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16. Abstract This study assessed the effectiveness of four recurrent training courses at the FAA Management Training School (MTS). The courses evaluated were Performance Improvement and Employee Appraisal (PIP/PER), Labor Relations for Management (LMR), Constructive Discipline (CD), and Managerial Effectiveness (ME). Questionnaires concerning the usefulness of course content, effects on supervisory behavior, and impact on the organizational unit were sent to randomly selected graduates of these courses. Immediate superiors and supervisees of these graduates were also sent questionnaires concerning the effects of the course on the behavior of the graduates. A total of 402 graduates, 263 immediate superiors, and 280 supervisees responded to the survey. Approximately 90 percent of the graduates of each of the courses evaluated the training as useful overall. Self-reported behavioral changes were noted most often in the areas of increased knowledge and understanding of the subject under consideration in the course, increased ability to administer these programs, and improved supervisory and interpersonal skills in general. Behavioral ratings by graduates, their immediate superiors, and supervisees generally supported the conclusion that these courses had a beneficial impact on supervisory behavior.					
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TABLE OF CONTENTS

	<u>Page</u>
PART ONE. AN OVERVIEW	1
I. Introduction	1
PART TWO. SURVEY RESULTS	4
I. Introduction	4
II. Method	5
A. Questionnaires	5
B. Participants	5
III. Results	8
A. PIP/PER Course	8
B. LMR Course	19
C. CD Course	29
D. ME Course	39
IV. Conclusions	48
REFERENCES	51
APPENDIX I	53
APPENDIX II	79
APPENDIX III	91

AN EVALUATION OF FOUR MTS RECURRENT TRAINING COURSES

PART ONE. An Overview

I. Introduction.

This survey was undertaken to assess the effectiveness of the recurrent training courses taught for FAA supervisors and managers at the FAA Management Training School (MTS). The four courses evaluated were the Performance Improvement and Employee Appraisal (PIP/PER) course, the Labor Relations for Management (LMR) course, the Constructive Discipline (CD) course, and the Managerial Effectiveness (ME) course.

Three groups of FAA personnel were surveyed about the effectiveness of each course. Graduates of each course were asked about the usefulness of the course, how the course had influenced their supervisory or managerial behavior, and how attendance at the course had influenced conditions in their organizational units. The immediate superiors and supervisees of graduates were asked to what extent they perceived changes in the behavior of graduates of the recurrent course. Supervisees were also surveyed about conditions within their units.

The judgments of these three groups of respondents were obtained through detailed questionnaires designed for each course (Appendixes I, II, and III). These questionnaires were sent out to individuals according to a stratified random sampling procedure based on the distribution of the graduates of these courses across the various FAA services and regions. A total of 945 usable questionnaires were returned, including those from 402 graduates of the courses, 263 immediate superiors, and 280 supervisees. The returns of graduates were sufficient to be 95 percent confident that obtained values were within plus or minus 10 percent of values that would have been obtained from the entire group of over 7,300 graduates of these courses.

The findings for the overall course evaluations indicated that each of the courses was generally viewed as a positive experience by approximately 90 percent of the respondents.

When graduates were asked how the course had been most helpful, the most frequent response for each course related to increased understanding of, and ability to apply, the concepts of the course. Personal growth, the opportunity to work through problems with others, and increased awareness of one's role as a supervisor or manager were also commonly mentioned.

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Graduates of the courses showed little unanimity in describing the areas of the courses that need improvement. While comments about some aspect of course content were most frequent, specific suggestions for changes in subject matter were quite varied in their focus for each of the courses. About the only specific theme that recurred with any frequency was the request for a more practical emphasis in the teaching.

Assessments of the usefulness of the content of each of the courses were generally quite favorable. Of the total of 104 topics taught across the four courses, 88 were judged to be moderately or more useful by at least 60 percent of the graduates. Of these, 29 were rated of at least moderate usefulness by more than 80 percent of the respondents. These included 10 of 35 topics from the LMR course, particularly the sessions dealing with grievances; 9 of 26 topics covered in the CD course, especially the discussions of the meaning and purpose of discipline (positive versus negative discipline, discipline and motivation, identifying discipline problems, and supervisory roles); and 10 of 21 ME topics, most notably those on management philosophy and style, group processes, management communications and team action.

None of the topics in the PIP/PER course were rated remarkably high in terms of usefulness; however, there were also no particularly low ratings for this course either. The topic with the lowest ratings, the relationship of PIP/PER to other FAA programs, was judged at least moderately useful by less than 56 percent of the respondents.

With the exception of five topics, all of the course content areas were evaluated as useful by at least 50 percent of the graduates. Four of these topics were in the LMR course and referred to contract negotiations, a process with which most of the graduates appear to have very little contact. The only other subject rated this low concerned the presentation in the ME course on operation of assessment centers.

Self-reports of important behavioral changes resulting from attendance at these courses focused on four main areas common to the four courses. First, many of the comments spoke to an increase in understanding of the subject under consideration in the specific course and an increased ability to effectively administer agency programs in these areas. There were also many comments concerning improvement in general supervisory and managerial skills, personal growth as an individual, and improved human relations.

The specific behavioral ratings obtained from graduates, their immediate superiors, and supervisees generally confirmed the notion that the courses had beneficial impacts on supervisory behavior. As expected, the graduates themselves were most likely to report improved behavior, followed fairly closely by the reports of their immediate superiors. Among graduates, about two-thirds to three-fourths of the respondents on the average reported increased effectiveness in the various behaviors of concern in the questionnaires. The range for immediate superiors was similar, but averaged about 5 percent lower.

The ratings by supervisees were less laudatory, but on the average about 50 percent of the respondents reporting increased supervisory effectiveness in graduates.

Diminished effectiveness following MTS training was rarely reported by any of the three groups.

The average behavioral ratings for three of the four courses, PIP/PER, CD, and ME, were very close for all three groups of respondents. About 70 percent of the graduates, 65 percent of the immediate superiors, and 47 percent of the supervisees reported improved supervisory performance. The corresponding values for the LMR course were significantly higher at 78, 75, and 61 percent respectively.

In considering the specific behavioral effects of the PIP/PER course, the three groups of respondents agreed that one of the most frequently improved areas of functioning concerned awareness of the effects of management styles on employees. On the less effective side, supervisees tended to see little improvement in actions concerned with Major Job Assignments (MJAs) or appeals of performance ratings.

Graduates of the LMR course tended to feel that not only was the course presentation on various aspects of grievances most valuable, it was also the area where they noticed the most improvement in their effectiveness as supervisors. The immediate superiors of graduates felt that relatively little had been accomplished in the area of ability to deal with contract negotiations. This was a teaching area rated of little value by graduates.

As for the CD course, graduates most often noted change in the area of employing informal disciplinary approaches. The most frequent change reported by supervisees was that graduates had become more adept at employing approaches to encourage self-discipline and were more aware of various symptoms and causes of discipline problems.

ME graduates most frequently felt that they had improved in the areas of communication and understanding group dynamics; however, supervisees felt improvement was least likely to be noted in these areas. Graduates and their immediate superiors agreed that the course had done little to improve the graduates' ability to participate effectively in the assessment center process.

The impact of the courses on conditions within the unit was judged by both graduates and supervisees to be primarily in the areas of improved relationships between supervisors and employees and increased unit efficiency. One-half to three-fourths of the respondents were inclined to report such improvements. Again, graduates were more likely to report a positive impact than were supervisees. Considerably fewer respondents in either group, usually about one-third, felt job satisfaction and employee morale had improved after the supervisor's return from MTS recurrent training.

Analyses were conducted on all items concerning differences in response trends across FAA services (AF, AT, FS, and Others), and location (headquarters, regional offices, field facilities). There were occasional differences noted, but for the most part response trends were consistent across these factors.

Taken together, the findings suggest that the MTS courses are proving to be of value to the supervisors and managers who attend them. While some adjustments in course content and focus are suggested by this evaluation, the primary conclusion must be that the structure, concept, and execution of the courses is generally resulting in desired outcomes, at least as viewed by the participants in this survey.

PART TWO. Survey Results

I. Introduction.

In 1973 an assessment of the effectiveness of the basic supervisory and managerial training courses provided by the FAA Management Training School (MTS) was undertaken (3). It was found that supervisors and managers held similar views of MTS. Most felt that the 3-week course at MTS had been useful in helping them meet the demands of their positions. Ratings by graduates of MTS, their immediate superiors, and supervisees indicated that MTS had beneficial effects on the on-the-job performance of the graduates.

Since the time of the first survey, the focus of training at MTS has shifted. While the basic courses continue to be offered to new supervisors and managers, most of the training is now directed toward upgrading supervisory and managerial skills through recurrent training. It is the recurrent training program that is the concern of this study.

At the time of this evaluation (June-September 1977), the core of the MTS recurrent training program consisted of four courses, each of which was 1 week in duration. The courses are designed to provide a detailed consideration of one of the topics introduced in the basic courses. They are:

Performance Improvement and Employee Appraisal (PIP/PER) - study of agency performance improvement and appraisal programs; employee counseling with review of human relations; management theory; and communication principles.

Labor Relations for Management (LMR) - study of union-management relations; contract administration and negotiation; unfair labor practices; and grievances and arbitration.

Constructive Discipline (CD) - study of FAA philosophy and policy toward discipline; motivation; application of corrective action; and disciplinary methods available for use by supervisors.

Managerial Effectiveness (ME) - study of management theory, group dynamics, and transactional analysis for managers with emphasis on management-by-objectives and team action.

The evaluation of each of these four recurrent training courses follows the general approach taken in the earlier study of the basic MTS courses. First, the effectiveness of the content of each course was evaluated by graduates of the respective courses. This is defined as an "internal criterion" measure of effectiveness according to Martin (2) and is primarily a measure of what is learned in the courses. The evaluation also included measures of the impact of the courses on supervisory or managerial behavior and on conditions in the unit. This aspect of the study included ratings of changes in the behavior of graduates following attendance at an MTS recurrent course. These ratings were made by the graduates themselves, by their immediate superiors, and by selected supervisees of the graduates. Ratings of unit efficiency, job satisfaction, and morale were also obtained. These ratings are considered "external criteria" in that they focus on the impact of the training on the job setting rather than on the graduate. Use of both approaches is basic to determining the effectiveness of supervisory or managerial training according to Campbell, Dunnette, Lawler, and Weick (1).

II. Method.

A. Questionnaires. Three questionnaires were used for each of the four recurrent courses (Appendixes I, II, and III). The questionnaire for graduates of the course (Appendix I) consisted of five parts: (i) demographic data (e.g., age, type of facility, location), (ii) general questions about the overall value of the course, (iii) a general assessment of conditions within the supervisor's organizational unit, (iv) an evaluation of the specific content of the course, and (v) a self-assessment of the impact of the course on supervisory behavior of the graduate. The ratings of course content were made on a five-point scale that ranged from "not at all useful" to "extremely useful." The behavior rating scales also contained five points that ranged from "considerable improvement" to "considerable reduction" in effectiveness.

The other two questionnaires were designed for the immediate superior of the graduate and one of the graduate's supervisees (Appendixes II and III). These questionnaires included demographic and behavioral assessment items that paralleled those provided course graduates. The questionnaire for supervisees also included a section for evaluating conditions within the organizational unit.

B. Participants. Six hundred graduates of recurrent training (150 from each course) were selected to participate in the survey. A stratified random sampling procedure was employed that controlled the distribution of participants to insure proportional representation by FAA region and service (Airway Facilities, Air Traffic, Flight Standards, and Others) for each course. Each of the selected individuals was called by telephone and asked to participate in the study. The purpose of the evaluation was explained as was the totally voluntary nature of the request. Only 15 of those contacted declined to

participate. Another 174 had moved, had retired, or were otherwise unavailable. These vacancies were filled by alternate selections until 150 graduates of each course had agreed to be included in the study.

The questionnaires were mailed directly to each individual supervisor who agreed to participate in the evaluation. (Note: For the remainder of the report, the word supervisor should be understood to include managers unless managers alone are being discussed.) The questionnaires for immediate superiors were sent along with the forms for the graduates with the request that they be forwarded directly to their immediate superiors by the graduates themselves. Separate return envelopes were supplied to prevent any breach in confidentiality.

The questionnaires for supervisees were distributed in a somewhat different manner. When each MTS graduate was called about the survey, each was asked to name the individuals working directly under his or her supervision. From each graduate's list of supervisees one of the names was selected on a random basis to receive a questionnaire. The questionnaire was sent directly to that person under separate cover. This procedure was followed to insure that no bias would be involved in the selection of supervisees to participate in the study.

All participants were asked to respond as quickly as possible to the survey and to return the completed forms directly to the principal investigator in the envelopes provided. Approximately two-thirds of the sample of graduates contacted for each of the courses returned their questionnaires (Table 1). These return rates exceeded those required for 95 percent certainty that the estimates provided by the sample were within plus or minus 10 percent of the values that would have been obtained from surveying all graduates.

TABLE 1. Number of Questionnaires Returned

Course	Respondent		
	Graduate	Immediate Superior	Supervisee
Total Returned	433	354	303
Total Usable ^a	402	263	280
PIP/PER	98	79	64
LMR	104	55	70
CD	102	69	64
ME	98	60	82

^aSome questionnaires returned were unusable because of insufficient course identification, demographic, or rating data.

The return rates for immediate superiors and supervisees were lower than for MTS graduates (Table 1). This was expected since no direct contact about participation was made with anyone other than the selected graduate supervisors. The return rates for the four courses were very similar for graduates but differed considerably for immediate superiors and supervisees. It is not clear why these differences in returns occurred for the latter two groups since there was no relationship between questionnaire length, any of the demographic variables, or other factors in the evaluation and the numbers of questionnaires returned.

The age and experience characteristics of the participants are presented in Table 2. Generally, the values for each group are comparable to the corresponding values obtained in the study of the basic MTS courses (3). As with the basic courses, those attending the ME course tend to be somewhat older than those attending courses designed primarily for supervisors. The group of immediate superiors was somewhat older, except for those in the CD course sample. For each course the supervisees were somewhat younger than the graduates. Since these are the expected relationships, it simply means that the samples of participants were not unusually distributed on these dimensions.

TABLE 2. Average Age and Experience in Years of Participants in the Evaluation of MTS Recurrent Courses

Course	Factors		
	Age	FAA Experience	Supervisory Experience
PIP			
Graduates	46.5	17.4	7.6
Immediate Superiors	48.3	21.0	12.5
Supervisees	42.2	14.4	--
LMR			
Graduates	45.8	18.0	8.5
Immediate Superiors	46.9	21.3	12.0
Supervisees	42.1	13.8	--
CD			
Graduates	47.1	18.6	8.9
Immediate Superiors	47.0	23.5	11.9
Supervisees	42.7	12.0	--
ME			
Graduates	44.2	21.2	12.3
Immediate Superiors	48.8	22.7	12.6
Supervisees	44.5	12.7	--

The distribution of participants across various demographic (background) factors is shown in Table 3. It is readily apparent that the graduates were predominantly male, were at upper grade levels, and were distributed across services and locations in general proportion to the actual distribution of FAA personnel. The major exception to this was the relative under-representation of Flight Standards personnel in the LMR course. Since the Flight Standards Service has relatively little interaction with unions, few of their personnel attend this course.

TABLE 3. Demographic Distribution of Graduates (G), Immediate Superiors (IS), and Supervisees (S) in the Evaluation of MTS Recurrent Courses (Totals for each factor may vary slightly due to missing information for some respondents.)

Demographic Factor	PIP			LNR			CD			ME		
	G	IS	Se	G	IS	Se	G	IS	Se	G	IS	Se
Sex												
Male	96	78	59	101	54	61	99	68	51	98	60	71
Female	2	1	5	3	1	9	3	1	13	0	0	11
FAA Service												
Airway Facilities	33	34	27	35	18	24	36	22	23	26	15	28
Air Traffic	42	27	20	59	33	34	42	29	24	35	27	20
Flight Standards	11	7	4	1	0	6	16	9	9	18	9	19
Other	12	11	13	9	4	6	9	9	10	18	9	13
Grade Level												
1-7	1	0	6	1	0	5	1	0	12	0	0	16
8-9	2	1	4	1	0	5	0	0	3	0	1	4
10-11	8	1	20	12	2	24	6	1	20	0	0	6
12	29	9	21	29	6	16	28	8	20	0	1	15
13	28	13	6	20	16	13	26	9	9	9	2	23
14	21	35	5	24	15	4	26	26	0	44	20	12
15-16	7	20	0	13	16	1	11	23	0	43	36	2
Location												
Headquarters	3	2	2	2	0	3	4	3	0	7	3	7
Regional Office	10	13	6	10	9	7	10	13	7	23	23	12
Aeronautical Center	5	5	3	5	3	4	9	7	6	5	5	7
NAFEC	1	1	1	1	1	1	3	4	5	3	0	0
Field	79	58	52	86	42	55	75	41	48	60	29	52

III. Results.

A. PIP/PER Course.

1. General Evaluation by MTS Graduates (N = 98).

a. Open-Ended Questionnaire. There were four parts to the open-ended portion of the questionnaire. One question was directed at identifying specific changes in supervisory behavior and is reported below in the section concerning behavior. The other three questions concerned the effective and ineffective aspects of the courses. Answers to the question concerning how the course could have been more helpful and the question on how it could be improved were largely redundant. Therefore, only the recommendations for improvement are discussed below.

The most helpful aspect of the course according to the respondents (Table 4) was the acquisition of increased knowledge, particularly in the areas of understanding the Performance Improvement Program (PIP) and understanding of employee needs, concerns, and motivations. Also mentioned frequently were opportunities for personal growth (e.g., learning more about self, improving supervisory practices, increased personal effectiveness), and the chance to work through common supervisory problems with others.

