sensitivity as to why people behave as they do.

An Air Force training program which was devoted in part to human relations training was evaluated by Mosel and Tsacnaris (1959). The experimental group consisted of 83 officers and noncommissioned officers who participated in a 40-hour (6-week) training course on management techniques, methods improvement, instructional techniques, and human relations. A control group was made up of 44 officers who did not undergo training. Two parallel forms of the "How Supervise?" test were given to both groups before and after training. Results showed a small but statistically significant improvement in the attitude and judgment of the
supervisors in the training group. In addition, the standard deviations showed that the supervisors in the training group had become more homogeneous.

Mahoney, Jerdee, and Korman (1960) examined one element of a large corporation's entire management development program. A 1-week course used a combination of case analysis, group discussion, lecture, and outside reading. Training objectives were to (a) develop an analytic approach to problem-solving, (b) gain a knowledge of management concepts and principles, and (c) improve the trainees' attitude toward self-development. A total of 64 second-level managers from a single division made up four experimental groups and one control group. Each group had approximately 12-15 managers. Multiple criteria measures were used in the study. The training group showed a significant increase in their analytic skills and in their attitude toward self-development. However, there was no significant increase in their knowledge of management concepts and principles.

Miner (1960) reported on the effectiveness of a 10-week psychology course which was used as part of a management development program in a large engineering firm. The training group had 55 research and development supervisors, most of whom held advanced chemistry or engineering degrees. The control group consisted of 30 supervisors who were also from the Research and Development Department. The major objective of the course was to develop a more favorable attitude toward their own supervisory roles. A lecture format was
used with an emphasis on human relations theory. The criterion measure was a Miner Sentence Completion Test which was designed to measure certain aspects of supervision. Results were positive with the training group showing a more favorable attitude toward their supervisory role.

In a follow-up study (Miner, 1965), the experimental group included 52 of the research and development managers who had participated in the original study. The control group consisted of 49 "other" managers. The criteria measures were the Degree of Advancement for those who had remained with the company and the Rehire Recommendation for those who had left. Both of these indexes were significantly higher for the experimental group.

Guetzkow, Forehand, and James (1962) conducted separate studies to determine the effectiveness of two different training programs. The Regional Program consisted of three 11-week courses which met for a total of 33 hours. A group discussion format was used, and topics included decision-making human relations theory, organizational theory, and communications. Participants were local civilian personnel of the Army, Navy, and Veterans Administration. Subjects in each group \( n = 21 \) were matched on the basis of job grade, military organization, age, length of service, and sex. The criteria measures included a pre- and posttest of administration judgment (civil service test) and superior and peer ratings. A nonparametric analysis showed that the ratings of the experimental group were significantly higher than
those of the control group. The test of administrative judgment did not yield a significant difference. The researchers admitted to the possibility of biased ratings since the trainees were known to the raters.

The Residential Program lasted either 2 or 4 weeks, and was similar to the Regional Program. The courses used a combination of lecture, group discussion, t-group training, and counseling. Unlike the previous study, subjects in the Residential Program were from all over the country. There were 47 federal administrators in the experimental group, and 42 administrators in the control group. In addition to the test of administrative judgment and peer and superior ratings, two parallel forms of the knowledge of Administrative Theory were given. All of the study results were negative. The authors theorized that the negative findings were due in part to a lack of support "back home" for the participants in the Residential Program. This was in contrast to the supportive atmosphere enjoyed by the participants in the Regional Program who were all from the local area.

House and Tosi (1963) reported on a training program which stressed the functional aspects of management. Only about 15% of the course was devoted to human relations training. A total of 252 engineering managers were trained, however, only 24 were included in the experimental group. Managers (n = 33) from outside the engineering group served as a control group. The training method was a combination of lecture and group discussion, and the topics included
managerial objectives, communication, performance standards, counseling techniques, and participative management. The overall results of the study were negative. In addition, there was some question as to the representativeness of the sample used in this study.

