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# Performance of Men in Different Mental Categories:

## 2. Assessment of Performance in Selected Navy Jobs

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by

(10) Robert Vineberg and John N. Joyner

HUMAN RESOURCES RESEARCH ORGANIZATION
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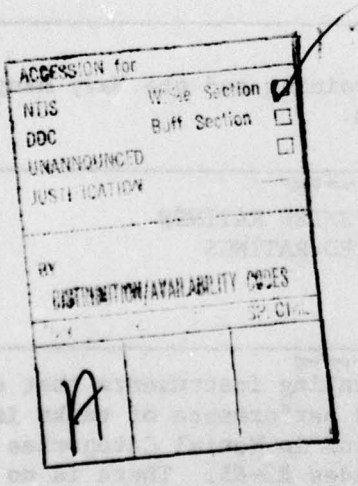
Worker-oriented and job-oriented supervisor rating instruments that could be used to evaluate the elements of behavior and performance of tasks in a job were developed. The job performance of persons in Mental Categories 1-4 was assessed in a variety of Navy jobs in pay grades E3-E5. There is no clear evidence that persons in lower mental categories are less effective either in the rated quality of their performance or in the number and characteristics of the duties they perform. Supervisors perceive the most effective job

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incumbents in pay grades E3 and E4 to be persons in either the highest or lowest mental categories and the most effective incumbents in Grade E5 to be persons in the lower mental categories. This pattern may be interpreted in terms of (1) the relative importance of technical factors and non-technical factors in job performance and their influence on ratings of performance, and (2) selective processes which favor the acquisition and retention of effective performers in the lower mental categories.



# PERFORMANCE OF MEN IN DIFFERENT MENTAL CATEGORIES:

## 2. Assessment of Performance in Selected Navy Jobs

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HUMAN RESOURCES RESEARCH ORGANIZATION
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## SUMMARY

This study was undertaken to determine the proficiency of men of different mental abilities in selected Navy jobs. Worker-oriented and job-oriented supervisor rating instruments that could be used to evaluate the elements of behavior and performance of tasks in a job were developed in the first phase of the research. In the second phase, the job performance of persons in Mental Categories 1-4 in pay grades E3-E5, was assessed in a variety of Navy jobs.

There is no clear evidence that persons in lower mental categories are less effective either in the rated quality of their performance or in the number and characteristics of duties they perform. Overall, there is a trend for job incumbents in Category 4 to receive slightly higher ratings. In the jobs studied, supervisors perceive the most effective job incumbents in pay grades E3 and E4 to be persons in either the highest or lowest mental categories. They perceive persons in the lower mental categories to be the most effective job incumbents in Grade E5. This pattern may be interpreted in terms of (1) the relative importance of technical (skill and knowledge) factors and non-technical (e.g., motivation) factors in job performance and their influence on ratings of performance, and (2) selective processes which favor the acquisition and retention of effective performers in the lower mental categories.

The task level worker-oriented and job-oriented rating items have more favorable properties for assessing performance than the Performance Evaluation Report used operationally in the Navy. These items however are still subject to bias effects. Leniency and halo increase with pay grade, a factor that must be controlled in all analyses that seek to determine the relationship between ratings and other variables. A correlational analysis of relationships among worker-oriented items common to all jobs revealed little discrimination among tasks.

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The research was accomplished at HumRRO, Western Division, Carmel, California; Dr. John E. Taylor is the Division Director.

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# INTRODUCTION

## BACKGROUND

With the advent of an All-Volunteer Force, there has been a general reduction in the number of persons of higher mental aptitude who have entered the military services.[1] At the same time an ever-increasing complexity of weapons systems coupled with a need to reduce military costs has made it necessary to maximize the flexibility and effectiveness of military personnel. While a number of studies have shown that men of lower mental ability often perform effectively both during training and on the job (Vineberg & Taylor, 1972; Weingarten, et al, 1972) an understanding of how men of varying aptitude perform remains fragmentary. For example, earlier studies have not examined performance with regard to the wide range of processes, activities and relationships that can be encountered in many jobs. They do not show that persons of limited ability will be equivalent to persons of higher ability if an unrestricted range of job requirements is considered. There is therefore a critical need for information about how men of differing aptitude perform in different kinds of jobs and how they perform in different types of tasks within jobs.

