

Technical Paper 275

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**THE DEVELOPMENT OF A WORK ENVIRONMENT
QUESTIONNAIRE FOR THE IDENTIFICATION
OF ORGANIZATIONAL PROBLEM AREAS
IN SPECIFIC ARMY WORK SETTINGS**

John R. Turney
and
Stanley L. Cohen, Work Unit Leader

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HUMAN ADAPTABILITY AND ORGANIZATIONAL EFFECTIVENESS TECHNICAL AREA

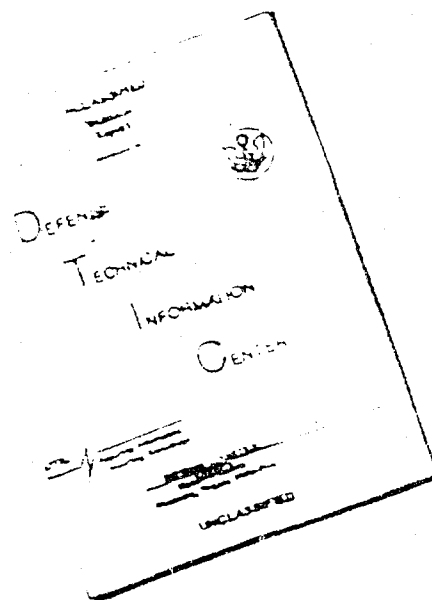


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20. The WEQ was developed and validated over a 3-year period as part of an organizational effectiveness program at an Army field installation. Focusing on individual work motivation and the situational factors affecting this motivation, it is designed to elicit from both supervisors and subordinates their attitudes and perceptions on their job duties, training, performance standards and consequences, and on their organizational supervision, work group, job importance, and feedback. Section formats are designed to apply to a wide range of Army settings, but item content is specific to the Army work setting and job. Three questionnaires were tailored with job-specific items for a supervisory NCO position and two different subordinate positions; the three as a whole comprise the WEQ. Validation procedures significantly correlated the attitude measures with independent measures of performance and effort.

→ The WEQ provides indexes of soldier perceptions, motivations, and satisfactions in specific terms which can identify problem areas suitable for corrective intervention. A further survey in the field installation has since identified seven major problem areas, and a program of active intervention has been designed to reduce these problems.

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Organization: Effectiveness

ARI Research Reports and Technical Papers are intended for sponsors of R&D tasks and other research and military agencies. Any findings ready for implementation at the time of publication are presented in the latter part of the Brief. Upon completion of a major phase of the task, formal recommendations for official action normally are conveyed to appropriate military agencies by briefing or Disposition Form.

FOREWORD

The Human Adaptability and Organizational Effectiveness Technical Area of the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) has among its objectives the expansion of human performance capabilities for effective operation in military units and the improvement of soldier and team performance, motivation, and job satisfaction through the design and use of techniques to increase organizational effectiveness (OE). Organizational Effectiveness Research develops diagnostic instruments to identify problem areas, intervenes with organizational development techniques to correct the problems, and finally evaluates the intervention results in terms of productivity and job satisfaction. This report discusses the development and validation of the Work Environment Questionnaire (WEQ) used to identify organizational problem areas. ARI Technical Paper 272 analyzes the WEQ responses which delineate specific areas for OE intervention in a field unit of one Army agency. The WEQ is designed to be adaptable to different agencies and circumstances, and its adaptation for diagnostic use within the Army Air Defense Command is discussed in ARI Research Problem Review 75-1. Research was conducted under Army RDTE Project 2Q762717A723, Organizational Effectiveness Research, FY 1975 Work Program.



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THE DEVELOPMENT OF A WORK ENVIRONMENT QUESTIONNAIRE FOR THE IDENTIFICATION OF ORGANIZATIONAL PROBLEM AREAS IN SPECIFIC ARMY WORK SETTINGS

BRIEF

Requirement.

To develop and validate a set of questionnaires which can be used to diagnose existing job/organizational problems in a selected Army work environment, as the first phase of an organizational effectiveness program. Such a program diagnoses organizational problem areas, intervenes with organizational development techniques to solve or reduce them, and finally uses the questionnaires along with performance criteria to evaluate whether the intervention was successful.

Procedure

The questionnaires, developed and validated over a 3-year period as part of an OE program at an Army field installation, focused on individual work motivation and the situational factors affecting this motivation. Section formats were designed to apply to a wide range of Army organizations while item content was specific to the Army work setting and job position in order to obtain valid responses useful for the OE program. Three separate questionnaires were designed, one for a supervisory NCO position and two for different subordinate enlisted jobs; the three as a whole are referred to as the Work Environment Questionnaire (WEQ). The WEQ elicits from supervisors and subordinates their attitudes and perceptions on their job duties and content, training, performance standards and consequences, and on their organizational supervision, work group, job importance, and feedback, using job-specific items which can readily be adapted to fit a variety of actual duties and organizations. Validation procedures significantly correlated the attitude measures with independent measures of performance effort.

Findings

Questionnaire formats provide indexes of soldier perceptions, motivations, and satisfaction in terms of specific interpersonal and job environments, which can identify problem areas suitable for OE program intervention. Discrepancies in supervisor-subordinate perceptions of performance standards, for instance, can provide the basis for developing more explicit or consistent standards

Utilization of Findings

The problem areas were diagnosed and identified with the WEQ in 1974 and a program of active intervention designed and implemented, using organizational effectiveness techniques, to reduce the specific problems at the field station. A resurvey of the station (the final OE phase) has indicated that the intervention did successfully decrease certain problems and increase job satisfaction and performance.

Even before the intervention phase began, the command was able to take action on specific problems brought to their attention by the WEQ. For instance, on the 1973 WEQ very few responses indicated promotion to be based on merit, while in 1974 a distinct increase in positive answers reflects command action in the interval.

A second OE program is underway at the 32d Air Defense Command. The WEQ has been adapted to their specific operations and administered and the implementation phase is in progress. As more such programs are developed, a generalized set of administration procedures and questionnaire format will be refined so that organizations can adapt the WEQ to their unique characteristics with a minimum of professional assistance.

THE DEVELOPMENT OF A WORK ENVIRONMENT QUESTIONNAIRE FOR THE IDENTIFICATION OF ORGANIZATIONAL PROBLEM AREAS IN SPECIFIC ARMY WORK SETTINGS

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THE DEVELOPMENT OF A WORK ENVIRONMENT QUESTIONNAIRE FOR THE IDENTIFICATION OF ORGANIZATIONAL PROBLEM AREAS IN SPECIFIC ARMY WORK SETTINGS

The ultimate goal of the organizational effectiveness (OE) research program is to design and implement techniques which will enhance the Army's effectiveness. A primary objective of the program is to identify and optimize those organizational factors in the Army work environment which are related to soldier job satisfaction, motivation, and performance. To meet this objective a three-phase research program has been developed. These phases are: (1) the identification of critical OE problem areas in sponsoring Army agencies, and the development of diagnostic instruments for this purpose; (2) the implementation of OE techniques to alleviate the problems identified in the first phase of the program; and (3) the evaluation of the intervention effects in terms of meaningful measures of job satisfaction and productivity.

Although the initial approach of the research program must necessarily be to develop instrumentation, intervention techniques, and evaluation methods which are content-specific to the unique combination of specific needs of the sponsoring agency, the constructs underlying the research program are chosen with the goal of eventually generalizing the program to other Army commands. The ultimate goal of the research program is to develop a set of carefully validated diagnostic instruments and organizational effectiveness techniques which can be used Army-wide with a minimum of professional intervention.

This report focuses on development of the diagnostic instrument to be used in the first phase of the research program. The initial research test beds for the OE program were in field station environments of a selected Army agency. Extensive longitudinal research was conducted at one major field station in the command over a three-year period in order to develop diagnostic instruments discussed here. A pretest in 1972 provided initial data on certain aspects of the station environment. In the course of validating the instruments, surveys were conducted in 1973 and 1974 on selected operations at the field station.

Numerous OE strategies have been developed over the past decade for use in industry,¹ but little emphasis was placed on developing useful measures of the organizational variables that are the focus for these OE efforts. This report describes the initial development of such a set of

¹For a recent review of these techniques, see Friedlander, F., and Brown, L. D. Organization development. Annual Review of Psychology, 1974, 25, 311-341.

instruments for an Army agency. The approach differed from previous strategies for developing such OE instruments in industrial and other work settings.^{2,3} The content of the questionnaires is designed to fit actual Army settings, with references to distinct aspects of the job, pieces of equipment used by personnel, and specific positions in the organization under study. Different questionnaires are designed for different jobs and for supervisors and subordinates in a specific Army organization. This approach provides respondents with a realistic setting to encourage valid responses with minimum ambiguity. Moreover, such references provide focal points for identifying specific organizational problems and for familiarizing organizational personnel with existing problem areas.

PROCEDURES FOR THE DEVELOPMENT OF THE WORK ENVIRONMENT QUESTIONNAIRE

SITE FAMILIARIZATION

The first segment of this project involved site familiarization. The research focused on a set of communications processing positions, in an Army field facility, occupied by approximately 150 enlisted personnel and their immediate noncommissioned officer (NCO) supervisors. These positions were selected for both research and operational reasons. Experimental considerations were that (1) the work is performed by 16-man teams consisting normally of a senior NCO supervisor in charge of 14 operators and one analyst; (2) both individual and team performance criteria could be collected for validation purposes while the teams did their jobs; and (3) the large number of teams performing identical job functions allowed adequate experimental control. Operationally, the operations are important to the mission requirements of the organization and representative of the complex semicomputerized systems being implemented Army-wide.

ARI scientists conducted extensive observations of the work site in all phases of operation and interviewed a random sample of potential questionnaire respondents about the work environment. Key officers up

² Bowers, D. G. OD techniques and their results in 23 organizations: The Michigan ICL Study. Journal of Applied Behavioral Science, 1973, 9(1), 24-43.

³ Hackman, J. R., and Oldham, G. R. Development of the job diagnostic survey. Journal of Applied Psychology, 1975, 60, 159-170.

through the field station command were also interviewed to learn their views about critical components of the positions under study.

CONCEPTUAL FRAMEWORK

At the same time, a framework dealing with worker motivation, performance, and satisfaction was developed to guide the actual construction of the questionnaire (Figure 1). The model is meant to serve only as a descriptive integration of organizational and individual variables which might affect performance in specific work settings. All of the variables have been incorporated in the questionnaires. However, not all of the causal interrelationships have yet been empirically tested. In addition, the framework does not indicate the relative importance of each of the relationships in any specific Army organization.

The model focuses primarily on how much effort personnel exert on job-related tasks while they are at work and how they distribute their efforts among the various activities. Effort exerted is used here as an index of work motivation; that is, if a soldier were functioning in a social vacuum with no one else present and no situational or task restraints on his behavior, then the effort he would exert to perform various job activities would be solely a function of his own motivation. When a worker first starts out on his job, his job training and the importance he attaches to the job will primarily determine his motivation and effort; once he has acquired experience, his motivation becomes more complex.

Motivation to perform an activity or a task can be intrinsic or extrinsic. Intrinsic motivation is a function of the extent an individual finds an activity enjoyable, challenging, and interesting in itself. Extrinsic motivation is a function of the extent the individual perceives that an activity results in his attaining a personally valued outcome such as promotion or recognition for superior performance. The greater the intrinsic and/or extrinsic motivation associated with an activity, the greater is the effort exerted to perform that activity, given minimal situational restraints.