Carron (1964) tested the effectiveness of a human relations training program for research and development supervisors at a chemical company. The experimental group consisted of 23 male supervisors. Subjects in the control group (n = 12) were similar with respect to age, sex, job level, education, and length of service. The training program lasted for 6 months, and included human relations concepts, case discussions, and role-playing. The Leadership Opinion Questionnaire and the California F scale were administered before, immediately after, and again 1 year after completion of the training. A vector analysis showed a significant shift from an authoritarian to a more democratic attitude for the experimental group and persisted on the follow-up measure 1 year later.

A "time-lapse" design was used by Schwartz, Stilwell, and Scanlan (1968) to test the effectiveness of the 3-day university-sponsored management-development program. A total of 57 managers and executives from an insurance company took part in the study. Subjects were trained in two groups 5 months apart, with the second group serving as the control. The training methods included lecture, group discussions, case studies, films, role-playing, and workshop sessions. The Leadership Behavior Description Questionnaire was given
before and after training. In addition, a critical-incident measure was taken after training with the experimental group and before training with the control group. Results of the study were mixed and generally negative. The authors hypothesized that there was a significant interaction between the two groups of managers "back on the job" which accounted for the mixed results.

Hand and Slocum (1970) measured the effectiveness of a 28-week human relations training program conducted at a steel plant located in central Pennsylvania. Sessions were 1½ hours long, and 60% of the total training time was devoted to exercises in group dynamics. In the study 42 subjects were randomly divided into two equal groups. Multiple criteria were used, including: knowledge of human relations principles, attitude with respect to acceptance of self and others, self-actualization motivation, group participation, and interpersonal relations as measured by the Leadership Opinion Questionnaire. Except for an improved score on the acceptance of self and others by the training group, all results were nonsignificant. Follow-up measures taken 3 months later also showed no score improvements. The authors concluded that the training was ineffective.

A follow-up study (Hand & Slocum, 1972) was conducted 2 years later using the same sample as before. Criteria measures included the Leadership Opinion Questionnaire, the Leadership Behavior Description Questionnaire, supervisor ratings, and a measure of attitude with respect to self and
others. Results showed that the experimental group developed a more positive attitude toward the human relations aspects of their jobs, and that this attitude was reflected in positive changes in job performance (as measured by the supervisor ratings). However, these same results were mirrored by the control group. In addition, the supervisor ratings suffered from possible bias since the trainees were known to the managers making the ratings.

This review has summarized those training evaluation studies which used a before-and-after research design with controls. Aside from the generally negative findings, many of the studies suffered from various methodological deficiencies including biased performance ratings and the nonrandom selection of subjects.

The present study attempted to test the effectiveness of a management development program for first-line staff supervisors. The success of the training program was measured by using a pre- and postexperimental design with a control group.

**Method**

**Subjects**

Subjects were 60 male first-line supervisors who were employed by a major manufacturing company in one of 10 plant locations. All subjects supervised nonmanufacturing staff functions, such as data processing, accounting, or administration. No biographical data were collected and participation in the study was voluntary.
The training group consisted of supervisors who were already scheduled to attend the management development training course. All subjects had previously attended a 1-week "prerequisite" training program.

The subjects in the control group were selected from a list of all supervisors who had attended the prerequisite training program within the preceding 6 years. The 30 subjects in the control group were similar to those in the training group with respect to job assignment (e.g., accounting), plant location, etc.

Of the 60 supervisors originally selected for participation only 48 were included in the final study. The remaining 12 supervisors (6 from each group) failed to return both the pre- and postmeasures, and were therefore eliminated.

Measures

A 42-item employee-opinion questionnaire (see Appendix A) was constructed as a measure of supervisory style and work-group climate. The use and content of the questionnaire was according to the recommendation and direction of the company sponsoring the research project.

The questionnaire was designed to obtain subordinate ratings of supervisory performance. Each of the questions had five alternate responses, with 11 of the questions negatively worded to avoid a response set. A high total score indicated an overall agreement with the positively worded statements, and an overall disagreement with the 11 questions which were stated in the negative.
A majority of the items were included at the request of the company, and were not expected to yield significant pre- and postmeasure score differences. For this reason, 11 of the statements which were considered most relevant to the content of the training program were identified and used as a measure of training effectiveness.