This study was undertaken to develop information about the proficiency of men of different mental abilities in selected Navy jobs[2] and to determine the characteristics of tasks that are associated with effective and ineffective performance. The research has been conducted in two phases. The first phase was devoted to the development of supervisor rating instru-

---

[1] Personal communication, Dr. Eli Flyer, Defense Manpower Data Center

[2] In the Navy, the term rating is used to refer to an occupational specialty or to closely related jobs. Since this report deals with the use of rating instruments to evaluate job performance, the use of the term rating to refer to both jobs and instruments would inevitably create confusion. The term Navy jobs is used hereafter to refer to what would ordinarily be called Navy ratings.

ments that could be used to evaluate performance in the elements and tasks of a job (Vineberg & Taylor, 1976). In the second phase, the subject of this report, the performance of men in a variety of Navy jobs and pay grades was assessed.

## TWO TYPES OF ITEMS FOR ASSESSING PERFORMANCE

Supervisor rating instruments designed in Phase I were composed of items at a task level of specificity and described numerous kinds of potential job activities and behavior. Two types of items were used, job-oriented items and worker-oriented items. These items are based on different approaches to analyzing the requirements of jobs, a distinction that has been made by McCormick (1972). Job-oriented items reflect the technological requirements of performance. They describe the performance of specific tasks or the use of particular equipment or the quality of specific job products. For example, a job-oriented item might require a supervisor to evaluate how effectively a person drafts business letters or trouble-shoots ignition systems or organizes stock control functions. A worker-oriented item on the other hand describes the performance of generalized human behaviors and functions. For example, a worker-oriented item might measure how effectively a person analyzes information from written sources, how consistently he follows prescribed procedures, how proficient he is in the use of simple hand tools, or how effective he is in interacting with subordinates.

## SUMMARY OF PHASE I

Specimen Navy jobs were selected for the study based on the following requirements:

- Highly Populated. Each job should have relatively large numbers of men assigned to it so as to provide an adequate sample for the study. This would increase the practical use of any findings that might prove to be specific to the jobs studied.

- Representation of Different Job Characteristics. The jobs, taken together, should cover as broad a range as possible of job types and task complexity.

- Highly Populated with Low Aptitude Men. To the extent possible, jobs should be selected in which reasonably large numbers of lower aptitude men are assigned.

- Availability of Navy Occupational Task Analysis Program (NOTAP) Data. Job inventory data should be available if possible to describe job requirements.

The following specimen jobs were selected:

Aviation Boatswain's Mate

- Equipment (ABE)
- Fuel (ABF)
- Handling (ABH)

Aviation Ordnance (AO)

Electrician's Mate (EM)

Hull Maintenance Technician (HT)

Interior Communication (IC)

Mess Management Specialist (MS)[1]

- S2 Division
- S3 Division

Storekeeper (SK)

The jobs selected were analyzed using a modified form of the Position Analysis Questionnaire (PAQ) (McCormick, et al, 1969). This instrument is a structured job analysis questionnaire that is used to describe worker-oriented requirements of jobs. In the selected jobs, important and frequently occurring elements were identified to provide the basis for the subsequent development of worker-oriented rating items. Items were constructed with seven-point rating scales and assembled into separate forms called the Performance Analysis Inventory (PAI) for each job.

---

[1] Analysis of the MS job subsequently revealed somewhat different duties for men assigned to an S2 Division billet (officer's mess) and for men assigned to an S5 Division billet (enlisted mess). These billets were treated as different jobs for the remainder of the study.

Job-oriented items were developed based on task inventory data for aircraft carrier billets furnished by NOTAP. As in the PAI, items were constructed with seven-point scales. They were assembled into forms referred to as the Task Proficiency Inventory (TPI) separately for pay grades E3, E4, and E5 in each job with the exception of EM, HT and IC.[1]

In field trials of the two rating instruments, performance evaluation data were obtained for a total of 569 job incumbents in the ten jobs. For comparison purposes, performance evaluation marks from the Performance Evaluation Report (PER), the rating instrument used operationally in the Navy, were obtained from personnel files.

Within the limits of a comparison of experimental and operational data, both the PAI (worker-oriented items) and the TPI (job-oriented items) revealed less leniency and halo effects, and better discrimination, than the PER.

Based on data from the field trials, redundant items (similar content and high intercorrelation) were rewritten as single items. Items were deleted that either were found to measure infrequently performed activities or failed to discriminate among job incumbents.

[1] Lack of NOTAP data precluded the development of job-oriented items for these jobs.