However, in all organizations, situational factors may moderate the relationship between the worker's personal motivation and the effort he exerts. Four such factors are considered in the model. First, an individual's work group may have certain norms regarding the effort its members are expected to expend in performing various job activities. If these norms extend or restrict the effort a worker exerts, his effort will not adequately represent his motivation. Second, the task information the worker receives from other personnel may influence how he distributes his effort among work activities. Such communications may come from superiors, fellow workers, other work groups with related functions, or sources outside the organization and may require certain actions of the worker. Thus, he may not be able to devote as much effort as he would prefer because of conflicting demands on his work time. Third, the worker's immediate supervisor can make demands which

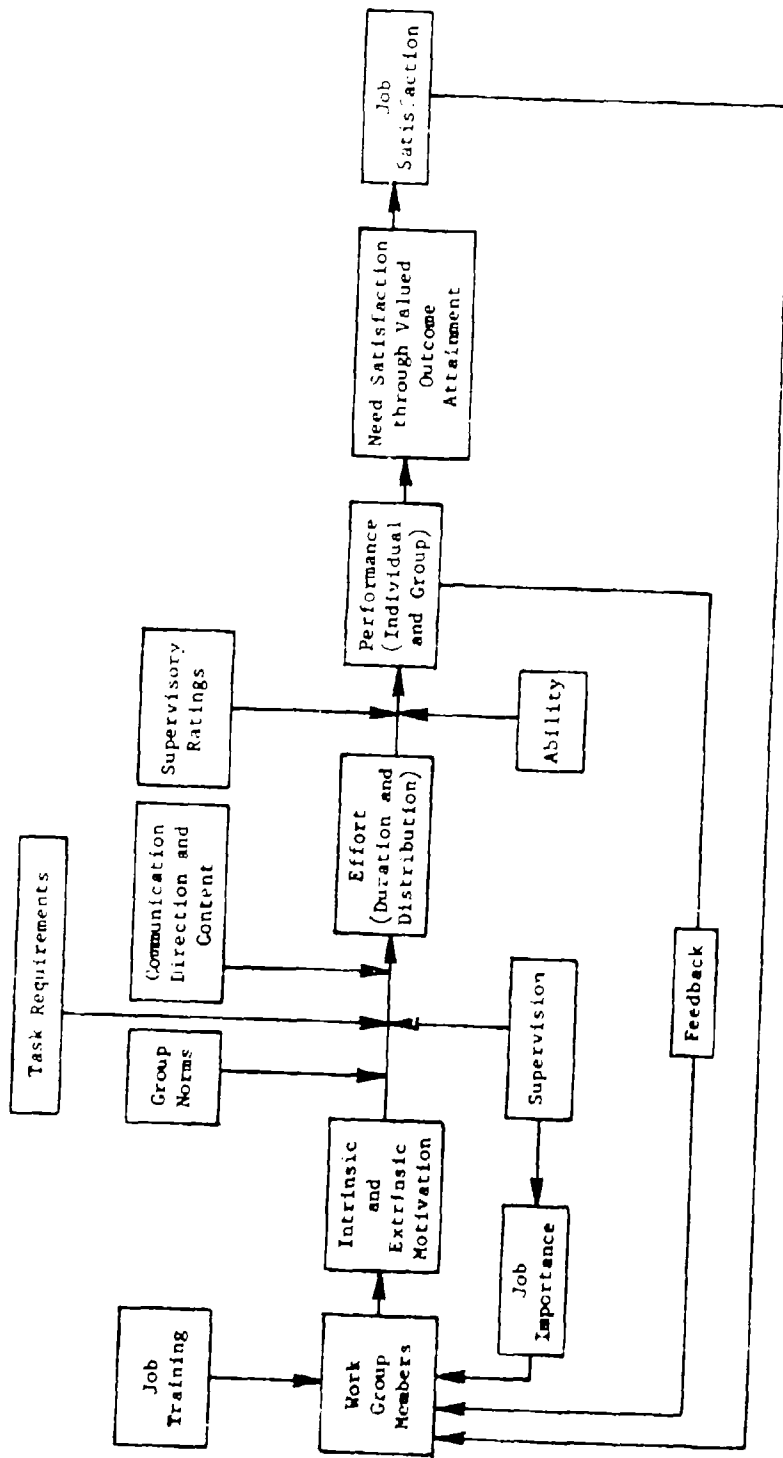


Figure 1. Theoretical organizational model.

moderate the relation between his motivation and the actual effort he exerts, or assign an activity which is not especially motivating. Finally, the nature of the job may require activities which do not motivate the worker or may present activities which motivate him to exert so much effort that his overall productivity is lowered.

Although motivation may not be completely reflected by actual effort, actual effort, in turn, may not be entirely reflected by a worker's performance or work output. For instance, ability may attenuate the relationship between effort and performance; regardless of how much effort a person of low ability exerts, he may not be able to perform a specific task which requires a skill he lacks. On the other hand, a person of high ability may perform the same task with very little effort. Although ability is a critical determinant of performance, it is not a variable that can be influenced to any great extent by an OE program. OE strategies must be carefully implemented and evaluated to assure that they are focused on variables directly related to motivation and distribution of actual work effort, and where changes are feasible. A successful OE program should increase the proportion of time or effort devoted to the most productive activities.

Once a worker has been on the job for a period of time, he discovers the extent to which his performance results in satisfaction of his needs through the attainment of valued outcomes. Needs may vary in strength from individual to individual. They include such factors as job security, self-esteem, self-actualization, and a sense of pride in the work itself. They can be at least partially satisfied through the attainment of such outcomes as promotion, increased job responsibility, and a supervisor's acknowledgement of work well done.

ITEM FORMATION

The conceptual framework (Figure 1) served as a guide for determining topic sections and item groups to be included in the questionnaires. Other job satisfaction and motivation surveys, such as one developed by the University of Michigan's Institute for Social Research,⁴ were examined for suggestions of item content. Individual items also took into account observational and interview data which indicated specific organizational problem areas.

THE INSTRUMENT PACKAGE

Different questionnaires were constructed for each of the three positions, to be content-specific to the work activities. Two were

⁴ Bowers, 1973, op. cit.

designed for the subordinate jobs of operator (Appendix A) and analyst (Appendix B); a third was developed for their immediate supervisor (Appendix C).⁵ The operator questionnaire will be the primary focus for discussion because the operator position was the primary functional area; most of the personnel were operators and most of the statistical analyses were conducted with data from this questionnaire. References to the other questionnaires demonstrate how instruments are developed for different functional areas and indicate how supervisor-subordinate items are composed to provide meaningful comparisons. The three instruments as a whole are referred to as the Work Environment Questionnaire (WEQ). The discussion of the composition of the WEQ will describe each section of the operator questionnaire in turn, with references to the conceptual framework presented in Figure 1. In addition, the derivation of specific item content will be explained.

COMPOSITION OF THE WORK ENVIRONMENT QUESTIONNAIRE

BIOGRAPHICAL DATA

The initial section of the questionnaire provides descriptive data on meaningful characteristics of respondents who complete the questionnaire. In the Army, meaningful variables include Military Occupational Specialty (MOS), length of service, rank, sex, and work-group membership such as platoon or company.

These data can be used for correlational analyses between such variables as service length and job satisfaction and for comparing job satisfaction or work environment perceptions for different ranks, sexes, or work groups. Variables can be added or deleted.

The biographical data can also identify respondents at different levels. Respondents can be identified more generally by classifying them according to work-group membership, or more specifically as individuals. Specific identification of individuals may be necessary for test/retest reliability analyses, pre-introduction of OE intervention strategies vs. post-program comparisons, or analyses of work attitude vs. job performance. Respondents who filled out the operator questionnaire were identified for all these reasons with their consent, for the duration of the analyses; specific identifications have since been destroyed.

⁵ Slight changes made in the questionnaires in references to the specific organization under study do not affect the actual focus or meaning of questionnaire sections or items.

When respondents are asked for specific identification, fear of supervisory retaliation may bias their responses on the questionnaire. The test administrator has the responsibility of assuring the respondents that their replies will not be used against them. An analysis was conducted comparing the responses of 25 personnel who answered the questionnaire anonymously with the responses of 25 personnel who had identified themselves on the questionnaire. The mean work attitude responses of these two groups on four general dimensions of the questionnaire showed no significant differences (Table 1) and indicate no biases which could be attributed to the respondents' knowledge that they could be identified.

Table 1
COMPARISON OF ANSWERS FROM IDENTIFIED AND ANONYMOUS RESPONDENTS

Questionnaire Dimension	Identified Respondents, Mean Value N = 25	Anonymous Respondents, Mean Value N = 25	t-value
Supervision	73.64	71.36	0.42
Job & Work Group	45.88	44.84	0.30
Performance Standards	102.96	104.44	0.52
Training	40.80	41.96	0.47

SECTION I. JOB CONTENT

This section of the questionnaire focuses on the effort variable from the conceptual model, to determine how the worker perceives that he distributes his actual effort among a range of activities during an average workday. By asking the subject to express his responses in percentages, indexes can be derived for both duration of effort for a given activity and distribution of effort across a range of activities. Knowledge of how workers perceive that they spend their time is used in OE strategies designed to optimize performance by encouraging proper distribution of work effort.

Activity categories were provided that accounted for all a worker's time on the job, including rest periods. Substantial pretest work is required to develop such a set of categories. If the categories are too specific, the respondent cannot meaningfully differentiate between the activities; if they are too general, not enough useful, situation-specific data are obtained. The resulting set of unique activity categories listed in Section I of each questionnaire is the product of pretest refinement which primarily eliminated unclear activity descriptions and combined categories which respondents said they had trouble differentiating. Eight or nine activity categories appear to be the maximum which respondents can meaningfully deal with.⁶

SECTION II. MORE ON JOB CONTENT

Section II provides additional data on the effort the respondent exerts performing each of the activities listed in Section I. Each activity is addressed by four items: Amount of time actually spent on it, amount he would like to spend, how much he enjoys it, how important it is. For each item, the respondent answers on a seven-point rating scale. Item 1 under each activity is another measure of the actual effort exerted by a soldier. Correlations between the percentage estimates and rating scale estimates of actual effort are all significant at $p < .01$ (Table 2). The percentage estimates present the respondent with all activities at once and require him to make meaningful comparisons among activities. The rating scale allows the worker to respond to the more psychometrically functional but separately presented activity categories. Observational data collected on how personnel in this study actually spent their time were used to validate these perceptual measures of effort.

The second item dealing with the amount of time the respondent would like to spend performing each activity is a more valid indicator of motivation because it expresses his effort in a hypothetical situation with no external restraints. As Table 2 shows, the measures of both percent work time and actual time spent are more strongly intercorrelated than either is related to desired effort. The pattern of correlations is completely consistent across the nine activities for comparisons involving percent work time and holds for six of the nine activities involving actual effort comparisons. (However, the latter result does not reach statistical significance at the .05 level using the Wilcoxon signed ranks test.)

⁶ Miller, G. A. The magical number seven, plus or minus two: Some limits on our capacity for processing information. Psychological Review, 1956, 63, 81-97.

Table 2

CORRELATIONS AMONG PERCEPTUAL MEASURES OF EFFORT
FOR LISTED OPERATOR JOB ACTIVITIES
(N = 74)

	Work Time With Actual Time Spent (A)	% Work Time With Desired Time Spent (B)	Actual Time With Desired Time (C)	Differences (A-B)	Differences (A-C)
Searching for Assigned Cases	.46**	.28*	.40**	+ .18	+ .06
Searching for Non- Assigned Cases	.79**	.46**	.46**	+ .33	+ .33
Copying Cases	.45**	.31**	.35**	+ .14	+ .10
Monitoring Cases	.63**	.17	.51**	+ .46	+ .12
Servicing Cases	.47**	.16	.55**	+ .31	- .08
Exchanging Case Information	.60**	.54**	.76**	+ .06	- .16
Using Work Aids	.54**	.34**	.59**	+ .20	- .05
Resting Between Cases	.57**	.26**	.45**	+ .31	+ .12
Taking Work Breaks	.50**	.33**	.40**	+ .17	+ .10

* p < .05

** p < .01

The final two items record the extent to which the activity motivates the respondent. Intrinsic motivation is indicated by how much the soldier enjoys performing the activity for its own sake. Extrinsic motivation is indicated by how important the soldier considers each activity to superior job performance. Table 3 shows that, predictably, both these motivation indexes are more strongly related to desired effort than to either measure of actual effort. However, both are still significantly correlated with the measures of actual effort for many of the activity categories.