The statements in this subset were selected on an "a priori" basis according to the following guidelines: (a) items that represented an area in which a supervisor could make an immediate change upon this return from training; (b) items that represented an area which was specifically covered in the training program (e.g., teamwork, goal-setting); and, (c) items that represented an area in which an employee's perception could be changed over a relatively short period of time (i.e., 90 days). Listed in Table 1 are the 11 items selected as a measure of training effectiveness.

Procedures

Premeasure. The original 60 supervisors were contacted by the experimenter to secure their participation in the study. A standardized telephone script was used and supervisors were not informed of the postmeasure at this time.

Packets of employee-opinion questionnaires were mailed to each supervisor in the training group approximately 2-3 weeks prior to the date that he was scheduled to attend the management development training program. Supervisors in the control group received their packets of materials at approximately the same time as the training group. All supervisors
Table 1

Eleven-item Subset from Employee-opinion Questionnaire

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>3. I understand what the objectives (goals) are of my department.</td>
</tr>
<tr>
<td>8.</td>
<td>8. Most individuals in my department know how well they are doing in terms of reaching department goals.</td>
</tr>
<tr>
<td>12.</td>
<td>12. I understand what is expected of me in my work.</td>
</tr>
<tr>
<td>13.</td>
<td>13. We routinely get together as a work group to plan how we can more effectively reach our goals.</td>
</tr>
<tr>
<td>23.</td>
<td>23. I know how my job fits in with other work in my department.</td>
</tr>
<tr>
<td>26.</td>
<td>26. My supervisor encourages us to make suggestions for improvements in our work.</td>
</tr>
<tr>
<td>29.</td>
<td>29. We can't get enough information about how well our work group is doing.</td>
</tr>
<tr>
<td>33.</td>
<td>33. People in my work unit are kept informed about company plans and goals.</td>
</tr>
<tr>
<td>34.</td>
<td>34. My supervisor seldom gives credit for work well done.</td>
</tr>
<tr>
<td>37.</td>
<td>37. My supervisor and I get together when needed to discuss job-related problems, goals, and progress.</td>
</tr>
<tr>
<td>40.</td>
<td>40. My supervisor tends to ignore my suggestions and problems.</td>
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were requested to distribute the questionnaires to each of their subordinates.

A cover letter (see Appendix B) was attached to each questionnaire explaining the general nature of the research, and urged the employees to participate in the study. Employees
were instructed to indicate their agreement or disagreement with each of the 42 statements as they felt that the item applied to their own work group (or work-group supervisor).

All questionnaires were completed on company time, but not in the presence of the supervisor. An envelope was attached to each questionnaire and was used to mail the completed form directly to the experimenter's university post office box. This helped to insure the confidentiality of the responses, and increase the number of returned questionnaires.

Training. A 1-week training program was conducted at the company's central training facility, and used a combination of films, lectures, group discussions, and team exercises. Supervisors studied human relation principles, interviewing techniques, staffing and training principles, problem-solving techniques, methods, methods improvement, Equal Employment Opportunity Commission regulations, and participative management theory. The major objectives of the training program as stated by the company were (a) to develop a team approach to problem-solving; (b) to emphasize the importance of goal-setting, and (c) to encourage supervisors to establish a work environment of mutual trust and support.

Postmeasure. Approximately 12 weeks after the completion of the training program, questionnaire packets were again mailed to all 60 work group supervisors. Instructions for the postmeasure were identical to those for the premeasure.
Only 48 of the original 60 work groups completed and returned the premeasure questionnaires.

The overall rate of response for the nearly 800 questionnaires mailed out during both phases of the study was 84.4% (premeasure = 89.2% and postmeasure = 79.7%). The usual rate of return for studies conducted by mail has generally been less than 60%.

**Results**

The following statistical analyses of the questionnaire use the combined premeasure scores from the subordinates (n = 313) of the training and control group subjects.

The item-total correlation coefficients (corrected for spurious item-test overlap) are calculated for all 42 items using the total score, and for the 11 items contained in the subset using the total subset score. This is done to check the homogeneity of the items in the total questionnaire and in the subset. Of the original 42 items, only two did not correlate .20 (or better) with the total questionnaire. These two questions (6 and 21) are eliminated from further analysis. The range of the correlation coefficients is from .14 to .59 with the median correlation of .44. All of the 11 subset items did correlate better than .20 with the subset total. The range is .30 to .59 with the median correlation of .46.