TABLE 4. Summary of Statements Indicating the Most Helpful Aspects of the PIP/PER Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=33)	AT (N=42)	FS (N=11)	O (N=12)	Number of Responses	Percent of Total
Increased Knowledge and Understanding	55	59	16	15	145	66
PIP Program	8	15	1	-	24	11
Understanding Employees/Human Relations	7	4	6	4	21	10
Supervisory Role	9	6	1	2	18	8
Preparation of PER	3	7	1	-	11	5
Review of Supervisory Principles	6	3	-	2	11	5
Other	22	24	7	7	60	27
Personal Growth	11	23	2	3	39	18
Working Through Supervisory Problems With Others	11	14	5	2	32	15
Miscellaneous	1	1	-	-	2	1

^a AF - Airway Facilities
 AT - Air Traffic
 FS - Flight Standards
 O - Other

There was considerable divergence of opinion about the kinds of improvements that should be made in the course (Table 5). The greatest number of statements concerned some aspect of course content, but no single aspect of content was identified by as many as 10 percent of the respondents as needing improvement. The only specific areas for improvement that received as many as 10 percent of the comments concerned a desire to reduce the mix of supervisors from various FAA services and a desire to see the instructor staff improved, particularly, with respect to awareness of specific FAA programs and problems. Ten respondents had no recommendations for improvement or felt the course was fine in its present state. There were, however, two respondents who recommended eliminating the course entirely.

TABLE 5. Summary of Statements Indicating Areas of Needed Improvement in the PIP/PER Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=33)	AT (N=42)	FS (N=11)	O (N=12)	Number of Responses	Percent of Total ^b
Course Content	14	29	2	7	52	39
Modify Course Approach	6	13	3	3	25	19
More practical emphasis	2	2	-	1	5	4
Other	4	11	3	2	20	15
Leave Course As Is	4	2	4	0	10	8
Improve Instructors	4	2	3	1	10	8
Miscellaneous	15	16	1	4	36	27

^a AF - Airway Facilities
 AT - Air Traffic
 FS - Flight Standards
 O - Other

^b Sum of percentages may vary slightly from total due to rounding error.

These findings suggest that the course as a whole has no particularly important problem areas or weaknesses that are apparent to students. Instead, there are a number of areas that are noted as problems for some, but not others, who attended the course.

b. Usefulness of the PIP/PER Course. The overall utility of the course was assessed by asking each respondent to rate the course on a five-point scale from "very useful" to "not at all useful" (See Item 1 on the questionnaires shown in Appendix I). A total of 91.8 percent of the graduates felt the course was moderately, generally, or very useful. Only one respondent felt the course was of no value.

2. Evaluation of Course Content.

The subjects taught in this and the other three courses were evaluated in terms of usefulness to the graduate supervisor in actual work settings. A five-point scale was used (Appendix I) that ranged from "not at all useful" through "slightly," "moderately," and "quite useful" to "extremely useful."

In general, extreme ratings were not common. There were on the average between five and six ratings at the low ("not at all useful") and again at the high ("extremely useful") ends of the scale for the specific instructional units in this course. The average proportion of respondents who felt the course topics to be of moderate or more use was 69.4 percent.

There were also only three topics in the PIP/PER course for which the ratings differed between FAA services or the locations of the individuals. These items, one each in the instruction blocks on Performance Appraisal, Management Theory, and Performance Improvement Program, are discussed below in the presentation of the findings concerning topics in each block of instruction.

a. Counseling. The instructional block on Counseling consisted of only the one topic of Principles of Counseling which was rated at least moderately useful by 76 percent of the respondents. Of the 22 specific subjects taught in the PIP/PER course (Table 6) only two, Theory and Principles of Communications and Approaches to Discussing Performance Appraisals (PER) with Employees, were more highly rated. It should be noted that the latter topic is in fact the application of the counseling process to the PER.

b. Communications. The ratings for the specific topics covered by this instructional block were uniformly high as about 75 percent of the graduates participating in the study felt the presentations on Communications Theory, Communications and Management style, and Application to PIP/PER were at least moderately useful. The unit on Application of Communication Principles to Work Settings was rated moderately or more useful by 71 percent of the respondents.

TABLE 6. Usefulness Ratings of PIP/PER Course Content

Content Area	Percent rating Moderate, quite, or very useful	
Counseling Employees	76.3	
Communication Principles	74.5	
Theory and Principles of Communication	77.7	
Application to PIP/PER Review	75.0	
Communication and Managerial Style	74.2	
Application to Work Setting	71.3	
Performance Appraisal (PER)	69.7	
Discussing Appraisals With Employees	77.3	
Use of the PER	74.2	
Establishing Performance Ratings	74.2	
Purposes of Appraisal	72.4	
Purposes of the PER	72.2	
Methods of Appraisal	69.8	
Problems in Appraisal	68.4	
Philosophy of Appraisal	68.1	
Appeals	65.3	
Relationship to Other FAA Programs	55.4	
Management Theory	65.3	
Management Style	69.8	
Current Theoretical Approaches	64.1	
Application to Performance Improvement	62.1	
Performance Improvement Program (PIP)	65.3	
Philosophy of PIP	67.7	
Measuring Results	67.0	
Relation to Other FAA Programs	64.5	
Development of Major Job Assignments	62.1	

c. Performance Appraisal. The ratings for the 10 topics covered in this content area varied considerably. About three-fourths of the respondents felt the presentations on Approaches to Discussing Appraisals (77 percent), the Use of the PER (74 percent), the Establishment of Performance Ratings (74 percent), and the Purposes of the PER (72 percent) were moderately or more useful. On the other hand, only somewhat more than half (55 percent) of the participating graduates felt that the unit on the Relationship of PER to Other FAA Programs was of moderate or better use.

The topic of Methods of Appraisal was rated more useful by respondents from Washington Headquarters, National Aviation Facilities Experimental Center, and the Aeronautical Center (HD group) than by those from Regional Offices (RO) or field facilities (FF). In the HD group, 87.5 percent felt this subject was moderately or more useful, while 70.0 percent of the RO and 68.0 percent of the FF personnel felt the same way. The overall chi-square test¹ was significant at the .05 level, as were the differences between the HD group and both the RO and FF groups. The RO and FF groups did not differ. This suggests that the closer the supervisor is to the field, the less relevant this specific topic is to his or her job.

¹The chi-square statistic was used throughout these analyses to determine whether or not the proportions of respondents giving favorable ratings on each survey item were equal for all groups.

d. Management Theory. The ratings of the presentations in this area differed relatively little. About two-thirds of the respondents judged each of the three units to be of moderate or better use.

One of the topics in this block, the presentation on Current Theoretical Approaches to Supervision, was rated somewhat differently as a function of the location of the respondent. All of the HD graduates (100 percent) rated this topic to be at least moderately useful. The corresponding values for the RO and FF groups were 70.0 percent and 58.9 percent respectively. An overall significant chi-square test ($p < .05$) resulted from the significant difference between the HD and FF groups ($p < .05$). The HD-RO difference approached but did not achieve statistical significance. There was no difference between the RO and FF groups. Again, as noted for the item on methods of appraisal, the supervisors in the field appeared to feel this topic to be less relevant to their needs than did HD supervisors.

e. Performance Improvement Program. As with the items on Management Theory, the four topics under the PIP area were rated rather uniformly. Approximately two-thirds of the respondents rated the units as at least moderately useful.

One item, Development of Major Job Assignments (MJAs), was rated differentially as a function of both FAA service and respondent location. With respect to FAA service, 75.8 percent of the Airway Facility (AF) graduates and 65.0 percent of the combined Flight Standards and other types of graduates (FS/O) rated this topic as at least moderately useful. Only 50.1 percent of the Air Traffic (AT) participants gave the same ratings. The overall significance of the chi-square test ($p < .05$) was the result of the AT proportion being significantly ($p < .05$) lower than either the AF or FS/O proportions. The AF and FS/O groups did not differ. The differences here probably reflect the perception of AT supervisors that they operate with standardized MJAs that they have little opportunity to develop or modify.

As for location, 87.5 percent of those from the HD group rated this topic as moderately or more useful. For the RO group the proportion was 66.7 percent and for FF supervisors it was 59.0 percent. The HD group had a significantly higher percentage according to a chi-square analysis of such ratings ($p < .05$) than the other two groups which did not differ from each other. Considering the higher degree of involvement in setting MJAs of those in the HD and RO locations than of those at the field level, the findings should not be considered surprising.

3. The PIP/PER Course and Supervisory Behavior.

a. Self-Assessment (N = 98).

(1) Most important changes. The graduates were asked to indicate how their own supervisory behavior had changed after attending the

PIP/PER course. The most frequent type of statement (35 percent) concerned some aspect of generally improved supervisory skills (Table 7); for example, better communications with employees or improved ability to motivate employees. The second most frequent type of response (26 percent) concerned the acquisition of some specific knowledge applicable to the supervisory task. The bulk of these comments (31 of 42) concerned increased awareness of the proper manner in which to proceed with the PIP/PER process. Several (19) of the participating graduates felt that they had benefited in a personal way from the course through acquisition of greater empathy, self-confidence, and self-understanding. On the other hand, about the same number (18) reported that the course had had no effect on their supervisory behavior. The remaining comments concerned improved understanding of human relations and employee motivations (9 percent) and a better, more balanced understanding of the supervisory/managerial role (6 percent).

TABLE 7. Summary of Statements Concerning Specific Changes in Supervisory Behavior Resulting From Attendance at PIP/PER Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=33)	AT (N=42)	FS (N=11)	O (N=12)	Number of Responses	Percent of Total
Improved general supervisory skills	21	28	3	2	54	35
Increased knowledge of specific application of PIP/PER program to supervisory situations	17	22	2	1	42	26
Conduct of PIP/PER	12	18	0	1	31	20
Other	5	4	2	0	11	6
Personal growth	8	8	2	1	19	12
No changes reported	2	7	6	3	18	12
Increased understanding of and improved human relations	3	8	1	2	14	9
Better understanding of supervisory role	8	1	-	1	10	6

^a
AF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

(2) Behavioral ratings. There were 37 specific behavioral outcomes specified for the PIP/PER course (Table 8). Across those items an average of 69.5 percent of the respondents reported improvement in effectiveness as a result of attending this course. The number reporting reduced effectiveness in functioning in any behavioral area was never more than five and averaged less than three (2.9) persons.

In looking at the specific behavioral items, the two with the greatest number of respondents reporting improvement were the items concerning understanding of one's own supervisory/managerial style (#1) and understanding the effects of various supervisory styles on employees (#2). The proportion of respondents reporting improvement on these two items was 86 percent for each

TABLE 8. Percentages of Respondents in Graduate, Immediate Superior, and Supervisee Groups Reporting Change
In Supervisory Behavior of Graduates of PIP/PER Course

Item ^a	Graduates (N=98)	Immediate Superiors (N=79)	Supervisees (N=64)
1. Understanding my own supervisory/managerial style	85.7	--	--
2. Understanding the effects of various supervisory/managerial styles on employees	85.6	79.8	63.3
3. Relating managerial theory to my current circumstances	69.1	71.1	--
4. Understanding my motivations as an FAA employee and supervisor/manager	59.8	68.8	--
5. Understanding the motivation of employees	72.4	60.2	45.9
6. Apply principles of communications to relations with employees	78.6	69.7	54.0
7. Present information to employees in a clear fashion	69.4	51.3	41.3
8. Present information to employees in a helpful manner	77.6	59.0	48.4
9. Applying the principles of human relations and communications to the PIP/PER program	61.8	68.4	--
10. Understand the relationship of PIP to other FAA programs	51.0	68.5	--
11. Understand the relationship of major job assignments (MJAs) to PIP	64.3	70.7	--
12. Accurate identification of MJAs	64.9	53.3	40.4
13. Establishment of results expected for MJAs	66.0	56.0	30.9
14. Effective measurement of results obtained in MJAs	61.1	51.4	33.3
15. Attend to employee needs in supervisory/managerial actions	79.2	68.4	51.7
16. Appropriate variation in managerial style as circumstances warrant	66.7	57.5	48.3
17. Effective conduct of performance review	74.2	68.4	60.3
18. Understanding relation of PIP to PER	71.1	70.7	--
19. Use of results-oriented approach in performance review	63.2	65.7	46.4
20. Application of appropriate principles and techniques to employee counseling	69.1	69.0	--
21. Use appropriate communication techniques during performance reviews	74.5	60.9	54.2
22. Definition of objectives of counseling sessions	67.3	59.7	47.2
23. Understand purpose of employee appraisal	65.3	64.1	37.5
24. Understand effective use of methods for appraisal	62.5	63.9	50.0
25. Awareness of FAA policy on performance appraisal	67.3	68.8	--
26. Development of well-defined performance standards	63.9	52.6	35.7
27. Understand requirements for determining acceptable levels of competence	67.7	64.9	42.8
28. Understand the relationship of appraisal to other FAA programs (MPP, EEO, LMR, Awards)	63.5	70.3	48.2
29. Understanding of the PER	76.5	74.4	47.4
30. Ability to properly prepare PER	75.5	69.6	63.2
31. Effectiveness in review of PER with employee	72.4	64.0	59.6
32. Understand process of appeal of PER	69.1	65.8	23.4
33. Understand supervisor/manager's role in appeal process	72.2	61.6	28.9
34. Understand requirements for denial of within-grade increments	77.3	67.6	--
35. Solicitation of employee involvement in development of performance standards	66.7	48.7	46.4
36. Adequacy of the evaluation of employee performance	67.0	68.4	50.0
37. Fairness of the evaluation of employee performance	66.3	71.1	50.0

^aItems are listed as presented in questionnaire provided to graduates. See Appendixes for corresponding wordings used in the questionnaires given to superiors and supervisees. Where no corresponding item was used, a dash is inserted in the table.

item. There were six other behavioral items for which at least 75 percent of the respondents indicated that improved performance occurred as a result of the course. These were the areas of applying principles of communications to relations with employees (#6), the presentation of information to employees in a helpful manner (#8), attending to employee needs in supervisory actions (#15), understanding of the PER (#29), the ability to properly prepare the PER (#30), and understanding of requirements for denial of within-grade increments (#34).

There were only two items for which less than 60 percent of the respondents reported improvement. On the item concerning their understanding of their own motivations as a supervisor (#4), 60 percent of the respondents felt that improvement had occurred. Only 50 percent felt that the course had helped them improve their understanding of the PIP in relation to other FAA programs (#10).

There were only two items on which the ratings differed across FAA services. A greater percentage of AT (78.6 percent) and AF (66.7 percent) graduates reported improvement on the item concerning the definition of the objectives of counseling sessions (#22) than did those in FS and other services (47.8 percent). A similar pattern was noted for ratings of the adequacy of evaluation of employee performance (#36), as 71.4 percent of the AT and 66.7 of the AF respondents reported improvement, while 59.1 percent of the FS and other graduates felt the same way. The differences in percentages between the AT and FS/O graduates were significant at the .05 level according to chi-square analyses. The AF-FS/O differences approached but did not achieve statistical significance. The AT-AF comparisons were not significant for either item. The differences observed for both of these items may reflect a greater emphasis on the tasks of evaluating and counseling employees in the AT and AF services, possibly because of the presence of unions.

There were also two items for which the percentage of reported behavior change varied as a function of location of the respondent. The HD group (89.0 percent) and the FF group (75.0 percent) were much more likely than the RO group (40.0 percent) to report improvement in their understanding of employee motivation (#5); the differences between RO and the other two groups of graduates were significant at the .05 level according to chi-square tests. The same pattern was observed on the item concerning application of appropriate principles and techniques to employee counseling (#20). In this case 78.0 percent of the HD group and 73.0 percent of the FF group reported improvement, while only 30.0 percent of the RO graduates made such reports. Again, the HD-RO and FF-RO comparisons were significant ($p < .05$). It should be noted that the number of respondents in the HD and RO groups was not large and thus these findings, which have no clear explanation, should be viewed conservatively.

b. Assessment by Immediate Superiors (N = 79). On the whole, immediate superiors noted less change in the behavior of graduates (Table 8) than did the graduates themselves ($p < .05$)². The average proportion of the immediate superiors indicating change on any one item was 64.6 percent.

The only performance improvement in graduates reported by more than 75 percent of the immediate superiors was understanding the effects of various managerial styles on employees (#2). There were six additional areas in which at least 70 percent of the immediate superiors noted improvement in the graduate supervisors. These included relating managerial theory to applied situations (#3), understanding the relationship of performance improvement and major job assignments (#11), understanding the relationship of PER to performance improvement (#18), understanding the relationship of appraisal to other FAA programs (#28), understanding of the PER (#29), and evaluating employee performance fairly (#37).

The areas where least improvement was noted by immediate superiors were presenting information to employees in a clear fashion (#7), accurate identification of MJAs (#12), measurement of results in MJAs (#14), developing well-defined performance standards (#26), and soliciting employee involvement in development of employee standards (#35). However, only on the latter item did the percentage of immediate superiors rating at least some improvement in graduates fall below 50 percent.

Only rarely did immediate superiors rate the performance of graduates in these areas as diminished. This occurred only eight times for the 36 behavioral items and never more than once an item. In addition, these eight ratings involved only three graduates of the course.

There were no differences in ratings related to either FAA service or location of employment.

c. Assessment by Supervisees (N = 64). Of the three groups rating the behavioral effects of this course on graduates, the ratings of supervisees reflected significantly less perceived change than those by either the graduates ($p < .01$)² or superiors ($p < .01$)². On the average, somewhat less than half (46.1 percent) of the supervisees reported observing improvements in the functioning of graduates in the PIP and PER areas.

Diminished effectiveness was rarely reported and averaged only slightly more than one such rating (1.2) per item, with two items (development of performance standards (#26) and relating appraisal to other FAA programs (#28)) having three such ratings each.

²As determined by Student's (t) test of the differences between two means.

There were 10 behavioral areas (Table 8) that were rated as showing improvement by at least 50 percent of the raters. Of these, supervisory style (#2), proper preparation of the PER (#30), and effective conduct of the performance review (#31) were most frequently judged by supervisees to have shown improvement after the graduate attended the PIP/PER course.

At the other extreme, six areas were rated improved by less than 40 percent of the supervisees. These included indication of results expected in MJAs (#13), measurement of results obtained in MJAs (#14), clearly stating the purposes of appraisal (#23), and development of well-defined performance standards (#26). Considerably below these were judgments about the presentation of the appeals process (#32) and role taking in the appeals process (#33). Only 23 percent of the graduates were judged to have improved on the former and 29 percent on the latter.