SECTION III. YOUR SUPERVISOR'S/SUBORDINATES' JOB

This section resembles Section I. Here, the operator or analyst indicates his perceptions of how his supervisor distributes his effort among his work activities, and the supervisor indicates his perceptions of how his subordinates spend their time. These data can then be compared with the worker's own perceptions of how he spends his time, from Section I. These comparisons can identify discrepancies in perceptions of how time is spent which may cause conflicts or negative work attitudes. In addition, these comparisons provide information on whether the activities can be readily rated by external observers. The time a worker spends performing certain activities can be difficult for someone else to estimate because the activity is not clearly visible or clearly differentiated (e.g., monitoring activities of subordinates). For such an activity, there should be less agreement between supervisor and subordinate responses. Specific comparative data collected in the course of developing these questionnaires confirm such discrepant perceptions.⁷

SECTION IV. PERFORMANCE STANDARDS

Part A. This section of the questionnaire focuses on the performance standards which supervisors use to rate their subordinates in their jobs. As indicated in Figure 1, a biased rating may affect the relation between the actual effort exerted by a worker and his job performance. A supervisor may stress certain standards more or less heavily than his subordinates feel is appropriate, based on what they view as critical aspects of their job and according to which they distribute their effort.

⁷ Cohen, S. L., and Turney, J. R. Results of an organizational diagnostic survey of an Army field facility work environment. ARI Technical Paper 272, January 1976. (AE A02 934)

Table 3

CORRELATIONS BETWEEN PERCEIVED EFFORT MEASURES
AND MOTIVATION INDEXES FOR LISTED OPERATOR JOB ACTIVITIES
(N = 74)

Activity and Index	% Work Time	<u>Actual</u> Time Spent	<u>Desired</u> Time Spent
Assigned Searching			
Intrinsic Pleasure	.05	.25*	.53**
Extrinsic Importance	.14	.28*	.25*
Non-Assigned Searching			
Intrinsic Pleasure	.37**	.38**	.83**
Extrinsic Importance	.44**	.48**	.66**
Copying			
Intrinsic Pleasure	.23	.24*	.66**
Extrinsic Importance	.10	.24*	.50**
Monitoring			
Intrinsic Pleasure	.14	.35**	.64**
Extrinsic Importance	.31**	.42**	.48**
Servicing			
Intrinsic Pleasure	.09	.14	.53**
Extrinsic Importance	-.01	.07	.26*
Exchanging Information			
Intrinsic Pleasure	.37**	.50**	.65**
Extrinsic Importance	.25*	.26*	.41**
Using Work Aids			
Intrinsic Pleasure	.29*	.49**	.77**
Extrinsic Importance	.25*	.50**	.56**
Resting at Work Position			
Intrinsic Pleasure	.16	.36**	.69**
Extrinsic Importance	.18	.28*	.46**
Taking Work Breaks			
Intrinsic Pleasure	.27*	.22	.62**
Extrinsic Importance	.01	.05	.17

* p < .05

** p < .01

The performance standards in this section were identified through earlier analyses as either being actually used to judge performance or as potential standards which should be used. Respondents to an earlier version of the questionnaire were asked to list the standards they felt were applied or could be applied to their jobs. The list of standards in this section was compiled from these responses and refined to eliminate ambiguities. Separate lists were developed for each of the three positions.

Two kinds of information are obtained, how much each standard is used and how much it should be used. By examining responses along the seven-point scale to the question of how much each standard is currently used, one can determine the subordinate's perception of which standards his supervisor relies on most heavily. By calculating the discrepancies between responses as to how much each standard is used and how much it should be used, one can derive a measure of subordinate satisfaction with the actual use of each standard. The discrepancy score is calculated by obtaining the absolute value--the numerical difference between the rating of how much each is used and the rating of how much each should be used--and subtracting this absolute value from 7. The formula is: Discrepancy score = 7 minus absolute score. Subtracting the "should be" score from the "is" score and disregarding the sign yields a score in which a high value indicates more dissatisfaction. This absolute value is subtracted from 7 to reverse the scale, making a high discrepancy score equal high satisfaction to correspond with satisfaction scales in other sections of the questionnaire. Discrepancy scores can also be summed across all the performance standards to yield an overall measure of satisfaction with current performance evaluation.

In the complementary section of the supervisory questionnaire (V-B), the supervisor is asked his actual and desired use of each of the listed standards in evaluating the performance of his subordinates. These responses can be compared with the responses of his subordinates to determine areas of disagreement in using the standards. Such comparisons are useful inputs to OE programs as a basis for discussion of why certain standards are or are not relied on and for the development of more explicit, consistent application of standards.

Part B. The items in this section of the questionnaire reflect the situational variables, shown in Figure 1, which intervene between motivation and actual effort exerted and may obstruct the desired effort of a worker. Item format is again a seven-point scale. The variables include work group norms, task requirements, communication, and supervision. Specific content of the items describe aspects of the work environment that could be addressed by OE intervention strategies if the data identified them as problem areas. Complementary items in the supervisor's questionnaire enable his perceptions of his behavior to be compared with the views of his subordinates (Table 4).

Items vary to some extent across the three questionnaires. Item content was refined and about 15% of the items were eliminated on the basis of pretest data in each of the three questionnaires. The primary criterion for elimination was excessive variance on a given item when

this variance could not be meaningfully related to independent observational and interview data; such random variance suggested that respondents could not consistently understand the item's content. The remaining sets of items can be applied across Army organizational work settings with a minimum of modification.

Table 4

COMPLEMENTARY SUBORDINATE-SUPERIOR ITEMS

Subordinate Items (Sec. IV-B, Operator Questionnaire)	Supervisor Items (Sec. V-C, Supervisor Questionnaire)
15. My supervisor makes clear to me what aspects of my performance he considers to be most important.	18. I make clear to my operators what aspects of their performance I consider to be most important.
16. My supervisor assigns me the tasks that I am best at doing.	20. I am able to assign the operators the tasks that they are best at doing without interference from my superiors.
25. My supervisor is likely to personally commend me for outstanding performance.	19. I commend operators personally for outstanding performance.

The final set of 25 items in the operator questionnaire was subjected to a complete factor analysis with a varimax orthogonal rotation. Only data from the operator questionnaire were used in this analysis, because of the small sample sizes for the other two questionnaires. Table 5 presents the factor structure and item loadings. Only items that clearly were correlated at this level with one factor and no other factors were included as representative items for that factor.

Two of the factors relate to supervision. Factor I refers to the amount of structure the supervisor provides for the subordinate's job and involves the extent to which the supervisor determines exactly what the subordinate should do. Factor II refers to the extent to which the supervisor shows consideration toward his subordinates, recognizes their good performance, and provides them useful assistance.

Table 5

FACTOR STRUCTURE OF ITEMS IN SECTION IV-B OF OPERATOR QUESTIONNAIRE
(N = 117)

Item	I Supervision- Structure	II Supervision- Consideration	III Group Cohesion	IV Group Performance	V Job Responsibility
1. Performance meaningfully evaluated by supervisor	.37	.70	.14	.01	.10
2. Supervisor sets clear goals	.61	.48	.20	.14	.17
3. Supervisor concerned with work quality	.50	.54	-.10	.04	-.03
4. Fellow Ops not encourage superior performance	-.11	-.03	-.21	-.85	-.01
5. Supervisor goes out of way to help me	.50	.64	-.02	.11	.26
6. Supervisor conveys clear evaluation standards	.63	.45	-.05	.27	.22
7. Job makes good use of abilities	.08	.25	-.20	.14	.71
8. Job duties clearly defined by supervisor	.73	.27	-.05	.20	.05
9. Group works well together	-.03	.05	.78	.31	.08
10. Most deserving are promoted	.42	.26	.37	.04	.35

Table 5 (continued)

Item	I Supervision- Structure	II Supervision- Consideration	III Group Cohesion	IV Group Performance	V Job Responsibility
11. Other agency jobs better utilize my abilities	-.16	-.01	-.18	.06	-.69
12. Members of my group stick together	.02	.11	.83	.14	-.10
13. Supervisor encourages me to help with work methods	.34	.70	-.06	.27	.23
14. I now feel my job is as important as in initial training	.22	.49	.01	-.05	.54
15. Supervisor makes clear aspects of performance he considers important	.64	.45	.00	.05	.03
16. Supervisor assigns me tasks I am best doing	.39	.46	-.22	.37	.20
17. If I perform outstandingly, my supervisor will recommend me for an award	.18	.77	.28	-.12	.17
18. I receive clear job instructions from my supervisor	.75	.42	-.06	.10	.17
19. Supervisor properly monitors my performance	.66	.39	-.03	.05	.08

Table 5 (continued)

Item	I Supervision- Structure	II Supervision- Consideration	III Group Cohesion	IV Group Performance	V Job Responsibility
20. Instructions given by my supervisor never conflict with other information	<u>.65</u>	.08	.15	.10	.42
21. If I perform poorly, supervisor corrects my behavior	<u>.70</u>	.04	.04	-.11	-.14
22. Supervisor has clearly defined responsibilities	<u>.66</u>	-.19	.12	.01	.29
23. Fellow ops emphasize superior performance	.06	.19	.33	<u>.82</u>	.20
24. I have the opportunity to work as hard as I want	.18	.17	-.05	.22	<u>.53</u>
25. Supervisor commends me for outstanding performance	.20	<u>.77</u>	.14	.11	.18

Note. Item-factor correlations $\geq .50$ are underlined.

The next two factors focus on the work group. Factor III is a 2-item factor which refers to the cohesion of the work group. Factor IV refers to the performance norms of the group or the extent to which group members are likely to encourage each other to achieve high performance.

Factor V deals with the job itself, describing the extent to which the job uses the skills and potential of the worker. This factor essentially measures those aspects of the work which would be the focus of a job enrichment OE intervention strategy.

SECTION V. FEELINGS ABOUT THE JOB ITSELF

Part A. This part of the questionnaire continues the focus on the variables which intervene between motivation and effort. A seven-point scale provides information on whether the respondent feels that each situational opportunity or intervention is adequate, too much, or too little. Satisfaction scores can be derived from these data by determining how much a given response varies from the "just right" point on the scale (value 4). The numerical difference between a given response and 4, disregarding the sign, is subtracted from 7 to reverse the values so that higher scores indicate more satisfaction. The formula is: Difference score = 7 minus absolute value (4 minus item response). This difference score is similar to the discrepancy score described earlier except that the discrepancy score is based on differences between two separate scales while the difference score is based on differences from a standard within one scale. By examining both the difference score satisfaction measures and the adequacy scores, one can identify situational aspects of the work environment which are unsatisfactory to workers as well as determine whether the source of dissatisfaction is too much or too little of a given factor.

A set of factor analyses similar to those described for Section IV was performed on the items in this section (Table 6). Approximately 30% of the items were eliminated as a result of the analyses of the pretest data. Factor I deals with the amount of job autonomy which the worker is provided with by the organization and, more specifically, by his supervisor. Factor II, the activity level on the job, focuses on the extent to which the worker perceives that his job keeps him sufficiently busy and that situational factors exert pressures which affect the direction (Item 3) and intensity (Item 4) of his effort. Factor III refers to the group impact on performance and complements the group cohesion factor described in the previous section.