The inter-item reliability is determined for the total questionnaire and the subset using Coefficient Alpha. The reliability coefficient for the total questionnaire (40 items)
is .91, and for the 11-item subset it is .31. Both reliability coefficients are more than adequate for this type of research.

The 40-item questionnaire is factor analyzed using principal axis with varimax solution on factors with eigenvalues greater than one. A factor analysis is used to help to establish the construct validity of the measurement instrument. The factor analysis reveals six identifiable factors and three "residual" factors (see Appendix C for a complete list of the factors and their factor loadings). Those items which were preselected as the best measure of training effectiveness did fall exclusively into three factors; feedback, understanding of job expectations, and supervisory style. Table 2 shows the mean scores and standard deviations for both groups on the total questionnaire and the 11-item subset.

A 1 X 2 analysis of covariance (ANCOV) is performed on the total questionnaire and the 11-item subset using the premeasure scores as the covariate. Since the number of employees within each individual work group is expected to vary slightly over the 14-15 weeks of the study, work group averages are used. The ANCOV shows that neither measure of training effectiveness yielded significant results. The ANCOV for the total questionnaire $F(1, 45) = .0973$ and for the 11-item subset $F(1, 45) = .2945$ are both significant.
Table 2
Mean Scores and Standard Deviations by Group for Pre- and Postmeasure

<table>
<thead>
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<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tr>
<td></td>
<td>Total Questionnaire</td>
<td></td>
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<tr>
<td>Training Group</td>
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<tr>
<td>Premeasure</td>
<td>147.82</td>
<td>12.95</td>
</tr>
<tr>
<td>Postmeasure</td>
<td>145.88</td>
<td>11.76</td>
</tr>
<tr>
<td>Control Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premeasure</td>
<td>148.62</td>
<td>13.59</td>
</tr>
<tr>
<td>Postmeasure</td>
<td>145.59</td>
<td>12.89</td>
</tr>
<tr>
<td></td>
<td>Eleven-item Subset</td>
<td></td>
</tr>
<tr>
<td>Training Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premeasure</td>
<td>39.34</td>
<td>4.30</td>
</tr>
<tr>
<td>Postmeasure</td>
<td>39.36</td>
<td>4.66</td>
</tr>
<tr>
<td>Control Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premeasure</td>
<td>39.54</td>
<td>5.12</td>
</tr>
<tr>
<td>Postmeasure</td>
<td>49.05</td>
<td>4.92</td>
</tr>
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</table>

*a_n = 24 for each group.

Discussion
Using a pre- and postexperimental design with a control group as recommended by Campbell et al. (1970), MacKinney (1957), and Miner (1965), the present study has failed to demonstrate the effectiveness of the management development
training program. Perhaps the most obvious weakness of this study is the use of an unvalidated criterion measure. This was done, however, at the insistence of the company who sponsored this research project. Their decision was, in part, based on the unavailability of objective criteria. Absenteeism records, turnover statistics, and productivity data were not maintained uniformly at all plant locations. The use of a validated measurement instrument, such as the Job Description Index or the Leadership Behavior Description Questionnaire might have yielded different results.

Aside from the criterion issue, it is certainly possible that a 1-week training program was simply ineffective in producing the desired behavioral changes. Fleishman et al. (1955) and Harris and Fleishman (1955) found that supervisors were unable or unwilling to implement what they had learned in the classroom once they were back on-the-job. This could be due in part to a lack of upper-management support for new ideas which emerge from management training programs (Guetzkow et al., 1962; Hariton, 1952; Schartz et al., 1968). Future research should focus on this problem by measuring training effectiveness both in the classroom and on-the-job.

In addition, studies by Hand and Slocum (1970, 1972) and Miner (1965) have suggested that a long-term follow-up study might reveal results which are different from those obtained at the time of the original postmeasure. Researchers might wish to use a pre-, post-, and postexperimental design
with a control group when trying to measure training effectiveness.