There were no differences between the ratings of supervisees as a function of either FAA service or location.

d. Comparing the Three Sets of Ratings. As noted above, graduates were the most likely of the three groups to report improvement in supervisory effectiveness (about 70 percent). The immediate superiors were significantly less likely to do so, but the proportion reporting change was not dramatically different (about 65 percent) from that of the graduates. However, supervisees were considerably less likely to report improvement than either of these two groups (about 46 percent).

Ranking the items from most to least reported behavior change and correlating these ranks for the responding groups showed that graduates and immediate superiors showed negligible agreement as to which areas showed most improvement ($r_s = .25$, not significant³). The comparison between graduates and supervisees, on the other hand, revealed a considerable similarity in ranking ($r_s = .54$, $p < .01$). In other words, graduates and supervisees tended to see the relatively greater or lesser change in supervisory performance in the same areas.

Looking at the specific areas of agreement, all three groups more frequently reported improvement in understanding the effects of supervisory styles on employees than in most other behavioral areas. The three groups did not tend to agree as to the other areas of performance that had shown the most relative improvement.

Graduates and their immediate superiors showed agreement on the relative frequency with which they reported improved ability to relate managerial theory to the actual supervisory situation. Graduates and supervisees noted relatively frequent improvement in the effectiveness of the PER review with supervisees.

³All correlations reported were calculated by the Spearman method of rank-order correlation.

In terms of least reported change, both immediate superiors and supervisees felt that relatively little change had occurred in accuracy of identification of Major Job Assignments (MJAs) or in presenting information to employees in a clear fashion. This latter area was among those for which graduates were most likely to report improvement. This suggests a notable discrepancy in perceptions about the effectiveness with which this task is accomplished.

4. Impact on the Unit.

Both graduates and their supervisees were asked to indicate to what extent conditions within their units had changed as a function of the graduates' attendance at the PIP/PER course. In general the assessments of the two groups were remarkably similar (Table 9). Over three-fourths of the graduates and about two-thirds of the supervisees felt the supervisor's interactions with employees had improved, and a majority of both groups felt efficiency within the unit had increased. However, ratings of job satisfaction and unit morale suggested less change on these dimensions as only 30 to 40 percent of the respondents in both groups felt improvements had occurred in these areas.

TABLE 9. Percentage of Graduates and Supervisees Rating Conditions in Their Unit as Improved After Attendance of Graduate at PIP/PER Course

Item	Graduate (N=98)	Supervisee (N=64)
Unit Efficiency	58.2	51.6
Employee Job Satisfaction	42.8	35.9
Employee Morale	31.6	29.7
Supervisor's Interaction With Employees	79.6	65.6

Ratings indicating deterioration of conditions within units were rare. No such ratings were given by the graduate group on the item concerning efficiency or by the supervisee group on the efficiency and job satisfaction items. There were three graduates and five supervisees who felt morale had decreased, and three supervisees who felt the quality of the interaction between supervisor and employees had declined.

B. LMR Course.

1. General Evaluation by MTS Graduates (N = 104).

a. Open-Ended Questionnaire. The most helpful feature of the LMR course (Table 10) was the increase in general knowledge and understanding of LMR gained by the graduates. The specific aspect of the course most frequently cited as helpful was the training on management of unfair labor practices (ULPs), grievances, and appeals, particularly for AT supervisors. As with the PIP/PER course, personal growth and the opportunity to work through supervisory problems with others were also frequently cited as being most helpful.

TABLE 10. Summary of Statements Indicating the Most Helpful Aspects of the LMR Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=35)	AT (N=57)	FS (N=1)	O (N=9)	Number of Responses	Percent of Total
Increased Knowledge and Understanding	59	102	2	13	176	79
LMR in General	32	36	1	7	76	34
ULPs, Grievances and Appeals	8	22	1	2	33	15
General Principles of Supervisors	7	17	0	0	24	11
Understanding Employees/Human Relations	7	11	0	2	20	9
Union Contracts	2	10	0	1	13	6
Supervisory Role	3	6	0	1	10	4
Working Through Supervisory Problems With Others	6	15	0	0	21	9
Personal Growth	12	8	0	0	20	9
Miscellaneous	2	4	0	1	7	3

^a AF - Airway Facilities
 AT - Air Traffic
 FS - Flight Standards
 O - Other

The items mentioned as needing improvement covered a variety of areas (Table 11). The only particular item mentioned by as many as 20 percent of the respondents was the desire for more discussion on the specific contract governing the work situation. This was particularly true of AT supervisors. The next most frequent response was that the course should not be changed. There were also several comments requesting more role playing and a more practical emphasis in the course, otherwise the suggestions ranged over many topics with no clear consensus being evident.

Taken together, these responses indicate that focused study on LMR is seen as valuable and the only substantive change that would be likely to increase that value is in the area of giving more attention to the specific FAA-union contracts.

TABLE 11. Summary of Statements Indicating Areas of Needed Improvement in the LMR Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=35)	AT (N=57)	FS (N=1)	O (N=9)	Number of Responses	Percent of Total ^b
Course Content	23	50	0	5	78	51
More on Specific FAA-Union Contracts	6	19	0	0	25	16
More on Role-Playing LMR Situations	5	8	0	0	13	8
Other	12	23	0	5	40	26
Modify Course Approach	8	23	0	1	32	21
More Practical Emphasis	2	9	0	0	11	7
Other	6	14	0	1	21	14
Leave Course As Is	7	8	1	1	17	11
Miscellaneous	12	15	0	0	27	18

^aAF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

^bSum of percentages may vary slightly from total due to rounding error.

b. Usefulness of the LMR Course. On the overall scale, the course was rated moderately to very useful by 90.4 percent of the graduates. All of the respondents felt the course was of some value.

2. Evaluation of Course Content.

On the average, 68.4 percent of the respondents felt the topics covered by the LMR course to be of moderate or better use. This is a value similar to that obtained for the PIP/PER course. However, in contrast to the PIP/PER course, the graduates were much more likely to provide extreme ratings on the subject matter in the LMR course. An average of nearly nine respondents per item gave ratings of "extremely useful," and for one item (discussed below), 21 of the ratings were at this level. On the "not at all useful" end of the scale, the number of such ratings averaged 11 per item. Furthermore, three items were so rated by more than 30, and another two items were so rated by more than 20 supervisors (see below). In other words, if the graduates found a part of the course useful, there was a good probability that it would be seen as very useful; if not, it was quite likely to be rated as having no value at all.

There were only three topics in the LMR course, one each in the instructional blocks concerning Grievance, LMR and Communications, and Arbitration, that were rated differently by graduates in the various FAA services or in the different locations considered in the survey. Those differences are discussed below with the other findings for the topics in each block of instruction.

TABLE 12. Usefulness Ratings of LMR Course Content

Content Area	Percent rating Moderate, quite, or very useful
Grievances	82.7
Documenting Grievances	89.3
FAA Grievance System	86.5
Processing Grievances	84.5
Nature of Grievances	83.7
Union Involvement in Grievances	81.7
CSC Guidelines	77.7
Negotiated Grievance System	75.7
Nature of Union/Management Relations	81.5
Role of Supervisor in LMR	86.5
Types of LMR Relations	76.5
Dealing With Unions Under Contract	79.7
Roles of Management	81.6
Roles of Unions	81.6
Written Agreements vs. Unwritten Understandings	76.0
Contract Administration	76.0
Administration of Contracts	76.5
Understanding Contracts	75.5
LMR Background and Overview	75.5
FAA Policy and Philosophy of LMR	81.7
Executive Order 11491	69.2
Unfair Labor Practices (ULPs)	73.1
Understanding ULP Actions	75.0
Procedures for ULPs	71.2
LMR and Communications	70.7
Employee Rights	89.4
Relations Under Exclusive Union Recognition	78.8
Relations Under National Consultation Rights	63.0
Relations With No Union Recognition	51.5
Arbitration	57.9
Alternatives to Arbitration	61.8
Supervisory Roles in Arbitration	60.2
Uses of Arbitration	58.2
Mechanics of Arbitration	57.3
Preparing Grievance Cases for Arbitration	55.3
Arbitration Hearings	54.4
Operations in a Union Facility	57.2
Dealing With Unions	73.5
ULPs	70.6
Contract Administration	63.4
Negotiating Contracts	21.4
Contract Negotiations	39.6
Post-Negotiation Responsibilities	47.4
The Negotiation Process	36.6
Action Prior to Negotiation	34.6

a. Grievances. The topics taught in this block (Table 12) were well regarded by graduates as 75 percent or more of the ratings for each topic were at the moderately or more useful level. In fact, five of the seven topics were rated as at least moderately useful by more than 80 percent of the supervisors. On one item, Documentation of Grievances, 21 graduates (20 percent) rated the topic as "extremely useful." This was the greatest proportion of such ratings for any of the topics taught in these four recurrent courses.

The discussion of Negotiated Systems was rated somewhat differently by AF supervisors than by the graduates from other services. A total of 69 percent of the AF participants felt this subject was at least moderately useful, while about 79 percent of the AT, FS, and other graduates felt the same way. The differences between groups, while statistically significant according to chi-square analysis ($p < .05$) were not so large as to suggest dramatic differences in the perceived value of the topic.

b. Nature of Union/Management Relations. The discussion of the Role of Supervisors in LMR was rated moderately or more useful by 87 percent, and the topic of LMR Relationships by 76 percent of the respondents.

c. Dealing With Union Under Contract. In this unit, each of the three topics was judged of considerable utility. The items concerning Roles of Management and Roles of Unions were each rated as at least moderately useful by 82 percent of the graduates. The area of Written Agreements versus Unwritten Understandings was judged moderately or more useful by 76 percent of the respondents.

d. Contract Administration. The two topics in this block were considered at least moderately useful by about three-fourths of the graduates.

e. LMR Background and Overview. There was some variation in the perceived value of the two specific topics covered in this unit. Over 80 percent of the graduates felt the presentation of FAA Policy and Philosophy of LMR (82 percent) was at least moderately useful. A total of 69 percent felt the discussion of the Executive Order on LMR had been moderately or more useful.

f. Unfair Labor Practices (ULPs). The two discussions designed to increase understanding of ULPs were judged of essentially equal utility. Three-fourths of the respondents felt the subject of Understanding ULPs was at least moderately useful, while 71 percent felt the same about the presentation on Procedures for ULPs.

g. LMR and Communications. There was considerable diversity in the judged value of the four topics presented in this unit. The discussion of Employee Rights was judged moderately or more useful by nearly 90 percent of the graduates (89 percent). In contrast, just over half (51 percent) felt

the presentation on LMR with no union recognition was involved was helpful. More than three-fourths (79 percent) of the respondents felt the discussion of relations with exclusive union recognition was at least moderately useful, and about two-thirds (63 percent) felt the same way about the item concerning relations with unions when national consultation rights have been accorded.

The lowest rated item, Labor Relations Without Union Recognition, showed considerable diversity in ratings. The most frequent response on this item was "quite useful" (29 percent), but there were also many who felt that the topic was "not at all useful" (22 percent). This diversity was due primarily to the fact that only 33.9 percent of the AT group felt this topic to be of moderate or more use compared to 77.1 percent of the AF group and 60.0 percent of the FS/O groups. The differences between the AT and other groups were highly significant by chi-square tests ($p < .001$). In fact 21 of the 23 persons rating the topic as having no usefulness were from the AT service.

h. Arbitration. The ratings of the topics in this content area were relatively uniform, ranging from 54 percent (Arbitration Hearing) to 62 percent (Alternatives to Arbitration) of the graduates judging the subjects to have moderate or better usefulness.

The item concerning the Arbitration Hearing received somewhat different ratings from FF supervisors than from those in RO and HD locations according to chi-square analysis ($p < .05$). A total of 60 percent of the FF respondents judged this topic to be at least moderately useful compared to 30 percent of the RO and 25 percent of the HD groups.

i. Operations in a Union Facility. Two of these presentations, Dealing With Unions and Unfair Labor Practices, were seen as moderately or more useful by at least 70 percent of the graduates. The area of Contract Administration was considered less useful overall but still was given moderate or better ratings by about two-thirds of the respondents. However, the remaining topic in this group, Negotiating Contracts, was given the lowest usefulness rating of any in this or the other recurrent courses. Only 21 percent of the respondents rated it as of even moderate utility. A total of 37 respondents rated this topic as having no value at all.

j. Contract Negotiations. Following the trend noted in the general discussion of contract negotiation presented in the previous block, the topics in this block were felt to be of very limited value by graduates. The majority felt each of the three topics discussed was of no or slight use, although almost half (47 percent) of the respondents felt that consideration of Post-Negotiation Responsibilities had been at least moderately helpful. Only a third felt similarly about the presentations on the Negotiation Process (37 percent) and Actions Prior to Negotiation (35 percent).

3. The LMR Course and Supervisory Behavior.

a. Self-Assessment (N = 104):

(1) Most important changes. According to the respondents, the most often mentioned change (54 percent) resulting from attendance at the LMR course was some general or specific increment in knowledge of and ability to handle LMR situations (Table 13). The most frequently mentioned specific change was in the area of contract administration (13 percent); however, nearly all of these citations (19 of 22) were made by AT supervisors. AF supervisors were more likely to cite general considerations, such as understanding LMR, human relations, and improved general supervisory skills. This difference suggests that contract administration is a more urgent consideration of AT supervisors at this point. It should be noted that with the implementation of the new union contract in the AF service, this aspect of the LMR course is likely to assume greater significance for the AF supervisor.

The other positive changes mentioned with some frequency concerned understanding human relations (11 percent) and personal growth (7 percent). There were 15 respondents (9 percent) who felt that there had been no change in their supervisory behavior as a result of attending the course.

TABLE 13. Summary of Statements Concerning Specific Changes in Supervisory Behavior
Resulting From Attendance at LMR Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=35)	AT (N=57)	FS (N=1)	O (N=9)	Number of Responses	Percent of Total ^b
Increased knowledge of specific application of LMR program to supervisory situations	17	65	0	9	91	54
Contract administration	1	19	0	2	22	13
Grievances	1	8	0	1	10	6
Relations with unions	4	3	0	3	10	6
Other	11	35	0	3	49	30
Improved general supervisory skills	10	11	0	1	22	13
Increased understanding of and improved human relations	11	8	0	0	19	11
No changes reported	8	6	1	0	15	9
Personal growth	4	7	0	0	11	7
Miscellaneous	2	9	0	0	11	7

^aAF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

^bSum of percentages may vary slightly from total due to rounding error.

TABLE 14. Percentages of Respondents in Graduate, Immediate Superior, and Supervisee Groups Reporting Change in Supervisory Behavior of Graduates of LMR Course

Item ^a	Graduates (N=104)	Immediate Superiors (N=55)	Supervisees (N=70)
1. Understanding of Executive Order 11491 on LMR in government	91.3	92.4	--
2. Knowledge of the rights and restrictions detailed in EO 11491	89.4	86.0	--
3. Application of the FAA policy and philosophy of LMR to one's own organizational unit	83.5	75.5	--
4. Understand the meaning of exclusive recognition for unions	77.9	77.8	--
5. Awareness of the various relationships that can exist between labor and management	88.5	85.2	--
6. Knowledge of the roles of personnel involved in the LMR process (line, staff, etc.)	76.9	74.1	--
7. Understanding of the impact of unionization on day-to-day operation of an organization	82.7	89.1	70.5
8. Awareness of communication requirements associated with the presence of labor organizations	87.5	92.6	--
9. Awareness of problems surrounding the presence of labor organizations	80.8	85.2	66.7
10. Analysis and interpretation of contracts	71.2	54.9	--
11. Ability to execute role of management in contract administration	69.3	61.2	--
12. Understanding of the union representative's role in administering contracts	75.0	75.0	--
13. Knowledge of procedures used for handling ULPs	78.8	74.5	66.0
14. Knowledge of the requirements for meetings, conferences, and consultations with labor organizations	88.5	82.7	--
15. Knowledge of procedures to be used in meeting with labor organizations	91.3	71.2	--
16. Knowledge of requirements and limitations on communication with nonlabor or nonrecognized labor organizations	77.9	70.6	--
17. Knowledge of FAA policy on use of government facilities by labor organizations	80.8	83.3	--
18. Knowledge of the steps and actions which must be undertaken in leading to negotiations	63.5	58.1	--
19. Awareness of negotiating techniques	65.4	45.2	--
20. Awareness of means available for resolving differences arising in negotiations	73.1	59.1	--
21. Understanding of the role of the supervisor/manager in administering a labor contract	90.4	89.1	--
22. Recognition of problem areas in relations with unions under contract	87.4	92.3	--
23. Appreciation of the role of the union representative in LMR	80.8	75.5	51.7
24. Knowledge of indicators for evaluating the effectiveness of the labor contract	50.5	54.5	--
25. Contract analysis and interpretation	66.7	66.0	--
26. Recognition of ULPs	73.1	72.3	56.9
27. Awareness of procedures for processing ULPs	75.0	70.8	--
28. Ability to resolve ULPs in a satisfactory manner	72.1	63.6	53.8
29. Understand differences between complaints, grievances, ULPs, and appeals	89.4	92.6	64.9
30. Knowledge of CSC criteria for grievance systems	78.8	72.0	--
31. Awareness of the FAA grievance system	85.6	78.8	--
32. Knowledge of procedures required in a negotiated grievance system	80.8	81.2	--
33. Understanding of the rights of all parties in the grievance system	85.6	82.7	60.6
34. Recognition of grievances	86.4	83.6	55.9
35. Ability to resolve and process a grievance, including the required documentation	82.7	88.0	57.6
36. Awareness of supervisory/managerial responsibility as to notification of union representatives of grievance actions	85.3	90.2	--
37. Knowledge of representation rights of employees and union in grievance actions	87.4	90.7	--
38. Awareness of the grievance format	82.7	82.7	--
39. Understanding of the arbitration process	81.7	73.1	--
40. Awareness of available options prior to arbitration	76.9	80.0	--
41. Ability to recognize and construct the essential elements of issues to be discussed in arbitration	62.5	59.1	--
42. Awareness of alternatives to arbitration	73.1	68.8	--
43. Understanding of arbitration procedures	71.2	69.6	--
44. Ability to prepare a grievance case for arbitration	56.7	50.0	--
45. Understanding of the supervisor/manager's role in arbitration	78.0	78.0	--

^aItems are listed as presented in questionnaire provided to graduates. See Appendixes for corresponding wordings used in the questionnaires given to superiors and supervisees. Where no corresponding item was used, a dash is inserted in the table.