Parts B and C. Section V, Part B deals with the extent to which workers perceive that different potential outcomes are related to outstanding performance; i.e., if a worker performs at a high level, how much chance he feels he has to receive a given reward. Examples of such reward outcomes include a promotion, a 3-day pass, a letter of commendation, and supervisor recognition. Because a given reward is more important to one person than another, Part C asks the respondent how much he values the same set of outcomes. The importance a respondent

Table 6

FACTOR STRUCTURE OF ITEMS IN SECTION V-A OF OPERATOR QUESTIONNAIRE
(N = 120)

Item	I	II	III
	Job Autonomy	Job Activity Level	Group Performance Orientation
1. Degree to which job keeps me busy	.09	<u>.66</u>	.22
2. Opportunity to use own judgment	<u>.72</u>	.19	.12
3. Number of interruptions in daily routine	.16	<u>.56</u>	-.40
4. Extent supervisor pushes for increased productivity	-.36	<u>.62</u>	.18
5. Extent supervisor encourages me to help develop work methods	<u>.62</u>	.11	.31
6. Extent supervisor asks my opinion on work problems	<u>.78</u>	-.12	-.01
7. Extent my supervisor lets me do my work the way I think is best	<u>.79</u>	-.17	-.09
8. Extent work group encourages superior performance	.05	.11	<u>.84</u>
9. Extent discussions with other members of work group assist in job performance	.13	.09	<u>.78</u>
10. Extent I make responsible job decisions	<u>.52</u>	.41	.08

Note. Item-factor correlations $> .50$ are underlined.

attaches to each outcome should be a function of the extent to which it satisfies his important personal needs.

According to recent theoretical research in organizational motivation,⁸ multiplying the probability of a given outcome by its value yields an index of the extent to which the outcome motivates current performance. Summing these values across all outcomes provides a measure of the extrinsic motivation associated with the performance of the job. Where this value is high, the soldier should be motivated to perform at a high level in order to attain valued outcomes. Detailed examination of each performance-outcome relation can indicate focal points for OE efforts designed to enhance extrinsic motivation by strengthening those relations that are weak. The data can be effectively presented by indicating the potential for improving the motivating power of each outcome through comparisons of actual performance outcome value scores with maximum possible scores of 49 (obtained by multiplying the maximum outcome probability score of 7 by the maximum outcome value score of 7).

The outcomes which are the focus of these analyses are derived from preliminary observation and interview data. Eight or nine such outcomes were considered the optimal number for the respondent to deal with.⁹ Examples are given in the questionnaires. Some of these outcomes will need modification for application in other work settings.

SECTION VI. FEEDBACK

Feedback is represented in Figure 1 by a loop from Performance back to Work Group Members. Such feedback is critical if a worker is to adjust his work effort according to the demands of the situation and the perceptions and evaluations of other personnel. In this section, Part A asks about different sources of feedback in the organization under study; Part B asks about feedback in relation to specific tasks; Part D asks about feedback on the external impact of performance output. In all three parts, the questions ask (a) how often feedback is obtained and (b) how often it is desired. The satisfaction with each feedback referent can be determined by calculating the discrepancy between (a), how much there is, and (b) how much is preferred. These discrepancy scores are calculated, as described earlier, with the formula: Discrepancy score = 7 minus absolute value (difference between a and b). Adding discrepancy scores across all items in Section VI provides an overall measure of satisfaction with feedback.

⁸ Lawler, E. E. Motivation in work organizations. Monterey, Calif.: Brooks/Cole, 1973.

⁹ Miller, 1956, op. cit.

Part C of this section asks subordinates what percentage of feedback is received for good performance. Such feedback is essential to motivate workers to strive for and maintain high performance levels. The immediate supervisor is asked to estimate the percentage of total feedback he gives for good performance. Discrepancies in perceptions between the amount of feedback given and the amount received for good work can provide data for the OE strategy in which group discussions focus on evaluating meaningful feedback and clear performance standards.

SECTION VII. TRAINING

This section focuses on the initial training which provides personnel with the skills and information they need to perform their jobs, with particular emphasis on whether formal school training is seen as relevant to actual on-the-job performance. Part A rates the helpfulness of both school and on-the-job sources of training for the job in general, to provide data for comparative analyses. Actual training sources are identified for the specific Army organization under study.

Part B asks about the helpfulness of formal school training for doing specific tasks. It is useful to include tasks for which one suspects personnel are not adequately prepared in school; if this proves correct, these tasks should be the focus of on-site, on-the-job training programs to compensate for such inadequacies.

SECTION VIII. JOB IMPORTANCE

This section of the questionnaire focuses on the loop in Figure 1 extending from Supervision back to Work Group Members. The importance a worker attaches to his job can have a strong impact on his motivation to perform at a high level. This importance is greatly influenced by the worker's interactions with the superiors who structure his job and his Army duties.

Items in this section sample the respondent's perceptions of the importance of his job. A complete factor analysis with varimax rotation, using the operator sample, yielded two factors from the eight items in the section (Table 7). Item 1, describing the importance of the job to the soldier himself, loaded almost equally on both factors. Factor I dealt with the importance which he felt that higher echelons in the organization attached to his job. Factor II described the importance he attached to certain aspects of his performance. Specific tasks unique to the organization under examination must be entered as item content, except in the performance quality and quantity items.

ADDITIONAL SECTIONS UNIQUE TO SPECIFIC QUESTIONNAIRES

Our discussion so far has focused on the operator questionnaire, with references to the other two questionnaires when sections in them were similar or complementary to the section under discussion. These

Table 7

FACTOR STRUCTURE OF ITEMS IN SECTION VIII OF OPERATOR QUESTIONNAIRE
(N = 117)

Item	Factor I Importance Of Job to Higher Echelons	Factor II Importance of Performance Aspect
1. Importance of your job to success of agency mission	<u>.53</u>	<u>.61</u>
2. Importance of your job to your supervisor	<u>.78</u>	.05
3. Importance of your job to station command personnel	<u>.85</u>	.08
4. Importance of your job to higher echelons removed from the field station	<u>.78</u>	.13
5. Importance of searching to mission	.07	<u>.72</u>
6. Importance of copying to mission	.42	<u>.68</u>
7. Importance of achieving high quality output	-.19	<u>.74</u>
8. Importance of achieving high quantity output	.18	<u>.61</u>

Note. Item factor correlations $\geq .50$ are underlined.

other two questionnaires also contain sections unique to each of them, as part of the development of instrument content which is specific to each position examined. We have already mentioned how the tasks in Sections I and II differ as a function of position and how complementary sections and individual items provide supervisor-subordinate comparisons.

In addition, specific organizational problem areas may be unique to a given position. Such aspects of the job, which are identified through preliminary analyses, may be more thoroughly documented for OE program purposes by introducing specific material into the questionnaire. For example, the analyst position was found to have an ambiguous supervisory relationship. In order to document this problem area in some detail, two questions were introduced into Section IV, Part B (Performance Standards), of the analyst's questionnaire. One item (No. 4) was designed to determine whether the respondent believed he had more than one immediate supervisor, the other item (No. 5) whether he preferred having one supervisor. In addition, all items which dealt with the analyst's supervision referred to "supervisor(s)." A separate section on Job Assistance (Section VI) was added to document whether or not the worker believed he was receiving the right amount of help in performing various job duties and to identify the supervisory positions he perceived as being in charge of specific task areas.

The supervisor's questionnaire included, in addition to the complementary sections and items mentioned earlier, a special set of questions under Training (Section VIII). Preliminary observations had indicated a deficiency in formal management training for supervisors which these questions were designed to document, to support an OE strategy focused on providing such training.

These examples emphasize the approach followed throughout the development of the instruments--that is, to construct the instruments to be as content-specific as possible to the Army organization under study while still adhering to a prescribed set of organizational variables and questionnaire formats.

INTERNAL ANALYSES OF THE WORK ENVIRONMENT QUESTIONNAIRE

INTERCORRELATIONS AMONG QUESTIONNAIRE DIMENSIONS

Tables 8 and 9 show the intercorrelations among the factors and questionnaire dimensions which have been discussed so far. Table 8 focuses on the factor scores derived from Sections IV-B, V-A, and VIII; Table 9 deals with the discrepancy or difference score measures of satisfaction based on summaries across all items for each section which produced such scores (Sections II, IV-A, VI-A, VI-B, and VI-D). An examination of the pattern of intercorrelations for these two sets of dimensions indicates that, in general, the correlations range below .50. This means that, at most, 25% of common variance is accounted for between any two dimensions. Even where two dimensions seem highly related, such as $r = .81$ for supervisory structure and recognition, there is still

Table 8

INTERCORRELATIONS AMONG FACTOR SCORES FOR
SECTIONS IV-B, V-A, AND VIII

	Job Auton	Group Perf Orien	Job Activ Level	Superv/ Struct	Group Cohesion	Job Resp	Superv/ Consid	Group Perf	Job Import to Higher Echelons	Import of Perf Aspect
Job Autonomy	1.00	0.33	0.64	0.63	0.10	0.51	0.69	0.38	0.23	0.16
Group Performance Orientation		1.00	0.25	0.17	0.53	0.30	0.20	0.61	0.32	0.10
Job Activity Level			1.00	0.44	0.12	0.53	0.40	0.20	0.23	0.06
Supervision- Structure				1.00	0.09	0.44	0.80	0.27	0.41	0.37
Group Cohesion					1.00	0.13	0.14	0.42	0.06	0.13
Job Responsibility						1.00	0.41	0.25	0.19	0.35
Supervision- Consideration							1.00	0.34	0.35	0.47
Group Performance								1.00	0.26	0.22
Job Importance to Higher Echelons									1.00	0.41
Importance of Per- formance Aspect										1.00

Table 9

INTERCORRELATIONS AMONG DISCREPANCY SCORE SUMS FOR
SECTIONS II, IV-A, VI-A, VI-B, and VI-D

	Exerted Work Effort	Performance Standards	Sources of Feedback	Feedback on Tasks	Feedback on Output Impact
Exerted Work Effort	1.00	0.25	0.36	0.28	0.18
Performance Standards		1.00	0.46	0.43	0.39
Sources of Feedback			1.00	0.59	0.68
Feedback on Tasks				1.00	0.54
Feedback on Output Impact					1.00

justification for retaining both dimensions. The difference in the content focus of the different dimensions contributes extremely useful data for the intervention and evaluation strategies of an OE program.

TEST-RETEST RELIABILITIES

Test-retest reliability data were collected for the operator questionnaire at a one-week interval. Table 10 provides a representative sampling of the reliability coefficients for single items, discrepancy scores, and factor scores.

Single test item measures of the activity variables in Sections I, II, III, and V demonstrated a considerable range of reliabilities as a function of the specific activity considered. Median reliabilities were in the .60s and .70s. The reliability coefficients would be expected to be somewhat conservative because a number of OE activities in the organization during the interval between administrations could have attenuated the test-retest relation. In general, the data indicate that adequate reliabilities can be obtained for individual item measures of specific work activity and perceptions of valued outcomes. However, caution must be taken to insure that item measures with low reliabilities are not relied on in isolation from other supportive data.

The discrepancy score sums showed adequate reliabilities, in the .60 to .80 range, as did the majority of the factor scores. A notable exception was Factor II in Section V, Part A (the Job Activity Level in the Satisfaction with Job Itself section). This three-item factor yielded a zero reliability coefficient. An internal analysis of the individual item reliabilities within the factor showed that the lack of reliability was due to item No. 4 (extent to which number of interruptions were perceived to be too much, just right, or too little), which had a reliability of $-.08$. Additional analyses are needed to determine whether this low reliability reflected true variance or error variance.

VALIDATION OF THE WEQ

To validate attitude measures such as the WEQ, the most relevant criteria must be selected from among the many quantitative measures of worker effectiveness which are available in a given Army work setting. Previous attempts to validate attitude measures against performance criteria have not been very successful in finding strong relations. Partly, criteria must be clearly delineated to reflect meaningful variance in attitude measures.¹⁰ Many of these criteria involve aspects

¹⁰ Herman, J. B. Are situational contingencies limiting job attitude-job performance relationships? Organizational Behavior and Human Performance, 1973, 10, 208-224.

of behavior or performance which the individual worker does not control. Various situational restraints or ability factors also attenuate relations between the attitude measures and the criteria. The dimensions of work attitude and perception measured in the WEQ should be related most directly to indices of the actual work effort exerted by a soldier. In contrast, performance criteria which focus on quantity and quality of worker output and which incorporate worker skills and abilities are most useful as predictors of need satisfaction and overall affective satisfaction with the job.