## DESCRIPTION OF THE RATING INSTRUMENTS USED IN PHASE II

Worker-oriented items from the PAI were assembled into a separate instrument for each job. In all jobs except EM, HT, and IC, job-oriented items from the TPI were assembled into two instruments for each job: one for pay grade E3/E4 combined and one for pay grade E5. (See Table 1). For ease of administration, the PAI-derived and TPI-derived instruments were combined into a single questionnaire for these jobs. To control order effects, half the questionnaires were assembled with job-oriented items appearing first, and the other half, the reverse. Sample performance rating items are shown in Table 2. Copies of the instruments are provided in Appendix A.

TABLE 1

Number of Worker-Oriented & Job-Oriented Items in Rating Forms for Different Navy Jobs & Pay Grades

| Navy Job | Worker-Oriented | Job-Oriented | |
|---|---|---|---|
| | | E3/E4 | E5* |
| ABE | 47 | 34 | 49 |
| ABF | 42 | 32 | 42 |
| ABH | 47 | 24 | 34 |
| AO | 37 | 25 | 33 |
| EM | 43 | — | — |
| HT | 41 | — | — |
| IC | 42 | — | — |
| MS-S2 Div. | 33 | 28 | 44 |
| MS-S5 Div. | 31 | 42 | 49 |
| SK | 26 | 23 | 31 |

*Job-oriented items for E5 consisted of those for E3/E4 plus additional items.

TABLE 2

Sample Job-Oriented & Worker-Oriented
Performance Rating Items (ABH E3/E4)

Job-Oriented

| Very Effective | | | Average | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ Directing aircraft using standard aircraft taxi signals or directing aircraft during respot.

☐ Acting as safety observer during aircraft movement (walk wings, etc.).

☐ Hooking tow bars to aircraft.

☐ Participating in "hang-fire" drills.

Worker-Oriented

Work produced using non-precision tools/instruments. (Tools used to perform operations not requiring great accuracy: paint chippers, scrapers, chipping hammers, spanner wrenches, needle gun, sanders and grinders, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

Maintains quality of work when performing under time pressure. (Launching, recover, respot, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

TABLE 2 (Continued)

Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

Getting job information by reading written materials. (Spot sheets, guidelines on training, etc.).

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

---

The worker-oriented items were classified into six categories, some of which are similar to the divisions used by McCormick, et al, in the PAQ.

Nineteen of the worker-oriented items appeared in the rating instruments for all jobs. Thirteen of these common items were in the category Work Habits, three were in Cognitive Processes, and three were in Obtaining and Observing Job-Relevant Information.

A matrix of worker-oriented items for each job appears in Appendix B. It lists an abbreviated version of each item, the item categories, and the common items.

TABLE 3

Number of Worker-Oriented Items by Category in Rating Forms for Different Navy Jobs

| Navy Job | Tools & Equipment | Hand/Arm Manipulations | Coordination | Work Habits | Cognitive Processes | Obtaining & Observing Information |
|---|---|---|---|---|---|---|
| ABE | 7 | 3 | 3 | 15 | 9 | 10 |
| ABF | 4 | 1 | 1 | 15 | 7 | 14 |
| ABH | 8 | 2 | 1 | 16 | 7 | 13 |
| AO | 5 | 3 | 1 | 15 | 5 | 8 |
| EM | 11 | 3 | 1 | 14 | 8 | 10 |
| HT | 6 | 6 | 2 | 13 | 5 | 9 |
| IC | 6 | 4 | 1 | 15 | 7 | 9 |
| MS-S2 Div. | 4 | 2 | _ | 13 | 5 | 9 |
| MS-S5 Div. | 3 | 1 | 2 | 14 | 6 | 7 |
| SK | 1 | 2 | — | 13 | 7 | 3 |

## DATA COLLECTION

### PROCEDURE

Supervisor ratings of the performance of men in the ten jobs were obtained aboard the USS Enterprise in September, 1977; aboard the USS Constellation in January, 1978; and aboard the USS Lexington in April, 1978.

On each ship all available incumbents in each job in pay grades E3-E5 were identified. Their immediate supervisors reported to a quiet location, e.g., Ready Room, and were briefed on the purpose of the study. They were told that the evaluations they were about to provide would be used solely for research purposes and would not become a matter of record. The rating forms were then filled out. They required about 20 minutes to complete. Each supervisor provided evaluations of from three to five subordinates. The order of presentation of worker-oriented and job-oriented items was controlled by alternating the two forms of the questionnaire. Each supervisor also prepared a Performance Evaluation Report (NAVPERS 792), the rating instrument used operationally in the Navy, for each subordinate.