(2) Behavioral ratings. There were 45 specific behavioral outcomes specified for the LMR course (Table 14). Averaging across all these outcomes, it was found that 78.5 percent of the respondents reported at least some improvement in performance on LMR matters as a result of attending this course. This was the highest value for the four courses and differed significantly ($p < .05$)² from each of the others. On only one area did as many as five respondents report lessened effectiveness, and the average was less than one respondent (.6) per item.

More than half (23) the behavioral items were rated as showing some or more improvement by 80 percent or more of the respondents. Three of these, understanding the executive order on LMR (#1), knowing procedures to be used in meeting with labor organizations (#15), and understanding the role of the supervisor in administering a labor contract (#21) were judged improved by more than 90 percent of the graduates.

Of the 23 areas cited above, 9 concerned the grievance process (#29, #31-38). Thus, not only was this area of teaching felt to be most useful by graduates (see previous discussion), it was also the area in which they felt the most improvement in performance.

The two areas of performance that showed least improvement according to the graduates were awareness of indications of the effectiveness of a labor contract (#24), and ability to prepare a grievance case for arbitration (#44). Just about half (47 and 50 percent respectively for the two items) of the graduates reported improved performance in these two areas.

There was only one area of the ability to resolve ULPs in a satisfactory manner (#28) that was rated differentially by the groups participating in the survey. On this item, 75.0 percent of the HD and 76.7 percent of the FF respondents, but only 30.0 percent of the RO group, reported improved functioning, a difference statistically significant by chi-square test ($p < .01$). It is not clear why the RO graduates were less likely to report improvement in this area. Perhaps being at the middle level of the management structure provides less opportunity to deal effectively with ULP matters that are brought to the RO. However, it should again be noted that the number of RO graduates involved in these comparisons was relatively small and the findings should therefore be viewed as only suggestive.

b. Assessment by Immediate Superiors (N = 55). As a group, immediate superiors reported only slightly less behavioral change in graduates than did the graduates themselves. The average proportion of immediate superiors indicating improvement on any item was 75.5 percent (Table 14). As it was for graduates, this value was significantly higher than those for the other three courses ($p < .05$)².

There were six areas in which more than 90 percent of the immediate superiors rated graduates improved after the LMR course; understanding of the Executive Order on LMR in government (#1), awareness of communication require-

ments associated with the presence of labor organizations (#8), recognition of problem areas with union relations (#22), understanding the differences between grievances, unfair labor practices, and appeals (#29), knowledge of representation rights of employees and unions in grievance actions (#31), and awareness of responsibility for notification of unions in grievance actions (#36).

The behavioral areas that were least likely to be rated as improved concerned interpretation of contracts (#10), contract negotiations (#18,19,20), evaluation of contract effectiveness (#24), and arbitration (#41,44). Only on awareness of negotiating techniques did less than half of the ratings reflect improvement (#19).

There were only six behavioral items to which immediate superiors reported diminished functioning in graduates, and only one such rating was made in each case. Four of these items concerned the performance of a single individual, and the remaining two items involved a second person.

There were no differences in ratings as a function of location or FAA service.

c. Assessment by Supervisees (N = 70). The supervisees who responded (Table 14) reported significantly less change in graduates than either the graduates themselves ($p < .01$)² or superiors ($p < .01$)². However, the average percentage of 60.6 of the supervisees reporting improved performance in the LMR areas was significantly higher than the parallel judgments made on the effectiveness of the other three recurrent courses ($p < .01$ for each comparison)².

Ratings by supervisees of lessened effectiveness in the LMR area by graduates were relatively rare. An average of 1.3 supervisees per item reported reduced effectiveness, and on only the item concerning resolution of ULPs (#28) did as many as four persons give such ratings.

The four behavioral items with the highest percentage of supervisees rating their supervisors as improved were understanding of the impact of unionization on operations (#7), awareness of problems associated with the presence of unions (#9), knowledge of procedures for handling unfair labor practices (#13), and understanding of differences between complaints, grievances, unfair labor practices, and appeals (#29). Approximately two-thirds of the respondents reported improvements in these areas.

The least improvement was noted in the appreciation of the role of the union representative in LMR (#23) and ability to resolve unfair labor practices (#28). Still, more than 50 percent of the respondents noted some improvement in each of these areas. With respect to the latter area, four supervisees noted decreased effectiveness; this was the only case for which more than two such ratings were made.

There were no differences in ratings between FAA services or the different locations.

d. Comparing the Three Sets of Ratings. Graduates and their immediate superiors were more likely than supervisees to report improved supervisory functioning in the LMR area. As noted earlier, an average of about three-fourths of the graduates and immediate superiors reported behavioral change on these items. These were the highest values for any of the four courses. Also at a high value compared to the other courses was the average frequency of 60 percent at which the supervisees reported increased effectiveness. This value was, however, significantly lower than the percentages obtained from graduates and superiors in this course ($p < .01$ for both comparisons)².

Rankings of the items by percentage of respondents reporting behavior change for each of the three groups and correlational analyses of those rankings showed a high degree of relationship between graduates and their immediate superiors ($r_s = .86$, $p < .01$). There was no such relationship between rankings by graduates and supervisees ($r_s = .31$, not significant).

As the correlations would suggest, there were more instances in which graduates and immediate superiors most frequently or least frequently reported improved performance in the same areas than was true for graduates and supervisees. Among the areas most frequently rated as improved, both graduates and their immediate superiors tended more often to report improvement by the graduate in understanding of the Executive Order governing LMR, awareness of communication requirements associated with union presence, recognition of potential LMR problem, understanding of the differences between complaints, grievances, and ULPs, awareness of the grievance system, and awareness of requirements to inform unions of grievance procedures.

At the low end of the rankings, both graduates and their immediate superiors were less likely to report change in knowledge of indicators of effective labor contracts or knowledge of how to prepare a grievance for arbitration.

Graduates and supervisees agreed in seeing more frequent improvement in understanding of the impact of unions and awareness of problems associated with the presence of unions in the work setting. Both groups also noted improvement in the supervisor's knowledge of requirements for meeting with unions on work and employee matters relatively frequently.

4. Impact on the Unit.

The impact of the LMR course on conditions in the supervisor's unit was comparably rated in general by both graduates and supervisees (Table 15). As with the other three courses, the most favorable ratings were given to the employee-supervisor interaction followed in order by efficiency, job

satisfaction, and employee morale. The only notable difference in ratings between the graduates and supervisees concerned the interaction between them as 20 percent more of the graduates felt an improvement in this area had occurred.

Ratings indicating that conditions in the unit had worsened after the graduate's attendance at the LMR course were rare. Two graduates and four supervisees felt job satisfaction had decreased. Three graduates and six supervisees reported lowered morale.

TABLE 15. Percentage of Graduates and Supervisees Rating Conditions in Their Unit as Improved After Attendance of Graduate at LMR Course

Item	Graduate (N=104)	Supervisee (N=70)
Unit Efficiency	48.1	40.3
Employee Job Satisfaction	37.5	34.7
Employee Morale	36.5	32.4
Supervisor's Interaction With Employees	66.3	46.3

There were significant ($p < .05$) differences according to chi-square analysis between the responses of graduates from the FAA services on three of the four items concerning unit conditions. Unit efficiency was rated improved by 61 percent of the AT, 34 percent of the AF, and only 20 percent of the FS/O graduates of this course. The corresponding values for improved job satisfaction were 51 percent, 17 percent, and 30 percent, and for improved unit morale they were 44 percent, 20 percent, and 20 percent. In each case, graduates from the AT service were much more likely to report improvement than either the AF or FS/O graduates. However, no parallel trend was noted in the supervisee data.

C. CD Course.

1. General Evaluation by MTS Graduates (N = 102).

a. Open-Ended Questionnaire. The most helpful aspects of the CD course are detailed in Table 16. The respondents most frequently mentioned some area in which they had gained additional knowledge and understanding of CD as being most helpful. In this respect, many (21 percent) specifically

indicated that their increased understanding of how to proceed in undertaking CD actions was most helpful. Another substantial group (19 percent) felt that the discussion of the philosophy and purposes of CD had been especially useful. Other helpful aspects of the course mentioned by at least 10 percent of the respondents included working through problems with others, an increased understanding of the supervisory role, and personal growth.

TABLE 16. Summary of Statements Indicating the Most Helpful Aspects of the CD Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=36)	AT (N=42)	FS (N=16)	O (N=9)	Number of Responses	Percent of Total
Increased Knowledge and Understanding	52	74	24	15	165	79
CD Procedures and Administration	15	21	5	4	45	21
Purpose and Philosophy of CD	15	14	6	5	40	19
Supervisory Role	3	15	3	0	21	10
General Principles of Supervision	7	6	1	4	18	9
Recognition of Behavior Problems in Employees	5	6	4	1	16	8
Understanding Employees/Human Relations	4	4	2	0	10	5
Other	3	8	3	1	15	7
Working Through Supervisory Problems With Others	6	11	4	1	22	10
Personal Growth	7	8	5	0	20	10
Miscellaneous	2	1	0	0	3	1

^aAF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

TABLE 17. Summary of Statements Indicating Areas of Needed Improvement in the CD Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=36)	AT (N=42)	FS (N=16)	O (N=9)	Number of Responses	Percent of Total ^b
Course Content	14	28	8	0	50	36
Modify Course Approach	5	12	6	5	28	20
More Practical Emphasis	4	9	4	2	19	14
Other	1	3	2	3	9	6
Leave Course As Is	7	5	3	4	19	14
Miscellaneous	15	18	7	3	43	31

^a AF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

^b Sum of percentages may vary slightly from total due to rounding error.

As with the other courses, no one aspect of this course was singled out as particularly in need of change (Table 17). The greatest percentage of comments related to some aspect of the content of the course (36 percent); however, no one specific area of course content was mentioned by as many as 10 percent of the respondents.

Outside of course content, the area most often mentioned as needing improvement was that of a more practical emphasis in the presentation (14 percent). An equal number of respondents recommended that no changes be made in the course.

These response patterns suggest that no particular aspect of the course was considered seriously deficient.

b. Usefulness of the CD Course. The course was rated moderately or more useful by 94.0 percent of the graduates. All respondents rated the course as having some value.

2. Evaluation of Course Content.

The average proportion of respondents rating each topic as useful was 74.8 percent. This value is somewhat higher than that obtained for the PIP/PER and LMR courses and about the same as the value for the ME course. In other words, there is some tendency (statistically significant at $p < .05$)² for the graduates to rate the content of this course as more useful than was the case for the two courses already described.

The pattern of extreme ratings showed that graduates were more likely to evaluate the course topics in highly positive than in particularly negative terms. Their number of "extremely useful" ratings averaged between 6 and 7 per topic, while the number of ratings of "not at all useful" numbered just 4 on the average.

There were no topics in the CD course that were rated differently by graduates from different services or locations.

a. Meaning and Purpose of Discipline. Each of the four specific topics taught under this unit were rated as quite useful by the graduates, as no less than 85 percent indicated the areas were of moderate or better utility (Table 18). The topic of the Supervisor's Role in Preventing Need for Corrective Discipline was particularly well regarded (89 percent) as 55 of 102 ratings were "very useful" and another 17 were "extremely useful." There were also 17 "extremely useful" ratings for the subject of Positive versus Negative Discipline and 13 for Identifying Potential Problem Areas. Only one other topic, the Supervisor's Role in Discipline (see (3)) was so highly rated by as many as 10 participants.

TABLE 18. Usefulness Ratings of CD Course Content

Content Area	Percent rating Moderate, quite, or very useful
Meaning and Purpose of Discipline	86.9
Role of Supervisor in Preventing Need for Corrective Discipline	89.2
Identifying Potential Problem Areas	87.2
Concepts of Positive vs. Negative Discipline	86.0
Relationship of Discipline to Employee Motivation	85.1
Informal Discipline	81.2
Available Disciplinary Actions	83.2
Approaches to the Disciplinary Interview	82.2
How to Employ Informal Discipline	78.4
FAA Policy on Discipline	79.0
Role of Supervisor in Discipline	90.2
FAA Standards of Conduct	79.4
FAA Philosophy on Discipline	76.2
Relation of Discipline to Other FAA Programs	70.2
Formal Discipline	77.3
Letter of Reprimand	80.0
Employee Appeals System	77.2
Minor Adverse Actions	77.0
Major Adverse Actions	75.0
Human Relations	76.1
Role of Supervisors in Human Relations	81.8
Impact of Organizational Environment on Employee Behavior	76.3
Review of Motivational Theory	70.2
Investigations and Security	63.7
Role of Supervisor in Investigative Actions	67.4
Investigative and Security Resources	60.0
Ethical Conduct	62.7
Supervisory Responsibilities	78.4
Outside Employment/Financial Interests	55.9
Gifts, Favors, Entertainment	53.9
Other Behavioral Problems	62.6
Financial Obligations	67.3
Alcohol Abuse	63.7
Political Activities	56.9

b. Informal Discipline. Two of the three topics in this block, Available Discipline Actions (83 percent) and Approaches to the Disciplinary Interview (82 percent), were rated as moderately or more useful by more than 80 percent of the graduates. The other area, How to Employ Informal Actions, was so judged by 78 percent of the respondents.

c. FAA Policy for Discipline. One of the specific topics in this unit, the Role of the Supervisor in Discipline, received the highest of all the ratings for this course; 90 percent of the graduates endorsed its utility at the moderate level or better. The topics of FAA Standards of Conduct (79 percent) and FAA Philosophy of Discipline (76 percent) although not rated as high, were still rated at the moderately or more useful level by more than three-fourths of the respondents. The lowest rated topic in this block was the presentation on Discipline in Relation to Other FAA Programs, but still 70 percent of the respondents felt it was at least moderately useful.

d. Formal Discipline. The four topics in this block were rated similarly, as between 75 percent and 80 percent of the respondents felt at least moderate utility in these subject areas. The area receiving the highest ratings concerned Letters of Reprimand (80 percent).

e. Human Relations. The ratings for the three areas considered in this instruction block varied considerably. Almost 82 percent of the graduates rated the discussion of the Supervisor's Role in Human Relations to be of moderate or better utility. Next, 76 percent rated the presentation on the Impact of the Organization on Employee Behavior as at least "moderately useful." About 70 percent of the graduates felt the Review of Motivational Theory was moderately or more useful.

f. Investigations and Security. Compared to the five instructional blocks discussed above, this block and the remaining two blocks were judged considerably less useful by respondents. Just over two-thirds of the graduates rated the topic of the Supervisor's Role in Investigative Actions as moderately or more useful, while 60 percent so rated the presentation on the Investigation and Security Resources Available to Supervisors.

g. Ethical Conduct. One of the three areas in this block was rated very favorably; the presentation on the Supervisor's Responsibilities for Ethical Conduct was rated moderately or more useful by 78 percent of the graduates. The other two areas, Outside Financial Interests and that of Gifts, Favors, and Entertainment were the lowest rated of all topics in the course with only 56 percent and 54 percent of the respondents reporting moderate or more utility respectively.

h. Other Behavioral Problems. The discussions of Financial Obligations (67 percent) and Alcohol Abuse (64 percent) were seen as at least moderately useful by about two-thirds of the graduates. The topic of Political Activities was given such ratings by 57 percent of the respondents.

3. The CD Course and Supervisory Behavior.

a. Self-Assessment (N = 102).

(1) Most important changes. Most of the comments (60 percent) about behavioral changes concerned increased knowledge and understanding of the application of CD to the work situation (Table 19). Specific changes mentioned under this general classification included increased ability to solve discipline problems (21 percent), improved discipline procedures (19 percent), and an increased understanding of the philosophy of CD (15 percent).

TABLE 19. Summary of Statements Concerning Specific Changes in Supervisory Behavior
Resulting From Attendance at CD Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=36)	AT (N=42)	FS (N=16)	O (N=9)	Number of Responses	Percent of Total ^b
Increased knowledge of specific application of CD program to supervisory situations	30	41	13	6	90	60
Ability to solve discipline problems	12	15	4	1	32	21
CD procedures	8	15	4	2	29	19
Understanding of CD philosophy	6	10	4	3	23	15
Other	4	1	1	0	6	4
Personal growth	5	12	3	1	21	14
No changes reported	7	5	1	4	17	11
Increased understanding of and improved human relations	1	6	2	2	11	7
Improved general supervisory skills	3	4	3	0	10	7
Miscellaneous	2	2	1	0	5	3

^aAF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

^bSum of percentages may vary slightly from total due to rounding error.

Other areas of improvement noted personal growth (14 percent), improved understanding of and relations with employees (7 percent), and improvement in general supervisory skills (7 percent). There were 17 respondents (11 percent) who reported no behavioral changes as a function of attending this course.

(2) Behavioral ratings. On the average, for the 34 behaviors considered, 72.8 percent of the CD graduates felt that performance had improved (Table 20). However, there was some greater tendency to report diminished performance after attendance at the CD course than was true for the other three courses. An average of 3.4 respondents per item indicated a loss in effectiveness with as many as seven and never less than one respondent reporting reduced performance.