Table 10
 SAMPLE OF TEST-RETEST RELIABILITIES
 (N = 25)

Variable	Reliability	Range
<u>Single Item Sections</u>		
Section I. Your Job Content--% Estimates of Effort (Median r for 9 activities)	.65	.35 to .93
Section II. More on Your Job Content (Median r for 9 activities)		
a. Actual time spent	.69	.56 to .83
b. Desired time spent	.64	.48 to .84
c. Activity enjoyment	.75	.34 to .85
d. Activity importance to performance	.72	.49 to .80
Section III. Your Supervisor's Job--% Estimates of Effort (Median r for 7 activities)	.57	.41 to .89
Section V. Part B. Performance--Valued Outcome Relationships (Median r for 9 outcomes)	.53	.28 to .66
Section V. Part C. Outcome Values (Median r for 9 outcomes)	.58	.25 to .81
<u>Discrepancy Score Sections</u>		
Section IV. Part A. Sum of Actual vs. Desired Use of Performance Standards for 10 Items	.81	

Table 10 (Continued)

Variable	Reliability	Range
Section VI. Part A. Sum of Actual vs. Desired Feedback by Source for 6 Items	.62	
Section VI. Part B. Sum of Actual vs. Desired Feedback by Job Activity for 2 Items	.60	
Section VI. Part D. Sum of Actual vs. Desired Feedback by Results for 2 Items	.72	
<u>Factor Score Sections</u>		
Section IV. Part B. Satisfaction		
Factor I - Supervision - Structure (9 items)	.81	
Factor II - Supervision - Consideration (5 items)	.82	
Factor III - Group Cohesion (2 items)	.77	
Factor IV - Group Performance (2 items)	.78	
Factor V - Job Responsibility (3 items)	.67	
Section V. Part A. Satisfaction with Job Itself		
Factor I - Job Autonomy (4 items)	.67	
Factor II - Job Activity Level (3 items)	.00	
Factor III - Group Performance Orientation (2 items)	.56	
Section VIII. Job Importance		
Factor I - Importance of Job to Higher Echelons (3 items)	.75	
Factor II - Importance of Performance Aspects (4 items)	.82	

Note. Test-retests took place at a one-week interval.

The effort criteria should focus on those work activities which are most under the individual's control and which represent his own personal motivation to perform his job. Three such measures were identified for the WEQ validation. Two of these measures use computer-monitored data describing worker-initiated activity: (1) the frequency with which the activity occurs (number of locations attempted) and (2) the time spent performing this activity (time spent locating). Validation analyses were based on a full month's data in order to minimize variance resulting from day-to-day fluctuations in time spent on the activity. Month-to-month reliability was $r = .80$ for number of locations attempted and $r = .63$ for time spent locating. The third measure, the perceived time or effort criterion, combined respondent questionnaire estimates (Section I) of actual effort exerted locating assigned and nonassigned cases and using provided work aids. This measure was included because self-estimates of effort exerted would seem to best represent the soldier's own internal motivation.¹¹

Data on the various attitude dimensions and the perceived effort criterion were collected with the WEQ twice, 6 months apart. Data on the two computer-monitored effort criteria were collected for the four weeks following each administration of the WEQ. Table 11 presents the attitude-criterion correlations for these two sets of data points. These analyses show the strongest correlation for the attitude factors validated against the perceived effort criterion. The two Supervision factors from Section IV-B show significant correlations for both administrations as does the Importance of Performance Aspect from Section VIII. In addition, all other factors are significantly related to this criterion in the second administration. Additional support for the validity of the two supervision factors and the Group Performance, Job Responsibility, and Importance of Performance Aspect factors is found in correlations involving the two computer-monitored effort measures.

The attitude measures based on discrepancy scores did not correlate as strongly with the effort criteria. Two significant correlations were found for the attitude dimensions of Job Autonomy, Performance Standards, and Feedback from Various Sources. None of the other four dimensions showed more than one significant correlation.

These analyses demonstrate that many of the attitude dimensions in the questionnaire were significantly related to selected effort criteria in this specific Army organizational setting. The attitude factor dimensions and the perceived effort criterion were most strongly related. No attitude dimension should be eliminated because it failed to demonstrate its validity in this one set of analyses. Only three effort criteria

¹¹ Mitchell, T. R., and Albright, D. W. Expectancy theory predictions of the satisfaction, effort, performance, and retention of naval aviation officers. Organizational Behavior and Human Performance, 1972, 8, 1-20.

Table 11

CORRELATION OF WEQ ATTITUDE DIMENSIONS AGAINST CRITERIA OF WORK EFFORT
(ADMIN. 1, N = 70; ADMIN. 2, N = 57)

WEQ Attitude Dimensions	Number		Time Spent Locating (Computer Monitor)		Perceived Time Spent Locating And Using Work Aids	
	Admin. 1	Admin. 2	Admin. 1	Admin. 2	Admin. 1	Admin. 2
<u>Attitude Factors</u>						
Supervision - Structure	.18	-.06	.23*	.04	-.22*	-.57**
Supervision - Consideration	.13	.20*	.09	.17	-.34**	.36**
Group Cohesion	.07	.05	-.08	-.01	.00	.34**
Group Performance	.17	.30**	.16	.02	.16	.33**
Job Responsibility	-.04	.22**	-.01	-.06	.08	.25*
Job Importance to Higher Echelon	-.09	.07	-.04	.08	-.02	.39**
Importance of Performance Aspect	-.04	.14	-.18	.27*	.29**	.21*
<u>Discrepancy Score Dimensions</u>						
Job Autonomy	.06	.22*	.12	.12	.23*	.06
Job Activity Level	.11	.22*	.10	.04	.00	.05
Group Performance Orientation	.01	.15	.06	-.02	.04	.22*
Performance Standards	.26*	.10	.37**	.15	.10	-.07
Feedback from Various Sources	.27**	.09	.28**	.03	-.15	-.08
Feedback on Specific Activities	.17	.07	-.04	-.12	-.08	-.05
Feedback on Product Utilization	.20*	.13	.14	-.06	-.05	.03

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

in one organizational setting were examined here; other criteria and settings are required to fully determine the degree of validity of the various dimensions and, even then, certain dimensions will be valid indicators of work effort only in certain work settings.

In addition, a significant correlation for an attitude dimension in one WEQ administration and not in the other does not reduce the validity of that dimension. In a dynamic organization such as the one which was the focus of this study, attitudes change in clarity and intensity as a function of organizational changes. Six months elapsed between the two data collections for this study. In this interval, an extensive organizational effectiveness program and a complete change in organization structure were introduced. It is likely that both of these had an effect on the configuration of soldier attitudes and work effort which altered the pattern of correlations for the second WEQ administration.

WEQ DIFFERENTIATIONS BETWEEN GROUPS

Instruments for an OE program must be designed so that the attitude dimensions are sensitive to meaningful differences between respondents or work groups. Table 12 compares the mean attitude scores on the five factors in Section IV-B of the operator questionnaire across four work groups. One-way analyses of variance conducted for each factor yield significant F-values for three of the five factors. Groups 1 and 4 consistently scored higher than groups 2 and 3 on Supervision-Consideration, Group Performance, and Job Responsibility.

These data indicate that work groups do vary significantly across attitude dimensions measured by the WEQ. Although these dimensions were found to be factorally unique, groups should still vary consistently across them. When a work group is poorly supervised or affected by other internal task or interpersonal difficulties, the symptoms should be reflected across a range of attitude dimensions. Conversely, a healthy work group should also demonstrate its healthy condition fairly consistently across a range of group member attitudes and various aspects of the group environment.

DISCUSSION AND CONCLUSIONS

The WEQ has been developed in one Army organizational setting. Additional research is testing the instruments in other Army work settings. As indicated earlier, these questionnaires were designed to be usable with a minimum of alteration in a wide range of Army organizations. The major modifications from one situation to another should entail changes in item content to adapt to unique aspects of the environment under study. The work environment variables outlined in Figure 1, with the focus on worker motivation, should continue to guide future refinement of the instruments. Supervision, communication, interpersonal group processes, training, and the nature of the job itself are encompassed in the work environment dimensions which are central to an OE program.

Table 12

SENSITIVITY OF FACTOR SCORES TO WORK GROUP DIFFERENCES

Factor	Means				F-Value
	Group 1 (N = 8)	Group 2 (N = 10)	Group 3 (N = 6)	Group 4 (N = 7)	
Supervision- Structure	35.88	29.30	31.75	35.57	0.88
Supervision- Consideration	23.50	19.05	19.25	26.14	6.36**
Group Cohesion	10.38	9.40	7.67	9.14	2.67
Group Performance	8.44	5.40	5.42	7.71	3.32*
Job Responsibility	13.06	9.15	8.33	12.36	3.80*

Based on one-way analyses of variance with unequal cell Ns.

* $p < .05$

** $p < .01$

Additional validation of the questionnaire dimensions against a range of effort criteria in other Army work settings is required. More research is necessary to determine the usefulness of discrepancy measures of attitudes toward aspects of the work environment; support was not strong for their validity or reliability in this research. However, the five factor dimensions derived from Section IV-B proved to be strong attitude measures as indicated by their validity, reliability, and sensitivity to group differences.

We have described the work environment questionnaires as diagnostic instruments whose function is to identify organizational problem areas. They also aid in evaluating an OE program where various OE techniques have been implemented. The questionnaires can be used in a pre-program/post-program design and/or an experimental group-control group comparison. The data would be examined for significant differences on attitude and perceptual dimensions which the OE strategies were intended to address. Such analyses evaluated the pilot OE program implemented at the Army field setting which was the focus of this study.

In conclusion, this report has described the development of specific questionnaire formats and items to be used as integral components of an OE program in Army organizations. These instruments can identify organizational problem areas and evaluate the usefulness of OE strategies intended to reduce the problems, insuring that OE programs are providing optimum results in terms of enhancing organizational effectiveness through improved soldier job satisfaction and work effort.

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APPENDIXES

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BIOGRAPHICAL DATA

1. What is your current MOS? _____
2. How long have you been in the military?
 _____ Years _____ Months
3. What is your rank? (Circle one.)
 0. PVT 3. SP5 6. Other (Specify) _____
 1. PFC 4. SSG _____
 2. SP4 5. SFC
4. Sex? (Circle one.)
 (0). Male (1). Female
5. How many months have you been assigned to this site?
 _____ Months
6. a. Have you held more than one assigned job since coming to this site? (Check one.)
 (0). _____ Yes (1). _____ No
- b. How long have you been in your present job since coming to this site?
 _____ Months
7. What is your Shift or Team number? (Circle one.)
 (0). Shift 1 (2). Shift 3 (4). Team 1 (6). Other (Specify) _____
 (1). Shift 2 (3). Shift 4 (5). Team 2 _____
8. What is your position? _____
9. What is your Company? (Circle one.)
 (0). A (1). B (2). C (3). D (4). Other (Specify) _____
10. Where were you assigned just before coming to this site?

SECTION I. YOUR JOB CONTENT

INSTRUCTIONS: THIS SECTION FOCUSES ON A NUMBER OF ACTIVITIES WHICH YOU PERFORM DURING AN AVERAGE WORKDAY. PLEASE LOOK OVER THESE ACTIVITIES AND THEN ESTIMATE AS WELL AS YOU CAN THE PERCENTAGE OF TIME YOU SPEND PERFORMING EACH ONE. IN DECIDING ON YOUR RESPONSES, YOU SHOULD CONSIDER YOUR ACTIVITY DURING A WORKDAY WHEN TRAFFIC IS FAIRLY HEAVY. YOU SHOULD ALSO FOCUS ON THE OPERATOR POSITION WITH WHICH YOU ARE MOST FAMILIAR. MAKE CERTAIN THAT YOUR PERCENT TIME ESTIMATES APPROXIMATE 100%. YOUR CAREFUL AND HONEST RESPONSE TO EACH ITEM WOULD BE MOST HELPFUL.