The Performance Evaluation Report (PER) consists of ten-point scales for rating the following five characteristics: Professional Performance, Military Behavior, Leadership and Supervisory Ability, Military Appearance, and Adaptability.

Following the collection of evaluation data, AFQT scores were obtained from personnel files to determine each incumbent's mental category.[1]

---

[1] Where AFQT scores were not available, Basic Test Battery scores (GCT + ARI + MECH) or ASVAB scores (WK + AR + SP) were used to estimate AFQT.

## SAMPLE SIZE

Performance evaluation data were obtained for a total of 993 job incumbents in the ten Navy jobs. The combined sample is displayed in Table 4.

TABLE 4

Sample Size by Navy Job, Mental Category & Pay Grade

| Navy Job | Mental Category* | Pay Grade | | | Total |
|---|---|---|---|---|---|
| | | E3 | E4 | E5 | |
| ABE | 1 | 2 | 0 | 1 | 3 |
| | 2 | 10 | 15 | 11 | 36 |
| | High 3 | 20 | 12 | 4 | 36 |
| | Low 3 | 12 | 14 | 3 | 29 |
| | 4 | 6 | 2 | 6 | 14 |
| ABF | 1 | 1 | 0 | 0 | 1 |
| | 2 | 14 | 12 | 2 | 28 |
| | High 3 | 8 | 6 | 4 | 18 |
| | Low 3 | 10 | 11 | 4 | 25 |
| | 4 | 2 | 4 | 1 | 7 |
| ABH | 1 | 1 | 1 | 0 | 2 |
| | 2 | 6 | 4 | 1 | 11 |
| | High 3 | 8 | 9 | 4 | 21 |
| | Low 3 | 10 | 7 | 2 | 19 |
| | 4 | 8 | 8 | 8 | 24 |
| AO | 1 | 1 | 1 | 0 | 2 |
| | 2 | 13 | 9 | 10 | 32 |
| | High 3 | 11 | 13 | 5 | 29 |
| | Low 3 | 16 | 10 | 6 | 32 |
| | 4 | 8 | 2 | 2 | 12 |
| EM | 1 | 9 | 3 | 6 | 18 |
| | 2 | 19 | 25 | 31 | 75 |
| | High 3 | 15 | 17 | 8 | 40 |
| | Low 3 | 8 | 10 | 4 | 22 |
| | 4 | 6 | 9 | 0 | 15 |

*Mental Categories in this and subsequent tables refer respectively to AFQT range: 93-99, 65-92, 50-64, 31-49, and 0-30.

TABLE 4 (Continued)

| Navy Job | Mental Category | Pay Grade | | | Total |
|---|---|---|---|---|---|
| | | E3 | E4 | E5 | |
| HT | 1 | 2 | 1 | 0 | 3 |
| | 2 | 20 | 12 | 12 | 44 |
| | High 3 | 25 | 13 | 8 | 46 |
| | Low 3 | 18 | 15 | 5 | 38 |
| | 4 | 4 | 3 | 6 | 13 |
| IC | 1 | 2 | 0 | 0 | 2 |
| | 2 | 14 | 21 | 13 | 48 |
| | High 3 | 4 | 6 | 1 | 11 |
| | Low 3 | 6 | 4 | 0 | 10 |
| | 4 | 0 | 1 | 0 | 1 |
| MS-S2 | 1 | 0 | 0 | 0 | 0 |
| | 2 | 8 | 3 | 0 | 11 |
| | High 3 | 9 | 6 | 1 | 16 |
| | Low 3 | 14 | 8 | 1 | 23 |
| | 4 | 1 | 14 | 17 | 32 |
| MS-S5 | 1 | 0 | 0 | 0 | 0 |
| | 2 | 3 | 4 | 0 | 7 |
| | High 3 | 12 | 6 | 1 | 19 |
| | Low 3 | 12 | 2 | 1 | 15 |
| | 4 | 4 | 9 | 34 | 47 |
| SK | 1 | 0 | 0 | 0 | 0 |
| | 2 | 8 | 3 | 2 | 13 |
| | High 3 | 5 | 4 | 0 | 9 |
| | Low 3 | 7 | 5 | 4 | 16 |
| | 4 | 5 | 8 | 3 | 16 |

The low number of cases in many cells severely limits the kinds of analysis that can be undertaken. The Navy did not provide access to any additional aircraft carriers for data collection.