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TABLE 20. Percentages of Respondents In Graduate, Immediate Superior, and Supervisee Groups Reporting Change in Supervisory Behavior of Graduates of CD Course

Item ^a	Graduates (N=102)	Immediate Superiors (N=69)	Supervisees (N=64)
1. Understanding the motivational factors that relate to work performance	78.2	71.6	50.0
2. Understand the factors influencing the management style used by supervisor/managers	67.6	80.3	--
3. Awareness of FAA policy and philosophy of positive discipline	71.3	77.9	--
4. Understanding supervisor/manager's responsibilities for discipline	76.5	74.6	--
5. Understanding the relation of discipline to programs such as EEO and LMR	60.8	74.2	--
6. Viewing discipline in a positive manner rather than strictly punishment	71.6	69.1	50.8
7. Promoting self-discipline in employees	74.5	57.6	43.5
8. Understanding the relation of positive discipline to motivational factors influencing employee behavior	72.4	64.1	--
9. Understanding of the relation of discipline to organizational goals	56.6	54.0	38.3
10. Awareness of the contrast between positive self-discipline and negative imposed discipline	71.3	58.5	53.4
11. Implementing supervisory/managerial practices to prevent need for corrective (imposed) discipline	71.6	57.4	56.9
12. Identification of causes of employee behavioral problems	72.5	61.8	47.4
13. Awareness of methods available to identify causes of behavior problems	74.5	65.1	--
14. Recognition of symptoms of problems	77.4	71.6	54.1
15. Awareness of causes of deteriorating discipline	72.5	67.2	55.7
16. Understand actions to be taken to determine causes of deterioration in discipline	72.0	56.1	33.9
17. Knowledge of informal disciplinary action	80.4	76.1	49.8
18. Understanding of correct procedures to accomplish informal disciplinary action	79.4	67.7	--
19. Ability to conduct an effective disciplinary interview	75.5	56.2	46.7
20. Correct use of the letter of reprimand	66.7	36.1	--
21. Understanding of employee grievance procedures in relation to disciplinary action	71.6	70.3	--
22. Understanding of the roles of the parties involved in a grievance action	74.5	71.9	--
23. Awareness of documentation and administrative requirements for a disciplinary action	87.2	78.5	--
24. Knowledge of how to take a minor adverse action	77.4	67.7	--
25. Awareness of process for appeal of minor adverse action	68.6	75.4	--
26. Understanding of the supervisor/manager's role in processing appeals for minor adverse actions	70.6	70.3	--
27. Ability to prepare a letter of proposal to take an adverse action	75.5	62.5	--
28. Understanding of how to undertake a major adverse action	74.2	58.7	--
29. Understanding of process for appeal of a major adverse action	68.3	59.4	--
30. Awareness of the supervisor/manager's responsibilities with respect to employee behavioral problem in finance, alcohol abuse, and political activity	--	--	--
31. Knowledge of the FAA Ethical Conduct Program	77.4	72.7	--
32. Awareness of supervisor/manager's responsibilities in the Ethical Conduct Program	65.7	72.7	--
33. Awareness of investigative/security resources available	65.3	70.8	--
34. Use of investigative/security services	70.7	63.1	--
	50.5	47.0	--

^aItems are listed as presented in questionnaire provided to graduates. See Appendixes for corresponding wordings used in the questionnaires given to superiors and supervisees. Where no corresponding item was used, a dash is inserted in the table.

There were two areas of performance, knowledge of informal actions (#17), and awareness of documentation and administrative requirements for disciplinary action (#23), that were rated as improved by more than 80 percent of the respondents. Another eight factors were rated as improved by more than 75 percent of the graduates, but these did not cluster in any particular behavioral area. They included understanding employee motivation (#1), understanding supervisory responsibilities for discipline in general (#4), recognition of problems (#14), understanding informal discipline procedures (#18), ability to conduct an effective disciplinary interview (#19), knowing how to take minor adverse actions (#24), preparation of letters proposing adverse action (#27), and awareness of supervisory responsibilities for certain behavioral problems such as alcoholism (#30).

The three behavioral items least likely to be rated as improved were understanding the relation of discipline to other FAA programs (#5), understanding the relation of discipline to organizational goals (#9), and use of investigative/security services (#34). However, in each case at least 50 percent of the respondents did report increased effectiveness in themselves.

There was one item, awareness of the appeal process (#25), for which the ratings differed across the FAA services according to chi-square test ($p < .05$). In this case, 80.0 percent of the AF and FS/O graduates but only 52.4 percent of the AT graduates reported improved functioning.

There were no differences in behavioral ratings as a function of location of the graduate.

b. Assessment by Immediate Superiors (N = 69).

Immediate superiors less frequently observed behavioral change in graduates than graduates did themselves (Table 20). The difference between the mean rating of immediate superiors at 65.9 percent and graduates at 72.8 percent was significant ($p < .01$)².

The areas in which immediate superiors most frequently noted improvement were in understanding management style (#2), awareness of FAA policy and philosophy of discipline (#3), knowledge of informal actions (#17), and awareness of documentation and administrative requirements (#23). Each of these behavioral areas was rated as improved by more than three-fourths of the respondents.

The two factors least likely to be seen as improved were the correct uses of the letter of reprimand (#20) and appropriate use of investigative/security services (#34). In each case less than 50 percent of the superiors felt that the graduates had shown improved performance.

Diminished performance in graduates was noted by at least one immediate superior for all but seven areas; however, no more than two such ratings were made for any one area.

There was a cluster of three behavioral items concerning adverse actions for which the frequency of improvements noted in the performance of graduates differed for immediate superiors from the various FAA services according to chi-square analysis. Both AT (77.8 percent) and AF (65.0 percent) superiors more frequently reported improvement ($p < .05$) on ability to prepare a proposal letter for an adverse action (#27) than FS/O (35.3 percent) superiors. Likewise, AT (74.1 percent) and AF (65.0 percent) graduates were also more likely to be judged ($p < .01$) by their immediate superiors as having improved in their understanding of how to take a major adverse action (#28) than was the case for the ratings by the immediate superiors of FS/O graduates (25.0 percent). This pattern was also present concerning understanding of the appeal process. For a major adverse action (#29), 71.4 percent of the AF, 66.7 percent of the AT, and 31.2 percent of the FS/O superiors reported improved functioning on the part of graduates ($p < .05$). This pattern suggests that the segment of the course concerned with these processes had little impact on graduates outside of the two largest FAA services.

c. Assessment by Supervisees (N = 64).

As in the other courses, supervisees less frequently reported change (Table 20) than either graduates ($p < .01$)² or their superiors ($p < .01$)². The average proportion of supervisees noting improved performance was 48.4 percent.

Diminished performance by graduates was reported by two or more supervisees on each of the behavioral items and averaged 3.75 such ratings per item. This frequency is substantially higher than the corresponding values for the two courses already discussed but not as high as that for the ME course. The highest number of such ratings (seven) was given to the item concerning ability to identify causes of employee problems (#12). Since this area of performance was also rated as improved in a substantial number of cases, it suggests that the course may have had some effect in both directions, depending on the individual supervisor being trained.

For half of the performance areas, at least 50 percent of the supervisees reported improved performance by graduates. The behavior most frequently reported as improved was the implementation of practices to prevent need for corrective discipline (#11). Three other areas of functioning, encouragement of self-discipline (#10), recognition of discipline problems (#14), and awareness of causes of deterioration in discipline (#15) were also judged to have improved rather frequently.

Only a third of the supervisees reported that graduates were more effective in taking appropriate action to determine causes of deterioration in discipline (#16) or in relating discipline to organizational goals (#9).

There were no differences in the response tendencies of supervisees in different locations; however, AT respondents did differ from FS/O supervisees in their judgments on two areas and from AF supervisees on one performance

area. The behavior on which the judgments of the AT group differed from both of the other groups by chi-square test ($p < .05$) concerned the implementation of supervisory practices to prevent need for corrective discipline (#11). A total of 85.0 percent of those in AT, 52.4 percent in AF and 29.4 percent of the FS/O group indicated that some improvement had occurred in this area. With respect to viewing discipline as a positive factor instead of a means of punishment (#6), 75.0 percent of the AT, 50.0 percent of the AF, and 26.3 percent of the FS/O supervisees reported improvement by their supervisors. In this case only the difference between the AT group and the FS/O group was significant ($p < .05$).

d. Comparing the Three Sets of Ratings.

As usual, graduates were most likely to report improved effectiveness (73 percent) than were immediate superiors (66 percent, $p < .05$)² and supervisees (48 percent, $p < .01$)².

The correlation between the rankings of the frequencies of reported behavioral change was negligible between graduates and either immediate superiors ($r_s = .23$) or supervisees ($r_s = .01$). In other words, there was no notable correspondence between the groups in the relative frequency with which they reported improved in supervisory behaviors.

The three groups did not unanimously agree on any of the most improved or least improved areas of functioning. Graduates and their immediate superiors tended to see improvement more frequently in awareness of informal approaches to discipline and documentation requirements in discipline. Graduates and supervisees tended to feel relatively frequently that improvement had occurred in recognition of the symptoms of discipline problems.

With respect to the areas of least change, graduates and immediate superiors tended to see little increased effectiveness in the use of investigative/security services within the agency, while graduates and supervisees saw relatively little change in ability to relate the discipline program to FAA organizational goals.

4. Impact on the Unit.

As for the other courses, both graduates and supervisees most frequently noted improvement in supervisor-employee interactions, followed by improvements in efficiency, job satisfaction, and morale (Table 21). However, the agreement in ratings between the graduates and supervisees was somewhat less than for the other three courses.

The biggest difference was on the item concerning interaction with employees. About 80 percent of the graduates felt that improvement had occurred in this area but not quite one-half of the supervisees felt the same way. On this item chi-square analysis revealed that there was a marked

TABLE 21. Percentage of Graduates and Supervisees Rating Conditions in Their Unit as Improved After Attendance of Graduate at CD Course

Item	Graduate (N=102)	Supervisee (N=64)
Unit Efficiency	59.4	45.3
Employee Job Satisfaction	38.6	31.2
Employee Morale	38.6	29.7
Supervisor's Interaction With Employees	80.2	48.4

difference between the responses of supervisees in the different services ($p < .01$). Supervisees in the AT service were much more likely (77.3 percent) to report improved interactions than were those in the AF (26.1 percent) or FS/O (42.1 percent) services. Closest agreement was found on the job satisfaction and employee morale items where about a third of the respondents in both groups reported some improvement.

Ratings of lessened quality in unit conditions were rare for both graduates and supervisees. The greatest number (6) of such reports were made by supervisees on the morale item, otherwise no more than three such ratings were given to any item by supervisees or by graduates.

D. ME Course.

1. General Evaluation by MTS Graduates (N = 98).

a. Open-Ended Questionnaire. According to the graduates of the ME course, the most helpful aspect of the course was the opportunity to gain additional knowledge and understanding of various aspects of management (Table 22). Under this general framework frequent mention was made of the value of the review of general management principles, human relations, and team action concepts. There were also several statements concerning personal growth and the opportunity to work through managerial problems with others.

TABLE 22. Summary of Statements Indicating the Most Helpful Aspects of the ME Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=26)	AT (N=35)	FS (N=18)	O (N=18)	Number of Responses	Percent of Total ^b
Increased knowledge and Understanding	28	33	29	23	113	55
General Management Principles	10	10	7	13	40	20
Understanding Employees/Human Relations	5	6	4	3	18	9
Team/Group Action	3	5	7	1	16	8
Other	10	12	11	6	39	19
Personal Growth	5	15	7	8	35	17
Working Through Management Problems With Others	7	16	4	3	30	15
Miscellaneous	6	8	2	11	27	13

^aAF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

^bSum of percentages may vary slightly from total due to rounding error.

There was no particular consensus about the aspects of the ME course most in need of improvement (Table 23). The general area of course content received the most attention. Within the course content category, the most frequent recommendation was to increase the emphasis on teaching specific management skills such as Management by Objectives (MBO) or budgeting. There were also several requests for more on current management theory and philosophy. No other types of comments occurred with notable frequency.

TABLE 23. Summary of Statements Indicating Areas of Needed Improvement in the ME Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=26)	AT (N=35)	FS (N=18)	O (N=18)	Number of Responses	Percent of Total
Course Content	15	13	8	17	53	43
Modify Course Approach	7	13	9	8	37	30
More practical emphasis	1	4	4	3	12	10
Other	6	9	5	5	25	20
Leave Course As Is	3	5	2	1	11	9
Improve Instructors	1	4	2	3	10	8
Miscellaneous	2	5	0	5	12	10

^a
AF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

b. Usefulness of the ME Course. The ME course was given an overall rating of at least moderately useful by 88.5 percent of the graduates. Only one graduate felt it had been of no value.

2. Evaluation of Course Content.

An average of 75.8 percent of the respondents rated the course topics of moderate or better use. This was the highest value for the four courses and was significantly ($p < .05$)² above the values for the PIP/PER and LMR courses.

There were on the average more extreme positive ratings (between 8 and 9 per item) than extreme negative ratings (about 5 per item). The frequencies of the positive ratings were somewhat greater than was the case for the CD and PIP/PER course and about the same as for the LMR course. The negative ratings occurred about as frequently as in the PIP/PER and CD courses, and less often than for the LMR course.

There were four topics that were rated differently by managers in the various FAA services and one that differed as a consequence of location. These differences are discussed below.

a. Team Approach to Managerial Effectiveness. Both of the topics taught under this subject, Concept of the Team Approach and Characteristics of

Effective Teamwork, were rated as at least moderately useful by more than 85 percent of the graduates (Table 24).

TABLE 24. Usefulness Ratings of ME Course Content

Content Area	Percent rating Moderate, quite, or very useful
Team Approach to Managerial Effectiveness	86.5
Characteristics of Effective Teamwork	87.1
Concept of Team Approach	85.9
Management Communication	85.7
Role of Managers in Communication	90.5
Factors in Failure of Distortion of Communication	84.9
Communication Theory	81.5
Management Philosophy	83.3
Group Influence on Decision Making	81.6
Group Problem Solving	87.1
Group Dynamics	82.1
Process in Groups	81.8
Content in Groups	75.3
Management Theory	76.0
Management Style	80.4
Current Theoretical Approaches to Management	71.6
Transactional Analysis (TA)	73.4
TA Analysis of Managerial Interactions	74.7
TA Theory	72.1
FAA Goals and the Formulation Process	70.7
Development of Goals	75.5
Resources Utilization	74.5
Goals Oriented Approach to Planning and Operations	72.9
Management of Goal Achievement	71.3
DOT/FAA Goals	59.4
Assessment Process	49.2
Approaches to Assessment	52.8
Operating Assessment Centers	45.7

b. Management Communication. This unit contained the most highly rated topic of all those in this course, the Manager's Role in Communication, as more than 90 percent of the graduates felt this area to be at least moderately useful. The remaining two areas reviewed, Factors in Communication Failure and Communication Theory, were also well regarded by more than 80 percent of the respondents.

c. Management Philosophy. This unit contained only one topic and it was judged moderately or more useful by more than 80 percent of the respondents.

d. Group Influence on Decision Making. Three of the four topics in this unit were rated as at least moderately useful by 80 percent or more of the graduates. These were Group Problem Solving, Group Dynamics, and the Group Process. The remaining area, Content in Groups, was judged somewhat less useful than the preceding topics but was still rated as moderately useful by three-fourths of the graduates.

The responses to the three most highly rated presentations in this unit were found to vary by chi-square test according to the FAA service of the respondents. On the two discussions of Group Dynamics and Processes in Groups,

approximately 91 percent of the AF and FS/O groups, but only 66 percent of the AT group gave ratings of at least moderate usefulness ($p < .05$). For the Group Problem Solving topic, all of the AF managers gave ratings of moderate or more utility, while 86 percent of the FS/O and 79 percent of the AT groups rated the subject at the same level ($p < .05$).

e. Management Theory. The presentation on Management Style was judged to be of moderate or better utility by 80 percent of the graduates. The material on Theoretical Approaches to Management was given this high a rating by about 72 percent of the respondents.

f. Transactional Analysis. Both the Theory of Transactional Analysis and Application of Transactional Analysis to Managerial Interactions were seen as at least moderately useful by approximately three-fourths of the graduates.

Transactional Analysis theory was seen as more useful ($p < .05$) by those in the RO and FF groups (78.3 percent and 74.5 percent, respectively) than by HD managers (50.0 percent).

g. FAA Goals and the Formulation Process. Of the five topics in this unit, four were judged to be at least moderately useful by 70 percent or more of the graduates. The sessions on Development of Goals and Resource Utilization were the most highly rated areas. One area, the presentation on DOT/FAA goals, was rated substantially below the others in usefulness, as only about 60 percent of the respondents felt this area was at least moderately useful.

The presentation on Resource Utilization was rated as moderately or more useful by more AF managers (96.0 percent) than by FS/O (74.3 percent) or AT (58.8 percent) managers according to chi-square analysis ($p < .05$).

h. Assessment Process. As noted above, this unit was clearly the least well regarded of the course. The two topics in this block were the lowest rated in the course as just more than half the respondents reported moderate or better utility for the discussion of Approaches to Assessment (53 percent) and only 46 percent felt the same about the topic of Operating Assessment Centers. Both of these topics were judged of no use by a substantial number (13 and 17 respectively) of the respondents.

3. The ME Course and Supervisory Behavior.

a. Self-Assessment (N = 98).

(1) Most important changes. When graduates were asked to indicate changes that had resulted from attending the ME course (Table 25), 39 percent of the responses concerned some aspect of increased knowledge and better application of various management skills to the management situation.

The specific aspect of such skills mentioned most often was improved communications (14 percent). The other factors, also mentioned with some frequency by graduates of the other three recurrent courses, were personal growth (16 percent), improved human relations (15 percent), and improved general managerial skills (14 percent). On the less positive side, another 15 percent felt the course had resulted in no noticeable beneficial changes in their managerial behavior.

TABLE 25. Summary of Statements Concerning Specific Changes in Supervisory Behavior
Resulting from Attendance at ME Course

Type of Statement	Number of Responses by Service ^a				Totals	
	AF (N=26)	AT (N=35)	FS (N=18)	O (N=18)	Number of Responses	Percent of Total ^b
Increased knowledge of specific application of managerial programs to management situations	16	14	15	12	57	39
Communications	5	6	4	5	20	14
Other	11	8	11	7	37	25
Personal growth	5	10	5	3	23	16
Increased understanding of and improved human relations	1	9	5	7	22	15
No changes reported	6	8	2	6	22	15
Improved general managerial skills	8	7	2	4	21	14
Miscellaneous	0	1	0	2	3	2

^a AF - Airway Facilities
AT - Air Traffic
FS - Flight Standards
O - Other

^bSum of percentages may vary slightly from total due to rounding error.

(2) Behavioral ratings. There were 27 behavioral items rated by the graduates (Table 26). On the average, 67.7 percent of the graduates felt that improvement in performance had resulted from attending the course. An average of less than two respondents (1.8) per area reported diminished functioning.