<u>% TIME</u>	<u>ACTIVITY</u>
_____ %	Searching for assigned cases.
_____ %	Searching for nonassigned or unidentified cases.
_____ %	Copying cases.
_____ %	Monitoring cases.
_____ %	Servicing cases.
_____ %	Giving and receiving case information with other personnel.
_____ %	Using work aids (e. g. , log book or pass-on book).
_____ %	Resting between cases on position.
_____ %	Taking work breaks away from position including meal time.
<u>100</u> %	<u>TOTAL</u>

SECTION II. MORE ON YOUR JOB CONTENT

HERE YOU ARE REQUESTED TO PROVIDE CERTAIN ADDITIONAL INFORMATION REGARDING THE SAME SET OF ACTIVITIES LISTED IN SECTION I. THERE ARE FOUR ITEMS LISTED FOR EACH ACTIVITY. PLEASE BE CAREFUL TO ANSWER EVERY ITEM FOR EACH ACTIVITY AS CAREFULLY AS POSSIBLE. YOU SHOULD CIRCLE THE ONE NUMBER FROM 1 TO 7 WHICH BEST REPRESENTS YOUR VIEWS.

ACTIVITY 1: Searching for assigned cases.

1. The amount of time you actually spend performing this activity in a workday.

7	6	5	4	3	2	1
Very Much Time			Some Time			No Time

2. The amount of time you would like to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very Much Time			Some Time			No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very Much			Somewhat			Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very Important			Somewhat			Very Unimportant

ACTIVITY 2: Searching for nonassigned or unidentified cases.

1. The amount of time you
- actually
- spend performing this activity in a weekday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very Much			Somewhat			Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very						
Important		Somewhat				Very Unimportant

ACTIVITY 3: Copying cases.

1. The amount of time you
- actually
- spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very Much			Somewhat			Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very						
Important		Somewhat				Very Unimportant

ACTIVITY 4: Monitoring cases.

1. The amount of time you
- actually
- spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very						
Much		Somewhat				Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very						
Important		Somewhat				Very Unimportant

ACTIVITY 5: Servicing cases.

1. The amount of time you
- actually
- spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very						
Much		Somewhat				Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very						
Important		Somewhat				Very Unimportant

ACTIVITY 6: Giving and receiving case information with other personnel.

1. The amount of time you
- actually
- spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very Much			Somewhat			Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very						
Important		Somewhat				Very Unimportant

ACTIVITY 7: Using work aids (e.g., log book or pass-on book).

1. The amount of time you
- actually
- spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very						
Much Time		Some Time				No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very Much			Somewhat			Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very						
Important		Somewhat				Very Unimportant

ACTIVITY 8: Resting between cases on position.

1. The amount of time you
- actually
- spend performing this activity in a workday.

7	6	5	4	3	2	1
Very Much Time			Some Time			No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very Much Time			Some Time			No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very Much			Somewhat			Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very Important			Somewhat			Very Unimportant

ACTIVITY 9: Taking work breaks from position including mealtime.

1. The amount of time you
- actually
- spend performing this activity in a workday.

7	6	5	4	3	2	1
Very Much Time			Some Time			No Time

2. The amount of time you
- would like
- to spend performing this activity in a workday.

7	6	5	4	3	2	1
Very Much Time			Some Time			No Time

3. How much do you enjoy performing the activity?

7	6	5	4	3	2	1
Very Much			Somewhat			Not At All

4. How important do you believe the activity is to superior job performance?

7	6	5	4	3	2	1
Very Important			Somewhat			Very Unimportant

SECTION III. YOUR SUPERVISOR'S JOB

LISTED BELOW ARE A SERIES OF ACTIVITIES WHICH YOUR SUPERVISOR MIGHT PERFORM DURING AN AVERAGE WORKDAY. PLEASE EXAMINE ALL OF THESE ACTIVITIES AND THEN ESTIMATE THE PERCENTAGE OF HIS/HER TOTAL WORKDAY WHICH HE/SHE SPENDS PERFORMING EACH ACTIVITY. YOUR TOTAL PERCENTAGES SHOULD APPROXIMATE 100%.

<u>TIME</u>	<u>ACTIVITY</u>
_____ %	Monitoring equipment.
_____ %	Deciding case assignments.
_____ %	Copying cases.
_____ %	Giving and receiving case information with other personnel.
_____ %	Monitoring the activities of ops and the analyst.
_____ %	Resting from job duties while at his job position.
_____ %	Taking breaks away from his job position including meal time.
<u>100</u> %	<u>TOTAL</u>

SECTION IV. PERFORMANCE STANDARDS

PART A. LISTED BELOW ARE A NUMBER OF STANDARDS WHICH MIGHT BE USED BY YOUR SUPERIORS TO JUDGE YOUR PERFORMANCE. WE WOULD LIKE YOU TO INDICATE ON THE SCALES PROVIDED FOR EACH STANDARD (a) HOW MUCH YOU THINK THE STANDARD IS CURRENTLY USED TO RATE YOUR PERFORMANCE AND (b) HOW MUCH YOU THINK THAT IT SHOULD BE USED TO JUDGE HOW WELL YOU ARE PERFORMING. PLEASE CIRCLE THE ONE APPROPRIATE NUMBER ON EACH RATING SCALE.

Standard 1: How well I pull and log call signs.

a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 2: How much traffic I copy.

a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 3: How good my copy is.

a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 4: How well I recognize reportable items.

- a. How much IS the standard currently used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |
- b. How much SHOULD the standard be used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |

Standard 5: How well I react to unusual conditions.

- a. How much IS the standard currently used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |
- b. How much SHOULD the standard be used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |

Standard 6: How effectively I communicate job-related information with other personnel.

- a. How much IS the standard currently used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |
- b. How much SHOULD the standard be used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |

Standard 7: How much time I spend searching for cases.

- a. How much IS the standard currently used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |
- b. How much SHOULD the standard be used?
- | | | | | | | |
|--------------|---|---|----------|---|---|------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Heavily | | | Somewhat | | | Not At All |

Standard 8: My personal appearance.a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 9: How well I assist other operators.a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 10: How much time I actually spend working each day.a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

SECTION IV.

PART B. FOR EACH OF THE FOLLOWING QUESTIONS, PLEASE CIRCLE THE ONE NUMBER WHICH BEST REFLECTS YOUR FEELINGS:

1. My job performance is meaningfully evaluated by my immediate supervisor.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

2. My supervisor sets clear goals for me in my present job.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

3. My supervisor is very much concerned with the quality of work I turn out in my present job.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

4. My fellow operators do not encourage superior performance.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

5. My supervisor goes out of his way to help me do an outstanding job.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

6. My supervisor conveys to me clear, uniform standards which he uses to evaluate my performance.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

7. My job makes good use of my abilities.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

8. My job duties are clearly defined by my supervisor.

7	6	5	4	3	2	1
Strongly			Undecided			Strongly
Agree						Disagree

9. My group works well together as a team.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
10. The most deserving persons are promoted.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
11. There are other agency jobs which would better utilize my skills and abilities.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
12. Members of my work group stick together.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
13. My supervisor encourages me to help in developing work methods and job procedures.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
14. I now feel my job is as important as I was led to believe in my initial training.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
15. My supervisor makes clear to me what aspects of my performance he considers to be most important.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
16. My supervisor assigns me the tasks that I am best at doing.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |

17. If I perform outstandingly in my present job, my supervisor is likely to recommend me for an award for my performance.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
18. I receive clear job instructions from my supervisor.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
19. My supervisor properly monitors my work performance.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
20. Instructions given to me by my supervisor never conflict with information I receive from other sources.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
21. If I perform poorly in my job, my supervisor is likely to correct my behavior.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
22. My supervisor has clearly defined areas of responsibility.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
23. My fellow operators emphasize superior performance.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
24. I have the opportunity on my job to work as hard as I want doing the things that I want.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
25. My supervisor is likely to personally commend me for outstanding performance.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |

SECTION V. FEELINGS ABOUT THE JOB ITSELF

PART A. PLEASE CIRCLE THE ONE APPROPRIATE NUMBER ON EACH RATING SCALE BELOW.

1. The degree to which my job keeps me busy.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
2. The opportunity I have to use my own judgment and initiative.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
3. The number of interruptions that occur in my daily routine.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
4. The extent to which my supervisor pushes for increased productivity from me.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
5. The extent to which my supervisor encourages me to help in developing work methods and job procedures.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
6. The extent to which my supervisor asks my opinion when a problem related to my work arises.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
7. The extent to which my supervisor lets me do my work the way I think is best.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
8. The extent to which my work group encourages superior performance.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
9. The extent to which my discussions with other members of my work group assist me in performing my job.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little
10. The extent to which I make responsible decisions on my job.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little

SECTION V.

PART B. LISTED BELOW ARE A NUMBER OF OUTCOMES WHICH MIGHT RESULT IF YOU PERFORM YOUR JOB WELL. YOU ARE TO RATE HOW STRONG A RELATIONSHIP YOU FEEL CURRENTLY EXISTS BETWEEN OUTSTANDING PERFORMANCE AND ATTAINMENTS OF EACH OF THE OUTCOMES. CIRCLE ONE NUMBER ONLY FOR EACH ITEM.

1. Outstanding Performance and a Promotion.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

2. Outstanding Performance and Increased Job Responsibility.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

3. Outstanding Performance and Praise from Fellow Operators.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

4. Outstanding Performance and a Letter of Commendation.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

5. Outstanding Performance and Acknowledgement from your Supervisor.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

6. Outstanding Performance and 3-Day Pass.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

7. Outstanding Performance and More Close Contact with Fellow Operators.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

8. Outstanding Performance and More Free Time On-the-Job.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

9. Outstanding Performance and a Commendation from the Ops Office.

7	6	5	4	3	2	1
Very Much Related			Somewhat Related			Not At All Related

SECTION V.

PART C. HERE YOU ARE TO RATE THE IMPORTANCE TO YOU PERSONALLY OF EACH OF THE OUTCOMES WHICH WERE LISTED IN THE PREVIOUS SECTION. CIRCLE ONE NUMBER ONLY FOR EACH ITEM.

- | | | | | | | | |
|--|---|---|---|--------------------|---|---|--------------------|
| 1. Acknowledgement from your supervisor. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 2. A 3-day pass. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 3. Free time on-the-job. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 4. Close contact with fellow operators. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 5. A promotion. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 6. Praise from fellow operators. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 7. A letter of commendation. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 8. Increased job responsibility. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |
| 9. A commendation from the ops office. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | | Somewhat Important | | | Not Very Important |

SECTION VI. FEEDBACK

PART A. PLEASE INDICATE ON THE SCALES PROVIDED BELOW (a) HOW MUCH FEEDBACK ON THE ADEQUACY OF YOUR PERFORMANCE YOU ACTUALLY RECEIVE FROM EACH OF THE LISTED SOURCES AND (b) HOW MUCH FEEDBACK YOU WOULD LIKE TO RECEIVE FROM EACH OF THESE SOURCES. CIRCLE ONE NUMBER ONLY FOR EACH ITEM.

1. Feedback from your mode controller.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently would you like feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

2. Feedback from your fellow ops.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently would you like feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

3. Feedback from the analyst.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently would you like feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

4. Feedback from ops and management division officers.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently would you like feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

SECTION VI.

PART B. PLEASE INDICATE BELOW (a) HOW MUCH FEEDBACK YOU ACTUALLY RECEIVE ON THE ADEQUACY OF YOUR PERFORMANCE OF EACH OF THE LISTED WORK ACTIVITIES AND (b) HOW MUCH FEEDBACK YOU FEEL THAT YOU NEED TO PERFORM YOUR JOB ADEQUATELY. CIRCLE ONE NUMBER ONLY FOR EACH ITEM.

1. Feedback on searching for cases.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently do you really need feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

2. Feedback on copying and servicing cases.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently would you like this feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

SECTION VI.

PART C. WHAT PERCENT OF THE FEEDBACK YOU RECEIVE IS FOR GOOD PERFORMANCE? _____ %

SECTION VI.

PART D. PLEASE INDICATE (a) HOW MUCH FEEDBACK YOU ACTUALLY RECEIVE REGARDING HOW YOUR COPY IS UTILIZED AND (b) HOW MUCH FEEDBACK YOU WOULD LIKE TO HAVE. CIRCLE ONE NUMBER ONLY FOR EACH ITEM.