The results of the present study are consistent with those found in the training evaluation literature. Of the 19 studies reviewed in this paper which used a pre- and post-training design with controls, only five reported generally positive findings. Of the remaining research studies, seven had mixed results, while six concluded that the training was ineffective.

In general, researchers have been frustrated in their attempts to demonstrate training effectiveness. However, because of the tremendous investment of money and manpower, organizations must continue to question the value of their management training programs. Proper evaluative research must continue to be used as a tool to help refine effective training programs, and to identify those programs which are ineffective in producing the desired behavioral changes.
Appendix A

Employee-opinion Questionnaire

We are interested in your opinion about (company's name) as a place to work. Please give your honest opinions. Do NOT sign your name. Many of your co-workers will be answering the same questions. Only group results will be looked at; you, as an individual, will be anonymous.

HOW TO ANSWER: Check the appropriate space indicating your agreement or disagreement with each of the following statements. (SA) = Strongly Agree; (A) = Agree; (D) = Disagree; (SD) = Strong Disagree; and (??) = No opinion. Please answer all of the questions.

1. There is a strong desire to perform well in our work group. SA__ A__ D__ SD__ ??__

2. There are too many rules and procedures to follow in my organization. SA__ A__ D__ SD__ ??__

3. I understand what the objectives (goals) are of my department. SA__ A__ D__ SD__ ??__

4. People in my work group work together as a team. SA__ A__ D__ SD__ ??__

5. In our department our paperwork systems are O.K. SA__ A__ D__ SD__ ??__

6. Often times I don't have enough work to keep me busy. SA__ A__ D__ SD__ ??__

7. One of my primary work goals is to make my department successful. SA__ A__ D__ SD__ ??__

8. Most individuals in my department know how well they are doing in terms of reaching department goals. SA__ A__ D__ SD__ ??__

9. There is not enough cooperation between my work group and others we work with. SA__ A__ D__ SD__ ??__

10. There are opportunities in (company's name) for those who want to get ahead. SA__ A__ D__ SD__ ??__
11. For the jobs in my area, working conditions are O.K. 

12. I understand what is expected of me in my work.

13. We routinely get together as a work group to plan how we can more effectively reach our goals.

14. I have a great deal of interest in (company's name) and its future.

15. Favoritism is a problem in my area.

16. I consider the methods and flow of my work in my department to be smooth and efficient.

17. I feel that I am in a job that makes good use of my abilities.

18. During the past 3 months, I have actively looked for a job outside of (company's name).

19. In my job I know when I succeed or fail without having to wait for my supervisor to tell me.

20. I feel free to tell my supervisor what I think.

21. I have progressed as far as I can at (company's name).

22. I am paid fairly for the kind of work I do.

23. I know how my job fits in with other work in my department.

24. I have as much freedom as I need to plan and organize my work.

25. People in my work group feel that they must hide their mistakes.

26. My supervisor encourages us to make suggestions for improvements in our work.
27. My work is satisfying to me.

28. I feel that I'm a part of (company's name).

29. We can't get enough information about how well our work group is doing.

30. The people I work with help each other when someone falls behind or needs help.

31. I can be sure of a job at (company's name) as long as I do good work.

32. I have confidence in the fairness of management.

33. People in my work unit are kept informed about company plans and goals.

34. My supervisor seldom gives credit for work well done.

35. My job seems to be leading to the kind of future I want.

36. The benefits (insurance, retirement, etc.) at (company's name) are O.K.

37. My supervisor and I get together when needed to discuss job-related problems, goals, and progress.

38. My job is often dull and monotonous.

39. I am proud to work for (company's name).

40. My supervisor tends to ignore my suggestions and problems.

41. The information that we get from computer reports is data that helps our department to do a better job.

42. My supervisor trusts me to do a good job.
* * * Please mail your completed questionnaire directly to * * *
(Experimenter's name and address)
A self-addressed envelope is attached for your convenience.
Appendix B

Cover Letter for Questionnaire

TO ALL PARTICIPATING EMPLOYEES:

Thank you for your participation in this study. In April 1976, [university's name] was asked by [company's name] to design a study to evaluate the effectiveness of [training course title]. The attached questionnaire was chosen as the best means of achieving the intended purpose of this study.