## DATA ANALYSIS AND DISCUSSION

### CHARACTERISTICS OF THE INSTRUMENTS

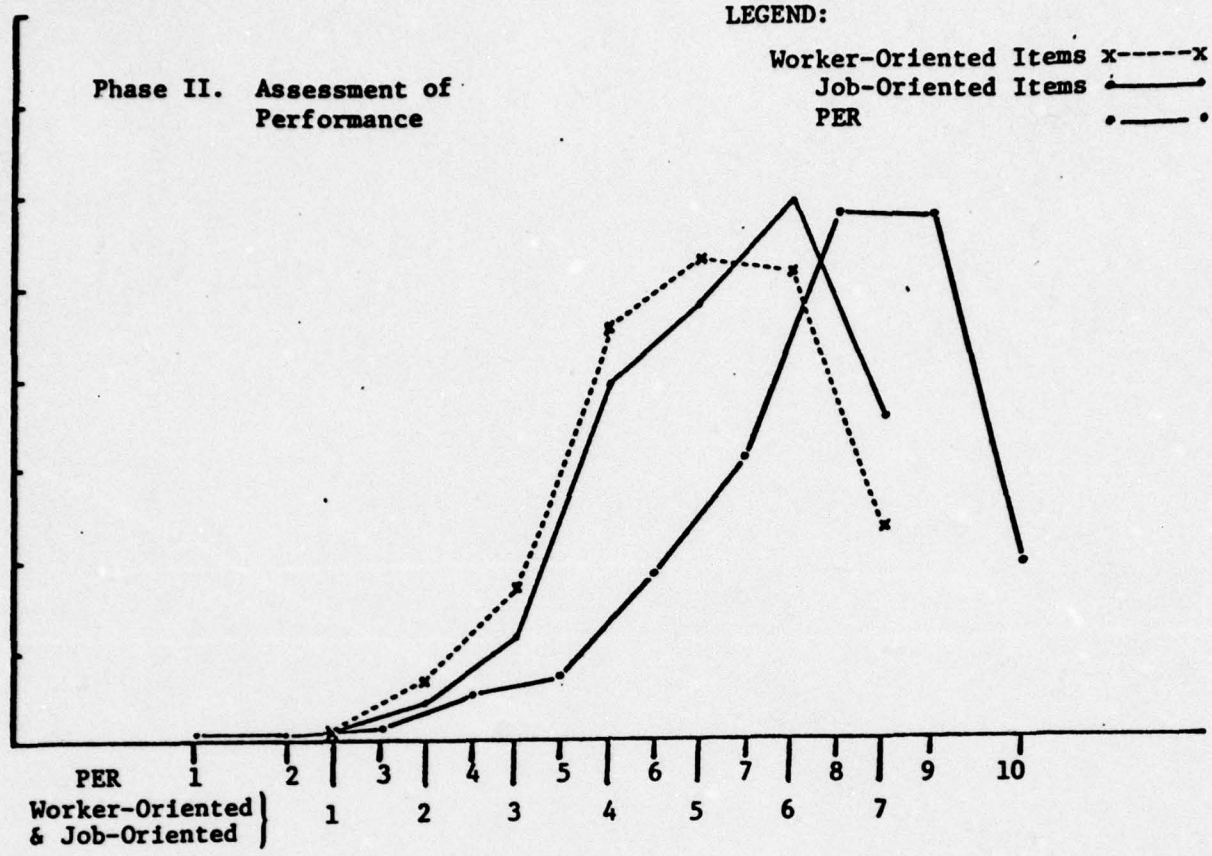
The extent to which rating instruments can provide useful information about the capabilities of job incumbents depends upon their characteristics as measuring instruments: their capacity to detect differences in job performance among different persons, their sensitivity to different aspects of job performance within the same individual, and their resistance to biasing effects of leniency and halo which can mask differences among and within individuals. Leniency refers to the tendency of raters to give overly favorable evaluations in response to social and other pressures. Halo refers to the tendency to allow overall impressions to influence the evaluation of individual traits and specific characteristics of performance.

Figure 1 shows frequency distributions of scale value usage for worker-oriented items, job-oriented items, and for the Performance Evaluation Report (PER).[1] Data obtained in Phase I (Development of Instruments) is also plotted to indicate the stability of the distributions, which is rather striking. Worker-oriented items consistently show less leniency and a more normal distribution than job-oriented items, which in turn possess more favorable characteristics than the PER.