1. The extent to which you are aware of the content of case reports which have used your copy.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently would you like this feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

2. The extent to which you are aware of the use of your case copy by management.

a. How frequently is there feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

b. How frequently would you like this feedback?

7	6	5	4	3	2	1
Very Often			Sometimes			Never

SECTION VII. TRAINING

PART A. PLEASE RATE THE CONTRIBUTIONS WHICH EACH OF THE FOLLOWING MADE IN PROVIDING YOU WITH THE SKILLS AND INFORMATION NECESSARY TO SUCCESSFULLY PERFORM YOUR JOB BY CIRCLING THE ONE APPROPRIATE NUMBER. DO NOT RATE ANY TYPES OF TRAINING NOT PROVIDED TO YOU.

1. Formal Training School.

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

2. Formal Classroom On-Site Instruction

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

3. Formal On-Job-Training

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

4. "Sidesaddle" On-Job-Training

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

5. Discussions with Supervisor

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

6. Informal Discussions with Fellow Operators

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

SECTION VII.

PART B. PLEASE RATE THE HELPFULNESS OF YOUR FORMAL SCHOOL TRAINING IN PREPARING YOU TO PERFORM EACH OF THE FOLLOWING WORK ACTIVITIES BY CIRCLING ONE NUMBER FROM 1 TO 7 ON THE RATING SCALE.

1. Searching for cases.

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

2. Copying and servicing cases.

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

SECTION VIII. JOB IMPORTANCE

PLEASE RATE HOW IMPORTANT YOU FEEL EACH ITEM LISTED BELOW IS BY CIRCLING ONE NUMBER FROM 1 TO 7 ON THE RATING SCALE.

1. How important do you feel your job is to the success of the agency mission?

7	6	5	4	3	2	1
Very Important			Moderately Important			Very Unimportant

2. How important do you feel your supervisor believes your job is to the success of the agency mission?

7	6	5	4	3	2	1
Very Important			Moderately Important			Very Unimportant

3. How important do you feel station command personnel believe your job is to the success of the agency mission?

7	6	5	4	3	2	1
Very Important			Moderately Important			Very Unimportant

4. How important do you feel higher echelons removed from the field station believe your job is to the success of the agency mission?

7	6	5	4	3	2	1
Very Important			Moderately Important			Very Unimportant

5. How important do you feel searching for new cases is to the success of the agency mission?
- | | | | | | | |
|----------------|---|---|----------------------|---|---|------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | Moderately Important | | | Very Unimportant |
6. How important do you feel copying your assigned cases is to the success of the agency mission?
- | | | | | | | |
|----------------|---|---|----------------------|---|---|------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | Moderately Important | | | Very Unimportant |
7. How important to you is achieving high quality output in your job?
- | | | | | | | |
|----------------|---|---|----------------------|---|---|------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | Moderately Important | | | Very Unimportant |
8. How important to you is achieving high quantity output in your job?
- | | | | | | | |
|----------------|---|---|----------------------|---|---|------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Very Important | | | Moderately Important | | | Very Unimportant |

SECTION 1. YOUR JOB CONTENT

INSTRUCTIONS: THIS SECTION FOCUSES ON A NUMBER OF ACTIVITIES WHICH YOU PERFORM DURING AN AVERAGE WORKDAY. PLEASE LOOK OVER THESE ACTIVITIES AND THEN ESTIMATE AS WELL AS YOU CAN THE PERCENTAGE OF TIME YOU SPEND PERFORMING EACH ONE. IN DECIDING ON YOUR RESPONSE, YOU SHOULD CONSIDER YOUR ACTIVITY DURING A WORKDAY WHEN TRAFFIC IS FAIRLY HEAVY. MAKE CERTAIN THAT YOUR PERCENT TIME ESTIMATES APPROXIMATE 100%. YOUR CAREFUL AND HONEST RESPONSE TO EACH ITEM WOULD BE MOST HELPFUL.

<u>% TIME</u>	<u>ACTIVITY</u>
_____ %	Identifying cases.
_____ %	Analyzing copy.
_____ %	Initiating reports.
_____ %	Giving and receiving case information with other personnel.
_____ %	Resting from job duties while in activity center.
_____ %	Taking breaks away from activity center including meal time.
<u>100</u> %	<u>TOTAL.</u>

* Only those sections which differ significantly in content or format from the operator questionnaire are presented.

7. My job makes good use of my abilities.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
8. My job duties are clearly defined by my supervisor(s).
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
9. My activity center works well together as a team.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
10. The most deserving persons are promoted.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
11. There are other agency jobs which would better utilize my skills and abilities.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
12. Members of my activity center stick together.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
13. My supervisor(s) encourages me to help in developing work methods and job procedures.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
14. I now feel my job is as important as I was led to believe in my initial training.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |
15. My supervisor(s) is likely to personally commend me for outstanding performance.
- | | | | | | | |
|----------|---|---|-----------|---|---|----------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly | | | Undecided | | | Strongly |
| Agree | | | | | | Disagree |

16. My supervisor(s) assigns me the tasks that I am best at doing.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
17. I receive clear job instructions from my supervisor(s).
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
18. My supervisor(s) properly monitors my work performance.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
19. Instructions given to me by my superiors never conflict.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
20. If I perform poorly in my job, my supervisor(s) is likely to correct my behavior.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
21. My supervisor(s) has clearly defined areas of responsibility.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
22. I have the opportunity on my job to work as hard as I want, doing the things that I want.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |

SECTION I. YOUR JOB CONTENT

INSTRUCTIONS: THIS SECTION FOCUSES ON A NUMBER OF ACTIVITIES WHICH YOU PERFORM DURING AN AVERAGE WORKDAY. PLEASE LOOK OVER THESE ACTIVITIES AND THEN ESTIMATE AS WELL AS YOU CAN THE PERCENTAGE OF TIME YOU SPEND PERFORMING EACH ONE. IN DECIDING ON YOUR RESPONSES, YOU SHOULD CONSIDER YOUR ACTIVITY DURING A WORKDAY WHEN TRAFFIC IS FAIRLY HEAVY. YOU SHOULD ALSO FOCUS ON THE OPERATOR POSITION WITH WHICH YOU ARE MOST FAMILIAR. MAKE CERTAIN THAT YOUR PERCENT TIME ESTIMATES APPROXIMATE 100%. YOUR CAREFUL AND HONEST RESPONSE TO EACH ITEM WOULD BE MOST HELPFUL.

<u>% TIME</u>	<u>ACTIVITY</u>
_____ %	Monitoring equipment.
_____ %	Deciding case assignments.
_____ %	Copying cases.
_____ %	Giving and receiving case information with other personnel.
_____ %	Monitoring the activities of ops and the floor analyst.
_____ %	Resting from job duties while at position.
_____ %	Taking breaks away from position including meal time.
<u>100</u> %	TOTAL

* Only those sections which differ significantly in content or format from the operator questionnaire are presented.

SECTION III. OPERATOR'S JOB

LISTED BELOW ARE A SERIES OF ACTIVITIES WHICH YOUR OPERATORS MIGHT PERFORM DURING AN AVERAGE WORKDAY. PLEASE EXAMINE ALL OF THESE ACTIVITIES AND THEN ESTIMATE THE PERCENTAGE OF THEIR TOTAL WORKDAY WHICH THEY SPEND PERFORMING EACH ACTIVITY. YOUR TOTAL PERCENTAGES SHOULD APPROXIMATE 100%.

<u>TIME</u>	<u>ACTIVITY</u>
_____ %	Searching for assigned cases.
_____ %	Searching for nonassigned or unidentified cases.
_____ %	Copying cases.
_____ %	Monitoring cases.
_____ %	Servicing cases.
_____ %	Giving and receiving case information with other personnel.
_____ %	Using work aids (e. g. , log book, pass-on book).
_____ %	Resting between cases on position.
_____ %	Taking work breaks away from position including meal time.
_____ 100 %	TOTAL

Standard 2: How much traffic they copy.

a. How much IS the standard currently used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

b. How much SHOULD the standard be used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

Standard 3: How good their copy is.

a. How much IS the standard currently used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

b. How much SHOULD the standard be used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

Standard 4: How well they recognize reportable items.

a. How much IS the standard currently used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

b. How much SHOULD the standard be used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

Standard 5: How well they react to unusual conditions.

a. How much IS the standard currently used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

b. How much SHOULD the standard be used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

Standard 6: How effectively they communicate job-related information with other personnel.

a. How much IS the standard currently used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

b. How much SHOULD the standard be used?

7 6 5 4 3 2 1
Very Heavily Somewhat Not At All

Standard 7: How much time they spend searching for cases.

a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 8: Their personal appearance.

a. How much IS this standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 9: How well they assist other operators.

a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

Standard 10: How much time they actually spend working each day.

a. How much IS the standard currently used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

b. How much SHOULD the standard be used?

7	6	5	4	3	2	1
Very Heavily			Somewhat			Not At All

SECTION V.

PART C. FOR EACH OF THE FOLLOWING QUESTIONS, PLEASE CIRCLE THE ONE NUMBER WHICH BEST REFLECTS YOUR FEELINGS. IF AN ITEM IS NOT APPLICABLE TO YOUR JOB, LEAVE IT BLANK.

1. My supervisor conveys to me clear, uniform standards which he uses to evaluate my performance.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

2. My supervisor goes out of his way to help me do an outstanding job.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

3. My operators emphasize superior performance.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

4. I feel that my job duties have been clearly defined by my supervisor.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

5. My operators suck together.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

6. My supervisor encourages me to help in developing work methods and job procedures.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

7. My job makes good use of my abilities.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

8. My group works well together as a team.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

9. I now feel that my job is as important as I was led to believe when I was first assigned.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
10. My supervisor makes clear to me what aspects of my performance he considers to be most important.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
11. My supervisor is likely to personally commend me for outstanding performance.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
12. I receive clear job instructions from my supervisor.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
13. Instructions given to me by my supervisor never conflict with information I receive from other sources.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
14. My supervisor has clearly defined areas of responsibility.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
15. I have clearly defined areas of responsibility.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
16. I am very much concerned with the quality of work turned out by my operators.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |
17. I am very much concerned with the quantity of work turned out by my operators.
- | | | | | | | |
|----------------|---|---|-----------|---|---|-------------------|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Strongly Agree | | | Undecided | | | Strongly Disagree |

18. I make clear to my operators what aspects of their performance I consider to be most important.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

19. I commend operators personally for outstanding performance.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

20. I am able to assign the operators the tasks that they are best at doing without interference from my superiors.

7	6	5	4	3	2	1
Strongly Agree			Undecided			Strongly Disagree

SECTION VI. FEELINGS ABOUT THE JOB ITSELF

PART A. PLEASE CIRCLE THE ONE APPROPRIATE NUMBER ON EACH RATING SCALE BELOW.

1. The degree to which my job keeps me busy.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little

2. My work load in comparison with the work load of other supervisors.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little

3. The opportunity I have to use my own judgment and initiative.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little

4. The number of interruptions that occur in my daily routine.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little

5. The amount of pressure on me for speed.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little

6. The amount of pressure on me for accuracy.

7	6	5	4	3	2	1
Too Much			Just Right			Too Little

SECTION VII.

PART C. WHAT PERCENT OF THE FEEDBACK WHICH YOU GIVE IS FOR GOOD PERFORMANCE?

_____ %

SECTION VIII. TRAINING

1. Were you given formal training in the job duties of your position?
(Check one.)
 Yes (0.) No (1.)
2. Were you given any formal management training to be a supervisor?
 Yes (0.) No (1.)
3. If you answered "yes" to either No. 1 or No. 2 above, where did you receive your formal training?

4. Please rate the helpfulness of any training you might have received for co-ordinating the work activities of your operators. (Leave the scale blank if no training was received.)