Several behavioral items were rated as improved by 80 percent or more of the graduates. These related to understanding one's own management philosophy (#3), understanding interpersonal relations (#4), understanding group dynamics (#6), identifying sources of conflicts in groups (#7), and the four items concerned with communication behaviors (#13,14,15,16).

Another six areas of performance were rated improved by at least three-fourths of the graduates. These were in the ability to relate management

TABLE 26. Percentages of Respondents in Graduate, Immediate Superior, and Supervisee Groups Reporting Change in Supervisory

Behavior of Graduates of ME Course		Graduates (N=98)	Immediate Superiors (N=60)	Supervisees (N=82)
Item ^a				
1. Relating management theory to your own supervisory/managerial situation		79.2	--	--
2. Employing concepts such as Reddin's 3-D Theory in your day-to-day functioning as a supervisor/manager		40.0	58.1	--
3. Identifying and evaluating your own personal supervisory/managerial philosophy		84.4	--	--
4. Understanding your interpersonal relations with your superiors, peers, and subordinates		83.5	80.0	52.4
5. Identification of personal leadership patterns that lead to problems with employees		71.9	61.7	41.5
6. Understanding the dynamics that operate in groups		81.2	75.9	--
7. Identification of sources of conflicts in groups		81.0	64.9	41.5
8. Development of group action in problem solving and implementation of solution		68.8	71.9	42.7
9. Understanding DOI/FAM agency-wide goals		39.2	66.1	--
10. Developing viable unit goals based on national goals		41.9	50.9	50.0
11. Establishing achievement indicators for unit goals		48.4	41.5	41.5
12. Identification of problem-solving alternatives and strategies in your unit		68.8	64.9	48.8
13. Improved managerial communication through self-analysis		82.5	66.1	52.4
14. Understanding emotional and personal factors which lead to failures or distortions in communications		84.4	51.8	49.4
15. Employing effective feedback principles in dealing with employees		82.5	72.4	43.9
16. Understanding your role as a supervisor/manager in the communication process within your unit		79.4	76.7	--
17. Understanding concepts of assessment centers		37.8	46.0	--
18. Can participate effectively in the assessment process		29.2	44.7	--
19. Effect proper utilization of resources in goal achievement		53.2	73.7	--
20. Direct subordinate's efforts in initiating, organizing, and accomplishing task		76.8	63.2	49.4
21. Seek and initiate appropriate changes when such changes will result in a more effective organization		71.9	70.7	60.0
22. Express directives and assignments in a clear and understandable manner		67.0	63.8	51.8
23. Through use of communication skills, able to motivate employees toward taking action and/or modifying behavior		71.9	65.5	37.8
24. Use the "team concept" in decision making		78.7	49.1	50.0
25. Provide effective feedback to others and elicit the same from them		77.3	69.5	44.4
26. Treat each employee as an individual with specific and unique needs		76.6	83.3	53.1
27. Provide opportunities for the growth and development of employees within the job		71.9	63.2	50.6

Items are listed as presented in questionnaire provided to graduates. See Appendixes for corresponding wordings used in the questionnaires given to superiors and supervisees. Where no corresponding item was used, a dash is inserted in the table.

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theory to the managerial situation (#1), understanding of the role of managers in communications (#16), direction of subordinates on work tasks (#20), use of team concepts (#24), providing and eliciting feedback (#25), and treating employees as individuals (#26).

There were six performance areas for which less than half the respondents noted beneficial change. One of these was the application of the 3-D theory to day-to-day management (#2). Three of them concerned goals: understanding DOT/FAA goals (#9), developing appropriate unit goals (#10), and developing achievement indications for goals (#11). The area least frequently reported as improved concerned assessment centers. Only 38 percent of the graduates felt their understanding of assessment center concepts (#17) was improved and 29 percent felt the same about their ability to participate effectively in such centers (#18).

There was only one behavioral assessment on which the graduates from the various FAA services differed in their ratings. This concerned the understanding of the manager's role in the communication process within the unit (#16). Chi-square analysis showed that of those in the FS/O group, 88.9 percent reported improvement, while 75.0 percent and 72.0 percent of the AT and AF groups felt improvement had occurred ($p < .05$).

There were two areas where the ratings differed by location. Clearly, more of those in the HD and RO groups ($p < .05$) felt their understanding of assessment center concepts (#17) had improved (50.0 and 61.1 percent respectively) than did those in the FF group (26.1 percent). The ability to participate effectively in the assessment center process (#18) was judged improved by 58.8 percent of the RO group, 23.9 percent of the FF group, but none of the HD group ($p < .01$). It is curious that although several HD managers were able to report improved understanding of the assessment center process, none felt that they had become better at participating in the process.

b. Assessment by Immediate Superiors (N = 60). The behavioral ratings of performance improvement by immediate superiors were slightly lower than the changes reported by the graduates themselves, as the average proportion noting improved performance was 64.4 percent.

The areas in which immediate superiors were most likely to report improved performance were understanding interpersonal relations (#4), understanding group dynamics (#6), understanding the manager's role in the communication process (#16), and the recognition of individual needs (#26). For the areas, #4 and #26, more than 80 percent of the immediate superiors judged graduates improved after MTS. For the other two over 70 percent of the immediate superiors gave the same high ratings.

The behavioral areas least likely to show improvement according to immediate superiors were those concerned with understanding the assessment center concept (#17), effective participation in assessment centers (#18), and

using the "team" concept (#24). Between 45 and 50 percent of these ratings reflected improvement.

Diminished performance in graduates was noted by an average of only one (.96) immediate superior per area and never by more than three.

There was one area that immediate superiors from the various FAA services rated differently. On the development of group action in problem-solving (#8), 88.5 percent of the AT, 66.7 percent of the AF, and 50.0 percent of the FS/O superiors reported improvement in their managers after the ME course. There were statistically significant differences according to chi-square analysis ($p < .05$).

There was also one area, use of the "team concept" (#24) for which ratings of immediate superiors varied as a function of location ($p < .05$). In this case, 63.6 percent of the immediate superiors from the RO, 50.0 percent from the FF, and none of the HD group reported improved effectiveness.

c. Assessment by Supervisees ($N = 82$). The behavioral ratings by supervisees (Table 26) were comparable to the ratings obtained from super-visees concerning the effectiveness of the PIP and CD courses. An average of 47.7 percent of the supervisees reported improved performance in the managers who had attended the ME course. This value was significantly lower than the corresponding values obtained by graduates ($p < .01$)² and by superiors ($p < .01$)².

In only the one area, that of initiating appropriate changes to improve organizational effectiveness (#21), did as many as 60 percent of the super-visees report performance improvement in graduates. An additional seven behavioral areas were judged improved by at least 50 percent of the respondents. These included relations with employees (#4), developing viable unit goals (#10), improved communications (#13), expressing directives and assignments in a clear fashion (#22), use of the team concept in decision making (#24), treating employees as individuals (#26), and providing opportunities for employee growth and development on the job (#27).

The area least frequently judged to show improvement was concerned with the ability to motivate employees (#23) as 38 percent of the supervisees felt their supervisors had improved in this respect. Just over 40 percent reported improvement in changing ineffective leadership patterns (#5), identification of sources of conflict in groups (#7), and establishing achievement indicators for goals (#11).

An average of almost five (4.7) supervisees reported diminished functioning for each area. The area with the greatest number of such ratings (9) concerned providing and eliciting effective feedback (#25). Eight supervisees felt that graduates were less effective in using the "team concept" in decision making (#24) after returning from the ME course.

There were no differences between the ratings of supervisees as a function of either FAA service or location.

d. Comparing the Three Sets of Ratings. Graduates and immediate superiors reported about the same frequency of change on the average (68 percent for graduates, 64 percent for immediate superiors). As was true for the PIP/PER and CD courses, supervisees reported the least amount of changed behavior in graduates (48 percent). The difference between graduates and their immediate superiors was not significant, while the differences between these two groups and supervisees were highly significant ($p < .01$ for each comparison)².

The rankings of the behaviors by frequency of observed change for graduates and immediate superiors showed a modest relationship ($r_s = .44$, $p < .05$). There was no significant correspondence between rankings for graduates and supervisees.

All three groups frequently reported improvements on the part of the graduate in the area of understanding interpersonal relationships. Graduates and immediate superiors felt understanding and management of group dynamics was often improved; however, this judgment was not shared by supervisees as this was an area where they were least likely to report improvement. Graduates and their immediate superiors also tended to report relatively frequent improvement in understanding of the manager's role in the communication processes with organizational units. Graduates and supervisees both tended to feel that improvement was present in the manager's ability to communicate with others.

The area where little improvement was noted by both graduates and immediate superiors was that of assessment center operation. This was, as was noted earlier, the area of the course felt to be least useful by graduates. Graduates and supervisees agreed in reporting relatively infrequent change in establishing achievement indicators for unit goals.

4. Impact on the Unit.

Graduates of the ME course most often felt, as did those from the other recurrent courses, that the greatest impact on the unit was in improved interaction with employees (Table 27), as approximately three-fourths of these managers reported this effect. Supervisees also were more likely to report this change than any other; however, the proportion reporting improved interaction was just above one-half of the supervisee group.

Unit efficiency was judged improved by nearly two-thirds of the graduates and about one-half the supervisees. In the area of job satisfaction among employees, one-half the graduates but only a third of the supervisees noted improvement. Employee morale was least likely to be changed, a pattern observed in the other courses as well.

TABLE 27. Percentage of Graduates and Supervisees Rating Conditions in Their Unit as Improved After Attendance of Graduate at ME Course

Item	Graduate (N=98)	Supervisee (N=82)
Unit Efficiency	62.5	51.2
Employee Job Satisfaction	50.0	36.6
Employee Morale	30.9	35.3
Supervisor's Interaction With Employees	74.5	52.4

Ratings of deterioration of conditions within the unit were not common as only one graduate reported lessened job satisfaction in employees and two reported lowered morale since attending MTS. For the supervisees, such reports were somewhat more frequent as two respondents reported poorer interaction with the graduate managers, six felt job satisfaction had decreased, and nine indicated that morale in the unit had diminished after the manager's attendance at the ME course. This rating by nine persons was the highest number of reported deterioration in conditions for any of the four recurrent courses.

No differences in responses to these items were found for FAA services or locations.

IV. Conclusions.

There is considerable uniformity to the findings from this survey of the MTS recurrent courses. On the whole, each course was seen as beneficial to the functioning of its graduates. This perception was shared by the graduates themselves, by their immediate superiors, and to a somewhat lesser, but still notable degree, by their supervisees. In other words, it appears that the recurrent training program is accomplishing its purpose insofar as that purpose is to improve the perceived behavioral effectiveness of the agency's supervisors and managers in the specific areas covered by the courses.

Although each of the courses is directed toward a specific area of supervisory functioning, it should also be noted that many of the graduates report general benefits from attendance. In particular, these include personal growth, a better understanding of one's self and others, and a better sense of the general supervisory task.

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While the evaluations of the effectiveness of the four courses are more alike than different, the evaluation of the LMR course diverged in some notable ways from the assessments of the other three courses. First, the LMR course was judged to have the most behavioral impact of any of these courses. This was particularly true of the assessments by supervisees. Second, although the course as a whole was judged to be very useful, particularly in the area of grievances, it also contained material, specifically on contract negotiations, that was seen as having very little value. In fact, the ratings on the contract negotiation topics were by far the lowest of any obtained for all the courses. Certainly if one were looking to modify this course, this is an instructional unit that should receive priority attention. Finally it should be noted that while the behavioral impact of this course was the most notable of the four, i.e., graduate supervisors apparently became more adept at handling union-related matters after attending the course, the impact on conditions within the unit was no greater, and perhaps somewhat less than for the other courses. The data on the LMR course provide no clear indications as to why the relatively strong improvement in supervisory effectiveness in the LMR area is not particularly associated with similarly improved interpersonal relationship between supervisor and employees, unit efficiency, job satisfaction, or morale. Perhaps it has something to do with the nature of the union presence in the agency; i.e., that improved ability to deal with union matters simply has a focused effect on LMR aspects of work and this ability is not as, or at least no more, relevant to the general work factors mentioned above than it is in the other courses.

There is not much else that needs to be said about the other three courses that is not already apparent within the body of the findings. The exposure in the CD course to conceptualizations of discipline that are alternatives to punishment seems particularly valuable to supervisors. Management philosophy and team action were the most valued presentations in the ME course. The various areas within the PIP/PER course are rated with a considerable degree of uniformity; nothing was reported as strikingly more or less useful than any other area, with the one minor exception of the discussion on the relation of PIP/PER to other FAA programs. However, even this area was viewed as useful by more than half the respondents.

As for weaknesses in these courses, the only specific areas not already mentioned that may be of questionable value are those concerned with assessment centers in the ME course and certain aspects of ethical conduct as presented in the CD course. In a more general sense there was feeling by some graduates of each course that a more practical emphasis is needed in the presentation.

The specific impact of the courses on behavior was most noticeable in a few areas. For the PIP/PER course, it was an increased understanding of the effects of various supervisory/managerial styles on employees that showed the most frequent gain. For the LMR course, it seems that ability to handle grievances was most enhanced. The CD course opened up alternative approaches

to discipline, and particularly, enabled graduates to shift away from imposed to self-discipline approaches. The major behavioral contribution of the ME course was probably in the area of improved communications processes.

In considering the meaning of any evaluative survey such as this, the question of the accuracy of the findings must be considered. Does this evaluation appropriately represent the effectiveness of MTS recurrent training? Several characteristics of the data suggest an affirmative answer. First, the overall tenor of the findings is consistent both within and between courses, between types of respondents (graduates, immediate superiors, and supervisees), and between different aspects of the FAA organization. However, within this overall consistency are the specific variations that suggest that the judgments provided by respondents were reasonably considered. The ratings of the presentations on contract negotiations in the LMR course are a case in point. Furthermore, there were several differences between the respondents from different services and locations that suggested that there were appropriate variations in attitudes about certain aspects of these courses. Thus, it seems reasonable to conclude that this survey provides a satisfactory estimate of the reaction of agency personnel to the MTS recurrent training program. It is clear that the reaction is by most accounts a favorable one.

In sum, each of the recurrent training courses appears to be providing a useful service to FAA supervisors and managers. While some modifications to the courses may be in order, it seems that the basic goal of improving the performance of those in leadership positions within the agency is being met by this program.

References

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2. Martin, H. O.: The Assessment of Training, PERSONNEL MANAGEMENT, 39:88-93, 1957.
3. Smith, R. C., B. Rana, and D. K. Taylor: An Evaluation of the Effectiveness of the FAA Management Training School. FAA Office of Aviation Medicine Report No. FAA-AM-75-9, 1975.

Appendixes

These appendixes contain the questionnaires used in the evaluation. Appendix I contains the questionnaires provided graduates of the four courses. Appendix II includes the questionnaires sent to immediate superiors of graduates and Appendix III contains the questionnaires sent to supervisees. In each appendix the cover letters and demographic forms are shown only once.

**DEPARTMENT OF TRANSPORTATION
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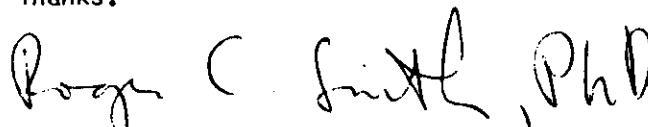
DATE: _____
IN REPLY REFER TO: AAC-118
SUBJECT: Evaluation of MTS Recurrent Training

FROM: Chief, Clinical Psychology Research Unit, AAC-118
TO: Participating Supervisors

Here is the questionnaire about the Management Training School's (MTS) Recurrent Training Program discussed with you recently by phone. Also enclosed is the questionnaire for your immediate supervisor. The questionnaire for your employee has been mailed directly to him or her.

We appreciate your willingness to help us with this evaluation. When you have completed the questionnaire, return the answer sheet in the enclosed envelope.

Thanks.


ROGER C. SMITH, PH.D.

3 Enclosures

MTS

Recurrent Course

Questionnaire

Instructions

1. Do NOT put your name on this questionnaire. We are interested in your frank and candid responses to the items; therefore, this survey is entirely confidential and anonymous.
2. The questionnaire consists of rating scales and a few open-ended questions. Work quickly--use your first impression to answer questions.
3. Use the enclosed answer sheet to mark your responses. Fill in the space corresponding to your choice of answer with a pencil. If you do change your mind, erase thoroughly.
4. When you are finished, please place the questionnaire in the enclosed postage-paid envelope and mail it directly to the address on the envelope.
5. If you have any questions, please call:

Dr. Roger C. Smith, AAC-118
FAA-CAMI
P.O. Box 25082
Oklahoma City, Oklahoma 73125

Telephone: (405) 686-4846
FTS Number: 732-4846

Information Sheet

Age _____ M _____ F _____ GS level _____ or Wage Grade (WG) level _____

FAA Program: AF _____ AT _____ GS _____ Other (specify) _____

Present position (sector manager, team supervisor, assistant chief, branch chief, etc.):

Present location (check one):

Washington headquarters _____

Regional office _____

NAFEC _____

Aerocenter. _____

Field office/facility (specify office/facility type). _____

Total FAA experience (years and months). _____

FAA supervisory/managerial experience (years and months) _____

Time in present position (years and months). _____

MTS attendance (indicate the number you have attended) _____

Basic course:

Supervisory (month/year) _____

Managerial (month/year) _____

Refresher course:

Supervisory (PIP/PER) Recurrent (month/year) _____

Labor-Management Relations (month/year) _____

Constructive Discipline (month/year) _____

Management Effectiveness (month/year) _____

Some general questions--please list up to three responses per question.

In what ways was the course most helpful to you?

- 1) _____

- 2) _____

- 3) _____

In what ways could the course have been more helpful?

- 1) _____

- 2) _____

- 3) _____

In what ways has this course specifically changed your supervisory/managerial behavior?

- 1) _____

- 2) _____

- 3) _____

What major improvements would you recommend for this course?