The questionnaire contains 42 questions and takes about 15-25 minutes to complete. In this study we are interested only in the results of the group. You, as an individual, will remain completely anonymous. The entire study will involve some 100 work groups (like yours) and their immediate supervisors.

In order to help you to complete the questionnaire, please follow the check list below:

___ 1. Arrange a convenient time with your supervisor (approximately half an hour) to complete the questionnaire in private. Your supervisor should NOT be present while you answer the questions.

___ 2. Follow the directions on the questionnaire carefully.

___ 3. Answer the questionnaire today and mail it directly to [university's name]. (An envelope is attached for your convenience.) All questionnaires should be returned within 1 week.

___ 4. Remember that the questionnaire is anonymous. The "number-letter" code at the top of your questionnaire is the same of each of your co-workers. Individual responses will NOT be identifiable.

___ 5. Do not discuss the questions with your co-workers. We are interested in your opinions.

The success of this study depends on your participation. Please answer and return your questionnaire today!

The entire study should be completed by [date and a "summary" copy of the results mailed to your supervisor sometime in [date]]. Once again, thank you for your cooperation.

(Experimenter's name and address)
Appendix C

Factor Analysis with Factor Loadings

Factor I: Feedback

*29. We don't get enough information about how well our work group is doing (.67).

*13. We routinely get together as a work group to plan how we can more effectively reach our goals (.65).

*8. Most individuals in my department know how well they are doing in terms of reaching department goals (.60).

*25. People in my work group feel that they must hide their mistakes (.43).

33. People in my work unit are kept informed about company plans and goals (.41).

Factor II: Job Itself

27. My work is satisfying to me (.75).

17. I feel that I am in a job that makes good use of my abilities (.74).

35. My job seems to be leading to the kind of future I want (.73).

38. My job is often dull and monotonous (.68).

18. During the past 3 months, I have actively looked for a job outside of (company's name) (.61).

28. I feel that I'm a part of (company's name) (.58).

14. I have a great deal of interest in (company's name) and its future (.42).

32. I have confidence in the fairness of management (.40).

Factor III: Teamwork

30. The people I work with help each other when someone falls behind or needs help (-.75).

4. People in my work group work together as a team (-.70).
1. There is a strong desire to perform well in our work group (-.69).

16. I consider the methods and flow of work in my department to be smooth and efficient (-.57).

9. There is not enough cooperation between my work group and others we work with (-.46).

5. In our department, our paperwork systems are O.K. (-.40).

Factor IV: Understanding of Job Expectations

*12. I understand what is expected of me in my work (-.71).

*19. In my job I know when I succeed or fail without having to wait for my supervisor to tell me (-.69).

*23. I know how my job fits in with other work in my department (-.63).

3. I understand what the objectives (goals) are of my department (-.60).

Factor V: (Unidentified)

7. One of my primary work goals is to make my department successful (-.50).

24. I have as much freedom as I need to plan and organize my work (-.39).

Factor VI: Supervisory Style

*37. My supervisor and I get together when needed to discuss job-related problems, goals, and progress (.73).

*40. My supervisor tends to ignore my suggestions and problems (.72).

*20. I feel free to tell my supervisor what I think (.63).

*26. My supervisor encourages us to make suggestions for improvements in our work (.62).

34. My supervisor seldom gives credit for work well done (.58).

42. My supervisor trusts me to do a good job (.57).

15. Favoritism is a problem in my area (.51).
Appendix C--Continued

Factor VII: (Unidentified)

2. There are too many rules and procedures to follow in my organization (-.69).

41. The information that we get from computer reports is data that helps our department to do a better job (-.57).

Factor VIII: (Unidentified)

36. The benefits (insurance, retirement, etc.) at (company's name) are O.K. (-.64).

11. For the jobs in my area, working conditions are O.K. (-.59).

Factor IX: Job Security

22. I am paid fairly for the kind of work I do (-.67).

31. I can be sure of a job at (company's name) as long as I do good work (-.46).

10. There are opportunities in (company's name) for those who want to get ahead (-.45).

39. I am proud to work for (company's name) (-.44).

*Statements contained in 11 item subset.*
References