7	6	5	4	3	2	1
Extremely Helpful			Somewhat Helpful			Not At All Helpful

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 1 USA Concept Anal Agcy, Bethesda, ATTN: MOCA-JF
 1 USA Arctic Test Ctr, APO Seattle, ATTN: STEAC-MO-AB1
 1 USA Arctic Test Ctr, APO Seattle, ATTN: AMSTE-PL TS
 1 USA Armament Cmd, Redstone Arsenal, ATTN: ATSK-TEM
 1 USA Armament Cmd, Rock Island, ATTN: AMSAR-TDC
 1 FAA-NAFEC, Atlantic City, ATTN: Library
 1 FAA-NAFEC, Atlantic City, ATTN: Hum Engr Br
 1 FAA Aeronautical Ctr, Oklahoma City, ATTN: AAC-44D
 2 USA Fld Arty Sch, Ft Sill, ATTN: Library
 1 USA Armor Sch, Ft Knox, ATTN: Library
 1 USA Armor Sch, Ft Knox, ATTN: ATSB-DI-E
 1 USA Armor Sch, Ft Knox, ATTN: ATSB-DT-TP
 1 USA Armor Sch, Ft Knox, ATTN: ATSB-CD-AD
 2 HOUSACDEC, Ft Ord, ATTN: Library
 1 HOUSACDEC, Ft Ord, ATTN: ATEC-EX-E-Hum Factors
 2 USAEEC, Ft Benjamin Harrison, ATTN: Library
 1 USAPACDC, Ft Benjamin Harrison, ATTN: ATCP-HR
 1 USA Comm-Elect Sch, Ft Monmouth, ATTN: ATSN-FA
 1 USAEC, Ft Monmouth, ATTN: AMSEL-CT-HDP
 1 USAEC, Ft Monmouth, ATTN: AMSEL-PA-P
 1 USAEC, Ft Monmouth, ATTN: AMSEL-SI-CB
 1 USAEC, Ft Monmouth, ATTN: C, Prod Dev Br
 1 USA Materials Syst Anal Agcy, Aberdeen, ATTN: AMXSY-P
 1 Edgewood Arsenal, Aberdeen, ATTN: SAREA-BL-H
 1 USA Ord Ctr & Sch, Aberdeen, ATTN: ATSL-TEM-C
 2 USA Hum Engr Lab, Aberdeen, ATTN: Library/Dir
 1 USA Combat Arms Tng Bd, Ft Benning, ATTN: Ad Supervisor
 1 USA Infantry Hum Rsch Unit, Ft Benning, ATTN: Chief
 1 USA Infantry Bd, Ft Benning, ATTN: STEBC-TE-T
 1 USASMA, Ft Bliss, ATTN: ATSS-LRC
 1 USA Air Def Sch, Ft Bliss, ATTN: ATSA-CTD-ME
 1 USA Air Def Sch, Ft Bliss, ATTN: Tech Lib
 1 USA Air Def Bd, Ft Bliss, ATTN: FILES
 1 USA Air Def Bd, Ft Bliss, ATTN: STEBD-PO
 1 USA Cmd & General Stf College, Ft Leavenworth, ATTN: Lib
 1 USA Cmd & General Stf College, Ft Leavenworth, ATTN: ATSW-SE-L
 1 USA Cmd & General Stf College, Ft Leavenworth, ATTN: Ed Advisor
 1 USA Combined Arms Cmbt Dev Act, Ft Leavenworth, ATTN: Dir/Cdr
 1 USA Combined Arms Cmbt Dev Act, Ft Leavenworth, ATTN: CCS
 1 USA Combined Arms Cmbt Dev Act, Ft Leavenworth, ATTN: ATCASA
 1 USA Combined Arms Cmbt Dev Act, Ft Leavenworth, ATTN: ATCAGO-E
 1 USA Combined Arms Cmbt Dev Act, Ft Leavenworth, ATTN: ATCACC-CI
 1 USAECOM, Night Vision Lab, Ft Belvoir, ATTN: AMSEL-NV-SD
 3 USA Computer Sys Cmd, Ft Belvoir, ATTN: Tech Library
 1 USAMERDC, Ft Belvoir, ATTN: STSFB-DQ
 1 USA Eng Sch, Ft Belvoir, ATTN: Library
 1 USA Topographic Lab, Ft Belvoir, ATTN: ETL-TD-S
 1 USA Topographic Lab, Ft Belvoir, ATTN: STINFO Center
 1 USA Topographic Lab, Ft Belvoir, ATTN: ETL-GSL
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: CTD-MS
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: ATIS-CTD-MS
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: ATSI-TE
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: ATSI-TEX-GS
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: ATSI-CTS-OR
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: ATSI-CTD-DT
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: ATSI-CTD-CS
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: DAS/IRD
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: ATSI-SEM
 1 USA Intelligence Ctr & Sch, Ft Huachuca, ATTN: Library
 1 CDR, HQ Ft Huachuca, ATTN: Tech Ref Div
 1 CDR, USA Electronic Prng Grid, ATTN: STEEP-MT-S
 1 CDR, Project MASSTER, ATTN: Tech Info Center
 1 HQ MASSTER, USATRADOC, LNO
 1 Research Institute, HQ MASSTER, Ft Hood
 1 USA Recruiting Cmd, Ft Sheridan, ATTN: USARCPM-P
 1 Senior Army Adv., USAFAGOD/TAC, Elgin AF Aux Fld No 9
 1 HQ USARPAC, DCSPER, APO SF 96568, ATTN: GPPE-SB
 1 Stimson Lib, Academy of Health Sciences, Ft Sam Houston
 1 Marine Corps Inst., ATTN: Dean-MC
 1 HOUSMC, Commandant, ATTN: Code MTMT B1
 1 HOUSMC, Commandant, ATTN: Code MPI-20
 2 USCG Academy, New London, ATTN: Admission
 2 USCG Academy, New London, ATTN: Library
 1 USCG Training Ctr, NY, ATTN: CO
 1 USCG Training Ctr, NY, ATTN: Educ Svc Ofc
 1 USCG, Psychol Res Br, DC, ATTN: GP 1/62
 1 HQ Mid-Range Br, MC Det, Quantico, ATTN: P&S Dir

- 1 US Marine Corps Liaison Ofc, AMC, Alexandria, ATTN: AMCGS-F
- 1 USATRADOC, Ft Monroe, ATTN: ATPO-ED
- 6 USATRADOC, Ft Monroe, ATTN: ATPR-AD
- 1 USATRADOC, Ft Monroe, ATTN: ATIS-EA
- 1 USA Forces Cmd, Ft Montherson, ATTN: Library
- 2 USA Aviation Test Bld, Ft Rucker, ATTN: STEBG-PO
- 1 USA Agcy for Aviation Safety, Ft Rucker, ATTN: Library
- 1 USA Agcy for Aviation Safety, Ft Rucker, ATTN: Educ Advisor
- 1 USA Aviation Sch, Ft Rucker, ATTN: PO/Drawer O
- 1 HQUA Aviation Sys Cmd, St Louis, ATTN: AMSAV-ZDR
- 2 USA Aviation Sys Test Act, Edwards AFB, ATTN: SAVTE-T
- * USA Air Del Sch, Ft Bliss, ATTN: ATSA TEM
- 1 USA Air Mobility Rsch & Dev Lab, Moffett Fld, ATTN: SAMDL-AS
- 1 USA Aviation Sch, Res Trng Mgt, Ft Rucker, ATTN: ATST-T-RTM
- 1 USA Aviation Sch, CO, Ft Rucker, ATTN: ATST-D-A
- 1 HQ, USAMC, Alexandria, ATTN: AMXCD-TL
- 1 HQ, USAMC, Alexandria, ATTN: CDR
- 1 US Military Academy, West Point, ATTN: Serials Unit
- 1 US Military Academy, West Point, ATTN: Ofc of Milit Ldrshp
- 1 US Military Academy, West Point, ATTN: MAOR
- 1 USA Standardization Cp, UK, FPO NY, ATTN: MASE-GC
- 1 Ofc of Naval Rsch, Arlington, ATTN: Code 452
- 3 Ofc of Naval Rsch, Arlington, ATTN: Code 458
- 1 Ofc of Naval Rsch, Arlington, ATTN: Code 450
- 1 Ofc of Naval Rsch, Arlington, ATTN: Code 441
- 1 Naval Aerospace Med Res Lab, Pensacola, ATTN: Acoust Sch Div
- 1 Naval Aerospace Med Res Lab, Pensacola, ATTN: Code L51
- 1 Naval Aerospace Med Res Lab, Pensacola, ATTN: Code L5
- 1 Chief of Nav-Pers, ATTN: Pers-OR
- 1 NAVAIRSTA, Norfolk, ATTN: Safety Ctr
- 1 Nav Oceanographic, DC, ATTN: Code 5251, Charts & Tech
- 1 Center of Naval Anal, ATTN: Doc Ctr
- 1 Nav Air Sys Com, ATTN: AIR-5313C
- 1 Nav BuMed, ATTN: 713
- 1 Nav Helicopter Sub Sq, 2, FPO SF 96601
- 1 AFHRL (FT) William AFB
- 1 AFHRL (TT) Lowry AFB
- 1 AFHRL (AS) WPAFB, OH
- 2 AFHRL (DOJZ) Brooks AFB
- 1 AFHRL (DOJN) Lackland AFB
- 1 HOUAF (INYSO)
- 1 HOUAF (DPXXA)
- 1 AFVIG (RD) Randolph AFB
- 3 AMRI (HE) WPAFB, OH
- 2 AF Inst of Tech, WPAFB, OH, ATTN: ENE/SL
- 1 ATC (XPTD) Randolph AFB
- 1 USAF AeroMed Lib, Brooks AFB (SUL-4), ATTN: DOC SEC
- 1 AFOSR (NLI), Arlington
- 1 AF Log Cmd, McClellan AFB, ATTN: ALC/DPCRB
- 1 Air Force Academy, CO, ATTN: Dept of Bel Sen
- 5 NavPers & Ovr Ctr, San Diego
- 2 Navy Med Neuropsychiatric Rsch Unit, San Diego
- 1 Nav Electronic Lab, San Diego, ATTN: Res Lab
- 1 Nav Trng Ctr, San Diego, ATTN: Code 9000-11b
- 1 NavPortGraSch, Monterey, ATTN: Code 86Aa
- 1 NavPortGraSch, Monterey, ATTN: Code 7124
- 1 NavTrngEquipCtr, Orlando, ATTN: Tech Lib
- 1 US Dept of Labor, DC, ATTN: Manpower Admn
- 1 US Dept of Justice, DC, ATTN: Drug Enforce Admn
- 1 Nat Bur of Standards, DC, ATTN: Computer Info Section
- 1 Nat Clearing House for MH-Info, Rockville
- 1 Denver Federal Ctr, Lakewood, ATTN: BLM
- 12 Defense Documentation Center
- 4 Dir Psych, Army Hq, Russell Ofcs, Canberra
- 1 Scientific Advn, Mil Bld, Army Hq, Russell Ofcs, Canberra
- 1 Mil and Air Attache, Austrian Embassy
- 1 Centre de Recherche Des Facteurs Humaine de la Defense Nationale, Brussels
- 2 Canadian Joint Staff, Washington
- 1 C/Air Staff, Royal Canadian AF, ATTN: Pers Std Anal Br
- 1 Chief, Canadian Def Rsch Staff, ATTN: C/CR/3(N)
- 4 British Def Staff, British Embassy, Washington
- 1 Def & Civil Inst of Environ Medicine, Canada
- 1 AIR CRESS, Kensington, ATTN: Info Sys Br
- 1 Militærpsykologisk Tjeneste, Copenhagen
- 1 Military Attache, French Embassy, ATTN: Doc Sec
- 1 Medecin Chef, C.E.R.P.M.-Arsenal, Toulon/Naval France
- 1 Prin Scientific Off, Appl Hum Engr Rsch Div, Ministry of Defense, New Delhi
- 1 Pers Rsch Ofc Library, AKA, Israel Defense Forces
- 1 Ministeris van Defensie, DOOR/KL, Afd Sociaal Psychologische Zaken, The Hague, Netherlands