- 1) _____

- 2) _____

- 3) _____

PIP/PER COURSE
(Supervisory Recurrent)

1. In general, how useful was this MTS course?

- a. very
- b. generally
- c. moderately
- d. slightly
- e. not at all

USE THE FOLLOWING SCALE FOR ITEMS 2-6.

To what extent have conditions in your unit changed as a result of your attendance at this MTS course?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

2. with respect to efficiency

3. employee job satisfaction

4. employee morale

5. your interaction with employees

6. your understanding of the supervisory/managerial role

USE THE FOLLOWING SCALE FOR ITEMS 7-9.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

7. working for the FAA

8. being a supervisor/manager

9. your current position as a supervisor/manager

USE THE FOLLOWING SCALE FOR ITEMS 10-31.

Please rate the following specific course content areas in terms of the usefulness of each to you in your present position.

- a. not at all useful
- b. slightly useful
- c. moderately useful
- d. quite useful
- e. extremely useful

If you do not remember a subject, leave the space for the item blank.

Management Theory

- 10. Current theoretical approaches to supervision and management
- 11. Management style
- 12. Management theory applied to performance improvement

Communication

- 13. Theory and principles of human communication
- 14. Application of communications principles in work settings
- 15. Communication and managerial style
- 16. Application of communication principles of PIP/PER review sessions

Performance Improvement Program (PIP)

- 17. The philosophy of PIP
- 18. Relation of PIP to other FAA programs
- 19. Development of major job assignments (MJA's)
- 20. Measuring the results expected from employees

Counseling

- 21. Review of principles of employee counseling

Performance Appraisal (PER)

- 22. Purposes of appraisal
- 23. Methods of appraisal
- 24. Problems in appraisal
- 25. Philosophy of appraisal
- 26. Establishing performance ratings
- 27. Relationship of appraisal to other FAA programs
- 28. Purposes of the PER
- 29. Use of the PER
- 30. Approaches to discussing appraisals with employees
- 31. PER appeals process

USE THE FOLLOWING SCALE FOR ITEMS 32-68.

To what extent has your attendance at this MTS course changed your effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

- 32. Understanding my own supervisory/managerial style
- 33. Understanding the effects of various supervisory/managerial styles on employees
- 34. Relating managerial theory to my current circumstances
- 35. Understanding my motivations as an FAA employee and supervisor/manager
- 36. Understanding the motivation of employees
- 37. Apply principles of communication to relations with employees
- 38. Present information to employees in a clear fashion
- 39. Present information to employees in a helpful manner
- 40. Applying the principles of human relations and communications to the PIP/PER program
- 41. Understand the relationship of PIP to other FAA programs
- 42. Understanding the relation of major job assignments (MJA's) to PIP
- 43. Accurate identification of MJA's
- 44. Establishment of results expected for MJA's
- 45. Effective measurement of results obtained in MJA's
- 46. Attend to employee needs in supervisory/managerial actions
- 47. Appropriate variation in managerial style as circumstances warrant
- 48. Effective conduct of performance review
- 49. Understanding relation of PIP to PER

50. Use of results-oriented approach in performance review
51. Application of appropriate principles and techniques to employee counseling
52. Use appropriate communication techniques during performance reviews
53. Definition of objectives of counseling sessions
54. Understand purpose of employee appraisal
55. Understand effective use of methods for appraisal
56. Awareness of FAA policy on performance appraisal
57. Development of well-defined performance standards
58. Understand requirements for determining acceptable levels of competence
59. Understand the relationship of appraisal to other FAA programs (MPP, EEO, LMR, Awards)
60. Understanding of the PER
61. Ability to properly prepare PER
62. Effectiveness in review of PER with employee
63. Understanding process of appeal of PER
64. Understand supervisor/manager's role in appeal process
65. Understand requirements for denial of within-grade increments
66. Solicitation of employee involvement in development of performance standards
67. Adequacy of the evaluation of employee performance
68. Fairness of the evaluation of employee performance

Labor-Management Relations
(LMR)

1. In general, how useful was this MTS course?

- a. very
- b. generally
- c. moderately
- d. slightly
- e. not at all

USE THE FOLLOWING SCALE FOR ITEMS 2-6.

To what extent have conditions in your unit changed as a result of your attendance at this MTS course?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

2. with respect to efficiency

3. employee job satisfaction

4. employee morale

5. your interaction with employees

6. your understanding of the supervisory/managerial role

USE THE FOLLOWING SCALE FOR ITEMS 7-9.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

7. working for the FAA

8. being a supervisor/manager

9. your current position as a supervisor/manager

USE THE FOLLOWING SCALE FOR ITEMS 10-44.

Please rate the following specific course content areas in terms of the usefulness of each to you in your present position.

- a. not at all useful
- b. slightly useful
- c. moderately useful
- d. quite useful
- e. extremely useful

If you do not remember a subject, leave the space blank for the item.

Background and Overview

- 10. Executive Order 11491
- 11. The FAA policy and philosophy of LMR

Nature of Union/Management Relation

- 12. Types of LMR relations
- 13. Roles of supervisor/managers in LMR

Day to Day Operations in a Union Facility

- 14. Negotiating contracts
- 15. Dealing with unions
- 16. Contract administration
- 17. Unfair labor practices (ULP's)

Management/Labor Relations and Communication

- 18. Employee rights
- 19. Relations when no union recognition has been accorded
- 20. Relations when exclusive union recognition has been accorded
- 21. Relations when rational consultation rights have been accorded

Contract Negotiations

- 22. Action prior to negotiations
- 23. The negotiation process
- 24. Post-negotiation responsibilities

Dealing with Unions on Contract

- 25. Written agreement vs. unwritten understandings
- 26. Roles of management
- 27. Roles of union

Contract Administration

- 28. Understanding contracts
- 29. Administration of contracts

Unfair Labor Practices (ULP)

- 30. Understanding ULP actions
- 31. Procedures for ULP's

Grievances

- 32. CSC guidelines for appeals and grievances systems
- 33. The FAA grievance system
- 34. Negotiated systems
- 35. Nature of grievances
- 36. Union involvement in grievances
- 37. Documenting grievances
- 38. Processing grievances

Arbitration

- 39. Uses of arbitration
- 40. Alternatives to arbitration
- 41. Mechanics of arbitration
- 42. The supervisor/manager's role in arbitration
- 43. The arbitration hearing
- 44. Preparing grievance cases for arbitration

USE THE FOLLOWING SCALE FOR ITEMS 45-89.

To what extent has your attendance at this MTS course changed your effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

- 45. Understanding of Executive Order 11491 on LMR in government
- 46. Knowledge of the rights and restrictions detailed in EO 11491
- 47. Application of the FAA policy and philosophy of LMR to one's own organizational unit
- 48. Understand the meaning of exclusive recognition for unions
- 49. Awareness of the various relationships that can exist between labor and management
- 50. Knowledge of the roles of personnel involved in the LMR process (line, staff, etc.)
- 51. Understanding of the impact of unionization on day to day operation of an organization
- 52. Awareness of communication requirements associated with the presence of labor organizations
- 53. Awareness of problems surrounding the presence of labor organizations
- 54. Analysis and interpretation of contracts
- 55. Ability to execute role of management in contract administration
- 56. Understanding of the union representative's role in administering contracts
- 57. Knowledge of procedures used for handling ULP's
- 58. Knowledge of the requirements for meetings, conferences, and consultations with labor organizations
- 59. Knowledge of procedures to be used in meeting with labor organizations
- 60. Knowledge of requirements and limitations on communication with nonlabor or nonrecognized labor organizations

61. Knowledge of FAA policy on use of government facilities by labor organizations
62. Knowledge of the steps and actions which must be undertaken in leading to negotiations
63. Awareness of negotiating techniques
64. Awareness of means available for resolving differences arising in negotiations
65. Understanding of the role of the supervisor/manager in administering a labor contract
66. Recognition of problem areas in relations with unions under contract
67. Appreciation of the role of the union representative in LMR
68. Knowledge of indicators for evaluating the effectiveness of the labor contract
69. Contract analysis and interpretation
70. Recognition of ULP's
71. Awareness of procedures for processing ULP's
72. Ability to resolve ULP's in a satisfactory manner
73. Understand differences between complaints, grievances, ULP's, and appeals
74. Knowledge of CSC criteria for grievance systems
75. Awareness of the FAA grievance system
76. Knowledge of procedures required in a negotiated grievance system
77. Understanding of the rights of all parties in the grievance system
78. Recognition of grievances
79. Ability to resolve and process a grievance, including the required documentation
80. Awareness of supervisory/managerial responsibility as to notification of union representatives of grievance actions
81. Knowledge of representation rights of employees and union in grievance actions

- 82. Awareness of the grievance format
- 83. Understanding of the arbitration process
- 84. Awareness of available options prior to arbitration
- 85. Ability to recognize and construct the essential elements of issues to be discussed in arbitration
- 86. Awareness of alternatives to arbitration
- 87. Understanding of arbitration procedures
- 88. Ability to prepare a grievance case for arbitration
- 89. Understanding of the supervisor/manager's role in arbitration

Constructive Discipline Course

1. In general, how useful was this MTS course?

- a. very
- b. generally
- c. moderately
- d. slightly
- e. not at all

USE THE FOLLOWING SCALE FOR ITEMS 2-6.

To what extent have conditions in your unit changed as a result of your attendance at this MTS course?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

- 2. with respect to efficiency
- 3. employee job satisfaction
- 4. employee morale
- 5. your interaction with employees
- 6. your understanding of the supervisory/managerial role

USE THE FOLLOWING SCALE FOR ITEMS 7-9.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

- 7. working for the FAA
- 8. being a supervisor/manager
- 9. your current position as a supervisor/manager

USE THE FOLLOWING SCALE FOR ITEMS 10-35.

Please rate the following specific course content areas in terms of the usefulness of each to you in your present position.

- a. not at all useful
- b. slightly useful
- c. moderately useful
- d. quite useful
- e. extremely useful

If you do not remember a subject, leave the space blank for the item.

Human Relations

- 10. Review of motivational theory
- 11. The supervisor's/manager's role in human relations
- 12. The impact of the organizational environment on employee behavior

FAA Policy for Discipline

- 13. The FAA philosophy of discipline
- 14. FAA standards of conduct
- 15. The role of the supervisor/manager in the area of discipline
- 16. Relation of discipline to other FAA programs

Meaning and Purpose of Discipline

- 17. Concepts of positive vs. negative discipline
- 18. Relationship of discipline to employee motivation
- 19. The role of supervisor/manager in preventing the need for corrective discipline
- 20. Identifying potential problem areas

Informal Discipline

21. Available disciplinary actions
22. How to employ informal discipline actions
23. Approaches to the disciplinary interview

Formal Discipline

24. Letter of reprimand
25. Minor adverse actions
26. Major adverse actions
27. Employee appeals system

Other Behavioral Problems

28. Political activities
29. Financial obligations
30. Alcoholic abuse

Ethical Conduct

31. Outside employment/financial interest
32. Gifts, favors, entertainment
33. Supervisor/managerial responsibilities

Investigations and Security

34. Investigative and security resources available to supervisor/managers
35. Supervisory/managerial role in investigative actions

USE THE FOLLOWING SCALE FOR ITEMS 36-69.

To what extent has your attendance at this MTS course changed your effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

- 36. Understanding the motivational factors that relate to work performance
- 37. Understand the factors influencing the management style used by supervisor/managers
- 38. Awareness of FAA policy and philosophy of positive discipline
- 39. Understanding supervisor/manager's responsibilities for discipline
- 40. Understanding the relation of discipline to programs such as EEO and LMR
- 41. Viewing discipline in a positive manner rather than strictly punishment
- 42. Promoting self-discipline in employees
- 43. Understanding the relation of positive discipline to motivational factors influencing employee behavior
- 44. Understanding of the relation of discipline to organizational goals
- 45. Awareness of the contrast between positive self-discipline and negative imposed discipline
- 46. Implementing supervisory/managerial practices to prevent need for corrective (imposed) discipline
- 47. Identification of causes of employee behavioral problems
- 48. Awareness of methods available to identify causes of behavior problems
- 49. Recognition of symptoms of problems
- 50. Awareness of causes of deteriorating discipline
- 51. Understand actions to be taken to determine causes of deterioration in discipline

52. Knowledge of informal disciplinary action
53. Understanding of correct procedures to accomplish informal disciplinary action
54. Ability to conduct an effective disciplinary interview
55. Correct use of the letter of reprimand
56. Understanding of employee grievance procedures in relation to disciplinary action
57. Understanding of the roles of the parties involved in a grievance action
58. Awareness of documentation and administrative requirements for a disciplinary action
59. Knowledge of how to take a minor adverse action
60. Awareness of process for appeal of minor adverse action
61. Understanding of the supervisor/manager's role in processing appeals for minor adverse actions
62. Ability to prepare a letter of proposal to take an adverse action
63. Understanding of how to undertake a major adverse action
64. Understanding of process for appeal of a major adverse action
65. Awareness of the supervisor/manager's responsibilities with respect to employee behavioral problem in finance, alcohol abuse, and political activity
66. Knowledge of the FAA Ethical Conduct Program
67. Awareness of supervisor/manager's responsibilities in the Ethical Conduct Program
68. Awareness of investigative/security resources available
69. Use of investigative/security services

Managerial Effectiveness Course

1. In general, how useful was this MTS course?

- a. very
- b. generally
- c. moderately
- d. slightly
- e. not at all

USE THE FOLLOWING SCALE FOR ITEMS 2-6.

To what extent have conditions in your unit changed as a result of your attendance at this MTS course?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

2. with respect to efficiency

3. employee job satisfaction

4. employee morale

5. your interaction with employees

6. your understanding of the supervisory/managerial role

USE THE FOLLOWING SCALE FOR ITEMS 7-9.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

7. working for the FAA

8. being a supervisor/manager

9. your current position as a supervisor/manager

USE THE FOLLOWING SCALE FOR ITEMS 10-30.

Please rate the following specific course content areas in terms of the usefulness of each to you in your present position.

- a. not at all useful
- b. slightly useful
- c. moderately useful
- d. quite useful
- e. extremely useful

If you do not remember a subject, leave the space for the item blank.

Management Theory

- 10. Current theoretical approaches to management
- 11. Management style

Management Philosophy

- 12. The study of managerial philosophy

Group Influence on Decision Making

- 13. Group dynamics
- 14. Process in groups
- 15. Content in groups
- 16. Group problem solving

FAA Goals and the Formulation Process

- 17. The goals oriented approach to planning and operations
- 18. DOT/FAA goals
- 19. Resources utilization
- 20. Development of goals
- 21. Management of goal achievement

Transactional Analysis

- 22. TA theory
- 23. TA analysis of managerial interactions

Management Communication

- 24. Theory of human communication
- 25. Factors in communication failure and distortion
- 26. Managers role in communication

Assessment Process

- 27. Approaches to assessment
- 28. Operating assessment centers

Team Approach/Organization Effectiveness

- 29. Concept of team approach
- 30. Characteristics of effective teamwork

USE THE FOLLOWING SCALE FOR ITEMS 31-57.

To what extent has your attendance at this MTS course changed your effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

- 31. Relating management theory to your own supervisory/managerial situation
- 32. Employing concepts such as Reddin's 3-D theory in your day-to-day functioning as a supervisor/manager
- 33. Identifying and evaluating your own personal supervisory/managerial philosophy
- 34. Understanding your interpersonal relations with your superiors, peers, and subordinates
- 35. Identification of personal leadership patterns that lead to problems with employees
- 36. Understanding the dynamics that operate in groups
- 37. Identification of sources of conflicts in groups
- 38. Development of group action in problem solving and implementation of solution
- 39. Understanding DOT/FAA agency-wide goals
- 40. Developing viable unit goals based on national goals
- 41. Establishing achievement indicators for unit goals
- 42. Identification of problem-solving alternatives and strategies in your unit
- 43. Improved managerial communication through self-analysis
- 44. Understanding emotional and personal factors which lead to failures or distortions in communications
- 45. Employing effective feedback principles in dealing with employees
- 46. Understanding your role as a supervisor/manager in the communication process within your unit

47. Understanding concepts of assessment centers
48. Can participate effectively in the assessment process
49. Effect proper utilization of resources in goal achievement
50. Direct subordinate's efforts in initiating, organizing, and accomplishing task
51. Seek and initiate appropriate changes when such changes will result in a more effective organization
52. Express directives and assignments in a clear and understandable manner
53. Through use of communication skills, able to motivate employees toward taking action and/or modifying behavior
54. Use the "team concept" in decision making
55. Provide effective feedback to others and elicit the same from them
56. Treat each employee as an individual with specific and unique needs
57. Provide opportunities for the growth and development of employees within the job

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

DATE:
IN REPLY REFER TO: AAC-118
SUBJECT: MTS survey

AERONAUTICAL CENTER
P.O. BOX 25082
OKLAHOMA CITY, OKLAHOMA 73125



FROM: Chief, Clinical Psychology Research Unit, AAC-118
TO: Second-line supervisors and managers

One of your subordinate supervisors has been asked to participate in an evaluation of the Recurrent Training he or she received at the FAA's Management Training School (MTS). As part of this evaluation, we would also greatly appreciate your assessment of the impact of that training on the performance of your subordinate.

Enclosed you will find a brief questionnaire to use in recording your judgments. All that is needed is to complete the questionnaire and return the answer sheet in the enclosed envelope.

We hope you will be able to help us with this survey as the assessment of the impact of the MTS Recurrent Training program would be incomplete without the behavioral judgments of those other than the graduates themselves.

Thank you.

Roger C. Smith, Ph.D.
ROGER C. SMITH, PH.D.