In Phase I, the PER had not been administered as part of the study. Instead, PER scores, based on ratings by unknown supervisors, were extracted from personnel records. The use of operational data, rather than the characteristics of the instrument itself, could account for the more highly

---

[1] Mid-points for distributions based on items with seven-point scales (worker-oriented, job-oriented) and ten-point scales (PER) have been set at the same position on the X-axis to permit comparison and avoid the distortion that would occur if either scale were expressed in terms of the other.



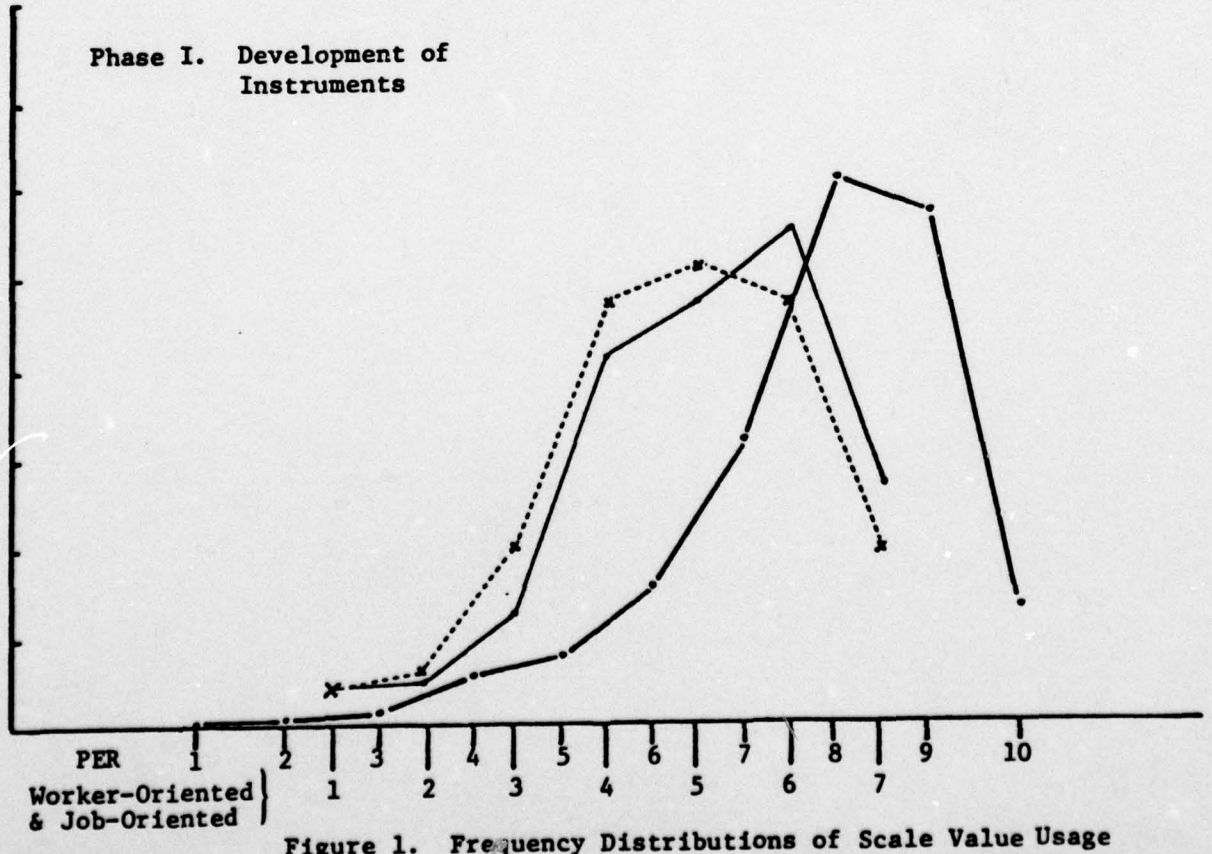




Figure 1. Frequency Distributions of Scale Value Usage for Three Types of Items Drawn with Mid-Points of Scale Coinciding - Grades E3 - E5

skewed distribution that was obtained in phase I.[1] In Phase II, the PER was completed by the same supervisors who provided the worker-oriented and job-oriented ratings with the understanding that the information obtained would only be used for research purposes and not be seen by Navy personnel. Thus a more legitimate basis was provided for comparison of the operational instrument to the experimental scales. Though there appears to be slightly less skew in the confidential PER of Phase II, the greater bias of the instrument as compared to the experimental scales remains.