2 Enclosures

MTS

Questionnaire

Instructions

1. Do NOT put your name on this questionnaire. We are interested in your frank and candid responses to the items; therefore, this survey is entirely confidential and anonymous.
2. The questionnaire consists of rating scales. Work quickly--use your first impression to answer questions.
3. Use the enclosed answer sheet to mark your responses. Fill in the space corresponding to your choice of answer with a pencil. If you do change your mind, erase thoroughly.
4. When you are finished, please place the questionnaire in the enclosed postage-paid envelope and mail it directly to the address on the envelope.
5. If you have any questions, please call:

Dr. Roger C. Smith, AAC-118
FAA-CAMI
P.O. Box 25082
Oklahoma City, Oklahoma 73125

Telephone: (405) 686-4846
FTS Number: 732-4846

Information Sheet

Age _____ M _____ F _____ GS level _____ or Wage Grade (WG) level _____

FAA Program: AF _____ AT _____ FS _____ Other (specify) _____

Present position (sector manager, team supervisor, assistant chief, branch chief, etc.):

Present location (check one):

Washington headquarters _____

Regional office _____

NAFEC _____

Aerocenter. _____

Field office/facility (specify office/facility type). _____

Total FAA experience (years and months). _____

FAA supervisory/managerial experience (years and months) _____

Time in present position (years and months). _____

MTS attendance (indicate the number you have attended) _____

Basic course:

Supervisory (month/year) _____

Managerial (month/year) _____

Refresher course:

Supervisory (PIP/PER) Recurrent (month/year) _____

Labor-Management Relations (month/year) _____

Constructive Discipline (month/year) _____

Management Effectiveness (month/year) _____

PIP/PER Course
(Supervisory)

USE THE FOLLOWING SCALE FOR ITEMS 1-36.

To what extent has the attendance of your subordinate at this MTS course changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

If you don't know, or have not observed the behavior described in an item, please leave it blank.

1. Understanding the effects of various supervisory managerial styles on employees
2. Relates managerial theory to his or her current circumstances
3. Understands his or her motivations as an FAA employee and supervisor/manager
4. Understanding the motivation of employees
5. Applying principles of communication to relations with employees
6. Presents information to employees in a clear fashion
7. Presents information to employees in a helpful manner
8. Apply the principles of human relations and communications to the PIP/PER program
9. Understands the relationship of PIP of other FAA programs
10. Understands the relation of major job assignments (MJA's) to PIP
11. Accurate identification of MJA's
12. Establishment of results expected for MJA's
13. Effective measurement of results obtained in MJA's

14. Attends to employee needs in supervisory/managerial actions
15. Appropriate variation in managerial style as circumstances warrant
16. Effectively conducts performance review
17. Understands relation of PIP to PER
18. Uses results-oriented approach in performance review
19. Applies appropriate principles and techniques to employee counseling
20. Uses appropriate communication techniques during performance reviews
21. Defines objectives of counseling sessions
22. Understands purpose of employee appraisal
23. Understands effective use of methods for appraisal
24. Aware of FAA policy on performance appraisal
25. Develops well-defined performance standards
26. Understands requirements for determining acceptable levels of competence
27. Understands the relationship of appraisal to other FAA programs (MPP, EEO, LMR, Awards)
28. Understands the PER
29. Able to properly prepare PER
30. Effectively reviews PER with employee
31. Understands process of appeal of PER
32. Understands supervisor/manager's role in appeal process
33. Understands requirements for denial of within-grade increments
34. Solicits employee involvement in development of performance standards
35. Evaluates employee performance adequately
36. Evaluates employee performance fairly

Labor-Management Relations
(LMR)

USE THE FOLLOWING SCALE FOR ITEMS 1-45.

To what extent has the attendance of your subordinate at this MTS course changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

If you don't know, or have not observed the behavior described in an item, please leave it blank.

1. Understanding of Executive Order 11491 on LMR in government
2. Knowledge of the rights and restrictions detailed in EO 11491
3. Application of the FAA policy and philosophy of LMR to his or her own organizational unit
4. Understand the meaning of exclusive recognition for unions
5. Awareness of the various relationships that can exist between labor and management
6. Knowledge of the roles of personnel involved in the LMR process (line, staff, etc.)
7. Understanding of the impact of unionization on day to day operation of an organization
8. Awareness of communication requirements associated with the presence of labor organizations
9. Awareness of problems surrounding the presence of labor organizations
10. Analysis and interpretation of contracts
11. Ability to execute role of management in contract administration
12. Understanding of the union representative's role in administering contracts

13. Knowledge of procedures used for handling ULP's
14. Knowledge of the requirements for meetings, conferences, and consultations with labor organizations
15. Knowledge of procedures to be used in meeting with labor organizations
16. Knowledge of requirements and limitations on communication with nonlabor or nonrecognized labor organizations
17. Knowledge of FAA policy on use of government facilities by labor organizations
18. Knowledge of the steps and actions which must be undertaken in leading to negotiations
19. Awareness of negotiating techniques
20. Awareness of means available for resolving differences arising in negotiations
21. Understanding of the role of the supervisor/manager in administering a labor contract
22. Recognition of problem areas in relations with unions under contract
23. Appreciation of the role of the union representative in LMR
24. Knowledge of indicators for evaluating the effectiveness of the labor contract
25. Contract analysis and interpretation
26. Recognition of ULP's
27. Awareness of procedures for processing ULP's
28. Ability to resolve ULP's in a satisfactory manner
29. Understands differences between complaints, grievances, ULP's and appeals
30. Knowledge of CSC criteria for grievance systems
31. Awareness of the FAA grievance system
32. Knowledge of procedures required in a negotiated grievance system

33. Understanding of the rights of all parties in the grievance system
34. Recognition of grievances
35. Ability to resolve and process a grievance, including the required documentation
36. Awareness of supervisory/managerial responsibility as to notification of union representatives of grievance actions
37. Knowledge of representation rights of employees and union in grievance actions
38. Awareness of the grievance format
39. Understanding of the arbitration process
40. Awareness of available options prior to arbitration
41. Ability to recognize and construct the essential elements of issues to be discussed in arbitration
42. Awareness of alternatives to arbitration
43. Understanding of arbitration procedures
44. Ability to prepare a grievance case for arbitration
45. Understanding of the supervisor/manager's role in arbitration

Constructive Discipline

USE THE FOLLOWING SCALE FOR ITEMS 1-34.

To what extent has the attendance of your subordinate at this MTS course changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

If you don't know, or have not observed the behavior described in an item, please leave it blank.

1. Understands the motivational factors that relate to work performance
2. Understands the factors influencing the management style used by supervisor/managers
3. Awareness of FAA policy and philosophy of positive discipline
4. Understands supervisor/manager's responsibilities for discipline
5. Understands the relation of discipline to programs such as EEO and LMR
6. Views discipline in a positive manner rather than strictly as punishment
7. Promotes self-discipline in employees
8. Understands the relation of positive discipline to motivational factors influencing employee behavior
9. Understands the relation of discipline to organizational goals
10. Awareness of the contrast between positive self-discipline and negative (imposed) discipline
11. Implements supervisory/managerial practices to prevent need for corrective (imposed) discipline
12. Identifies causes of employee behavioral problems
13. Awareness of methods available to identify causes of behavior problems
14. Recognizes symptoms of problems

15. Awareness of causes of deteriorating discipline
16. Understands actions to be taken to determine causes of deterioration in discipline
17. Knows about informal disciplinary action
18. Understands correct procedures to accomplish informal disciplinary action
19. Able to conduct an effective disciplinary interview
20. Correctly uses the letter of reprimand
21. Understands employee grievance procedures in relation to disciplinary action
22. Understands roles of the parties involved in a grievance action
23. Aware of documentation and administrative requirements for a disciplinary action
24. Knows how to take a minor adverse action
25. Aware of process for appeal of minor adverse action
26. Understands the supervisor/manager's role in processing appeals for minor adverse actions
27. Able to prepare a letter of proposal to take an adverse action
28. Understands how to undertake a major adverse action
29. Understands process for appeal of a major adverse action
30. Aware of the supervisor/manager's responsibilities with respect to employee behavioral problem in finances, alcohol abuse, and political activity
31. Knows the FAA Ethical Conduct Program
32. Aware of supervisor/manager's responsibilities in the Ethical Conduct Program
33. Aware of investigative/security resources available
34. Uses investigative/security services appropriately

Management Effectiveness

USE THE FOLLOWING SCALE FOR ITEMS 1-25.

To what extent has the attendance of your subordinate at this MTS course changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

If you don't know, or have not observed the behavior described in an item, please leave it blank.

1. Employing concepts such as Reddin's 3-D theory in his or her day-to-day functioning as a supervisor/manager
2. Understanding interpersonal relations with his or her superiors, peers, and subordinates
3. Identification of personal leadership patterns that lead to problems with employees
4. Understanding the dynamics that operate in groups
5. Identification of sources of conflicts in groups
6. Development of group action in problem solving and implementation of solutions
7. Understanding DOT/FAA agency-wide goals
8. Developing viable unit goals based on national goals
9. Establishing achievement indicators for unit goals
10. Identification of problem-solving alternatives and strategies in his or her unit
11. Improved managerial communication through self-analysis
12. Understanding emotional and personal factors which lead to failures or distortions in communications

13. Employing effective feedback principles in dealing with employees
14. Understanding the role of a supervisor/manager in the communication process within his or her unit
15. Understanding concepts of assessment centers
16. Participates effectively in the assessment process
17. Proper utilization of resources in goal achievement
18. Directing subordinate's efforts in initiating, organizing, and accomplishing tasks
19. Seeks and initiates appropriate changes when such changes will result in a more effective organization
20. Expresses directives and assignments in a clear and understandable manner
21. Uses communication skills to motivate employees toward taking action and/or modifying behavior
22. Use of the "team concept" in decision making
23. Provides effective feedback to others and elicits the same from them
24. Treats each employee as an individual with specific and unique needs
25. Provides opportunities for the growth and development of employees within the job

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

DATE:

IN REPLY
REFER TO: AAC-118

SUBJECT: MTS survey

AERONAUTICAL CENTER
P. O. BOX 25082
OKLAHOMA CITY, OKLAHOMA 73125

FROM: Chief, Clinical Psychology Research Unit, AAC-118

TO: FAA nonsupervisory personnel

Your supervisor has been asked to participate in an evaluation of the Recurrent Training course he or she received at the FAA's Management Training School (MTS). As part of this evaluation, we would also greatly appreciate your assessment of the impact of that training on the performance of your supervisor.

Enclosed you will find two questionnaires. The first is focused upon the results of MTS training as you have observed them. The second is a standardized questionnaire that asks about your approach to your work. All that is needed is to complete the questionnaires and return the answer sheets in the enclosed envelope.

We hope you will be able to help us with this survey as the assessment of the impact of the MTS Recurrent Training program would be incomplete without the assessments of those other than the graduates themselves.

Roger C. Smith, Ph.D.
ROGER C. SMITH, PH.D.

3 Enclosures

MTS

EMPLOYEE QUESTIONNAIRE

Instructions

1. Do NOT put your name on this questionnaire. We are interested in your frank and candid responses to the items; therefore, this survey is entirely confidential and anonymous.
2. The questionnaire consists of rating scales. Work quickly--use your first impression to answer questions.
3. Use the enclosed answer sheet to mark your responses. Fill in the space corresponding to your choice of answer with a pencil. If you do change your mind, erase thoroughly.
4. When you are finished, please place the questionnaire in the enclosed postage-paid envelope and mail it directly to the address on the envelope.
5. If you have any questions, please call:

Dr. Roger C. Smith, AAC-118
FAA-CAMI
P.O. Box 25082
Oklahoma City, Oklahoma 73125

Telephone: (405) 686-4846
FTS Number: 732-4846

TEAR OUT AND RETURN
WITH ANSWER SHEET

Information Sheet

Age _____ M _____ F _____ GS level _____ or Wage Grade (WG) level _____

FAA Program: AF _____ AT _____ FS _____ Other (specify) _____

Present Position (AF technician, flight inspector, air traffic controller, etc.):

Present location (check one):

Washington headquarters _____

Regional office _____

NAFEC _____

Aerocenter. _____

Field office/facility (specify office/facility type). _____

Total FAA experience (years and months). _____

PIP/PER

USE THE FOLLOWING SCALE FOR ITEMS 1-4.

To what extent have conditions in your unit changed as a result of your supervisor's attendance at the MTS Performance Improvement/Performance Evaluation (PIP/PER) course?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

1. with respect to efficiency
2. employee job satisfaction
3. employee morale
4. supervisor's interaction with employees

USE THE FOLLOWING SCALE FOR ITEMS 5-7.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

5. working for the FAA
6. with your choice of occupation/profession
7. your current position in FAA

USE THE FOLLOWING SCALE FOR ITEMS 8-34.

To what extent has your supervisor's attendance at the PIP/PER course changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

If you don't know, or have not observed the supervisory behavior described in an item, leave it blank.

- 8. His or her supervisory/managerial style
- 9. Understanding my motivation as an employee
- 10. Relations with employees
- 11. Presenting information to employees in a clear fashion
- 12. Presenting information to employees in a helpful manner
- 13. Identification of major job assignments (MJA's)
- 14. Indication of results expected for MJA's
- 15. Measurement of results obtained in MJA's
- 16. Attending to my needs as an employee in supervisor/managerial actions
- 17. Varies his or her managerial style as circumstances warrant
- 18. Effectively conducts performance review
- 19. Uses a results-oriented approach in performance review
- 20. Communicates well during performance reviews
- 21. Defines objectives of counseling sessions
- 22. Clearly states purposes of employee appraisal
- 23. Effectively appraises my performance
- 24. Develops well-defined performance standards
- 25. Presentation of requirements for determining acceptable levels of competence
- 26. Communicates an understanding of the relationship of appraisal to other FAA programs (MPP, EEO, LMR, Awards)

27. Communicates an understanding of the PER
28. Properly prepares PER
29. Effectively reviews PER with me as an employee
30. Clearly presents appeal process for PER
31. Takes proper role as supervisor/manager in appeal process
32. Solicits employee involvement in development of performance standards
33. Evaluation of my performance is done adequately or better
34. Evaluation of my performance is done fairly

Labor-Management Relations (LMR)

USE THE FOLLOWING SCALE FOR ITEMS 1-4.

To what extent have conditions in your unit changed as a result of your supervisor's attendance at this MTS course?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

- 1. with respect to efficiency
- 2. employee job satisfaction
- 3. employee morale
- 4. your supervisor's interaction with employees

USE THE FOLLOWING SCALE FOR ITEMS 5-7.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

- 5. working for the FAA
- 6. with your choice of occupation/profession
- 7. your current position in the FAA

USE THE FOLLOWING SCALE FOR ITEMS 8-17.

To what extent has your supervisor's attendance at the MTS course on Labor-Management Relations (LMR) changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

If you do not know, or have not observed the supervisory behavior described in an item, leave it blank.

- 8. Understands of the impact of unionization on day to day operation of labor organization
- 9. Aware of problems surrounding the presence of labor organizations
- 10. Knows procedures used for handling ULP's
- 11. Appreciates the role of the union representative in LMR
- 12. Recognition of ULP's
- 13. Ability to resolve ULP's in a satisfactory manner
- 14. Understands differences between complaints, grievances, ULP's and appeals
- 15. Understands the rights of all parties in the grievance system
- 16. Recognition of grievances
- 17. Ability to resolve and process a grievance, including the required documentation

Constructive Discipline Course

USE THE FOLLOWING SCALE FOR ITEMS 1-4.

To what extent have conditions in your unit changed as a result of you supervisor's attendance at the MTS Constructive Discipline Course?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

- 1. with respect to efficiency
- 2. employee job satisfaction
- 3. employee morale
- 4. supervisor's interaction with employees

USE THE FOLLOWING SCALE FOR ITEMS 5-7.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

- 5. working for the FAA
- 6. with your choice of occupation
- 7. your current position as a supervisor/manager

USE THE FOLLOWING SCALE FOR ITEMS 8-19.

To what extent has your supervisor's attendance at the Constructive Discipline Course changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

If you don't know, or have not observed the supervisory behavior described in an item, leave it blank.

- 8. Understanding my motivation as an employee
- 9. Views discipline in a positive manner rather than strictly punishment
- 10. Promotes self-discipline in employees
- 11. Relates discipline to organizational goals
- 12. Encourages positive self-discipline as opposed to negative (imposed) discipline
- 13. Implements supervisory/managerial practices to prevent need for corrective (imposed) discipline
- 14. Can identify causes of employee behavioral problems
- 15. Recognizes symptoms of problems
- 16. Is aware of causes of deteriorating discipline
- 17. Acts appropriately to determine causes of deterioration in discipline
- 18. Effectively employees informal disciplinary action
- 19. Conducts an effective disciplinary interview

Managerial Effectiveness Course

USE THE FOLLOWING SCALE FOR ITEMS 1-4.

To what extent have conditions in your unit changed as a result of your supervisor's attendance at the MTS course in Managerial Effectiveness?

- a. much better
- b. better
- c. no change
- d. worse
- e. much worse

1. with respect to efficiency
2. employee job satisfaction
3. employee morale
4. supervisor's action with employees

USE THE FOLLOWING SCALE FOR ITEMS 5-7.

In general, how satisfied are you?

- a. very satisfied
- b. satisfied
- c. indifferent
- d. dissatisfied
- e. very dissatisfied

5. working for the FAA
6. with your choice of occupational/profession
7. your current position in FAA

USE THE FOLLOWING SCALE FOR ITEMS 8-25.

To what extent has your supervisor's attendance at the Managerial Effectiveness course changed his or her effectiveness in the areas listed below?

- a. considerable improvement
- b. some improvement
- c. no change
- d. some reduction
- e. considerable reduction

- 8. Relations with employees
- 9. Changing personal leadership patterns that lead to problems with employees
- 10. Identifies sources of conflicts in groups
- 11. Develops group action in problem solving and implementation of solution
- 12. Develops viable unit goals
- 13. Established achievement indicators for unit goals
- 14. Identifies problem-solving alternatives and strategies in your unit
- 15. Has improved managerial communication
- 16. Understands emotional and personal factors which lead to failures or distortions in communications
- 17. Employs effective feedback principles in dealing with employees
- 18. Directs efforts in initiating, organizing, and accomplishing tasks
- 19. Seeks and initiates appropriate changes when such changes will result in a more effective organization
- 20. Expresses directives and assignments in a clear and understandable manner
- 21. Through use of communication skills, is able to motivate employees toward taking action and/or modifying behavior
- 22. Uses the "team concept" in decision making
- 23. Provides effective feedback to others and elicits the same from them
- 24. Treats each employee as an individual with specific and unique needs
- 25. Provides opportunities for the growth and development of employees within the job