Figures 2, 3, and 4 show frequency distributions for pay grades E3, E4, and E5 separately. Skewness increases with pay grade in all of the rating items, though worker-oriented items consistently display less leniency than job-oriented items, and both display more favorable characteristics than the PER.

Table 5 shows the means and standard deviations of ratings in worker-oriented items, job-oriented items, and the PER by pay grade and Navy job. PER means and standard deviations have been adjusted to make them comparable to the values for worker-oriented and job-oriented items based on seven-point scales.[2]

---

[1] Pritchard et al (1973) compared confidential Navy performance ratings to official non-confidential ratings. The distribution of confidential ratings showed less skew and more discrimination than the non-confidential appraisals.

[2] PER Mean = x
Adjusted PER Mean = 0.333 + 0.667x
Standard Deviation of PER Mean = y
Adjusted Standard Deviation of PER Mean = 0.667y

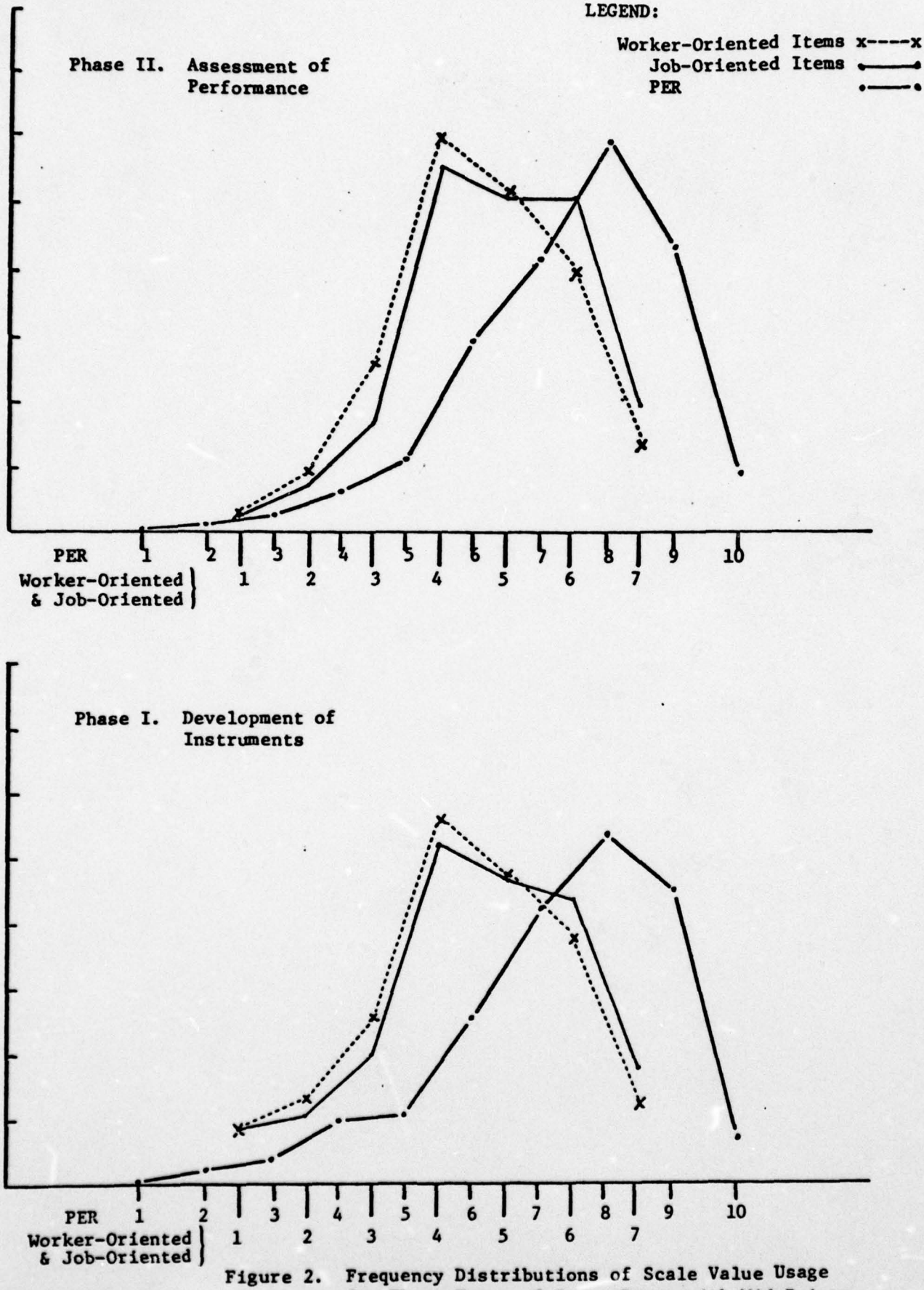
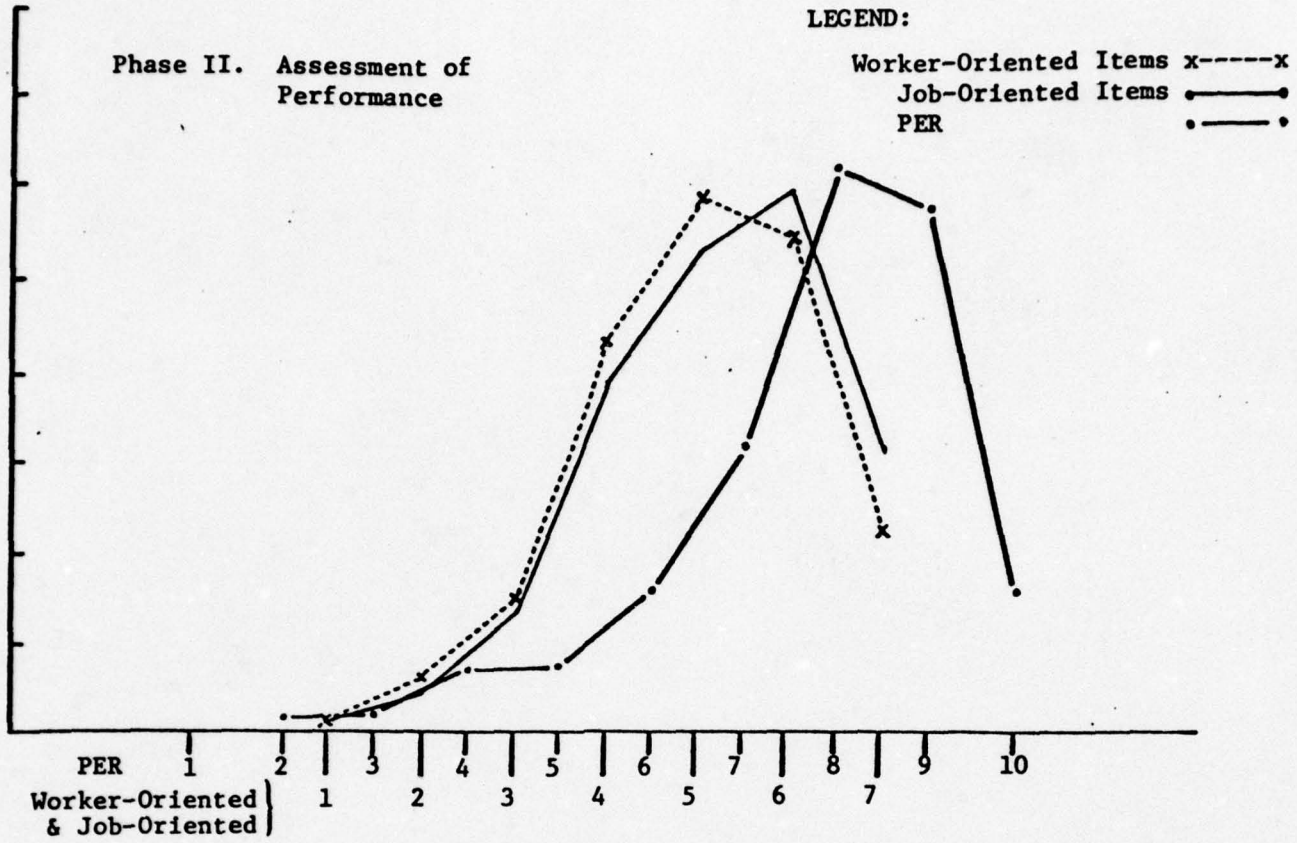



Figure 2. Frequency Distributions of Scale Value Usage for Three Types of Items Drawn with Mid-Points of Scale Coinciding - Grade E3



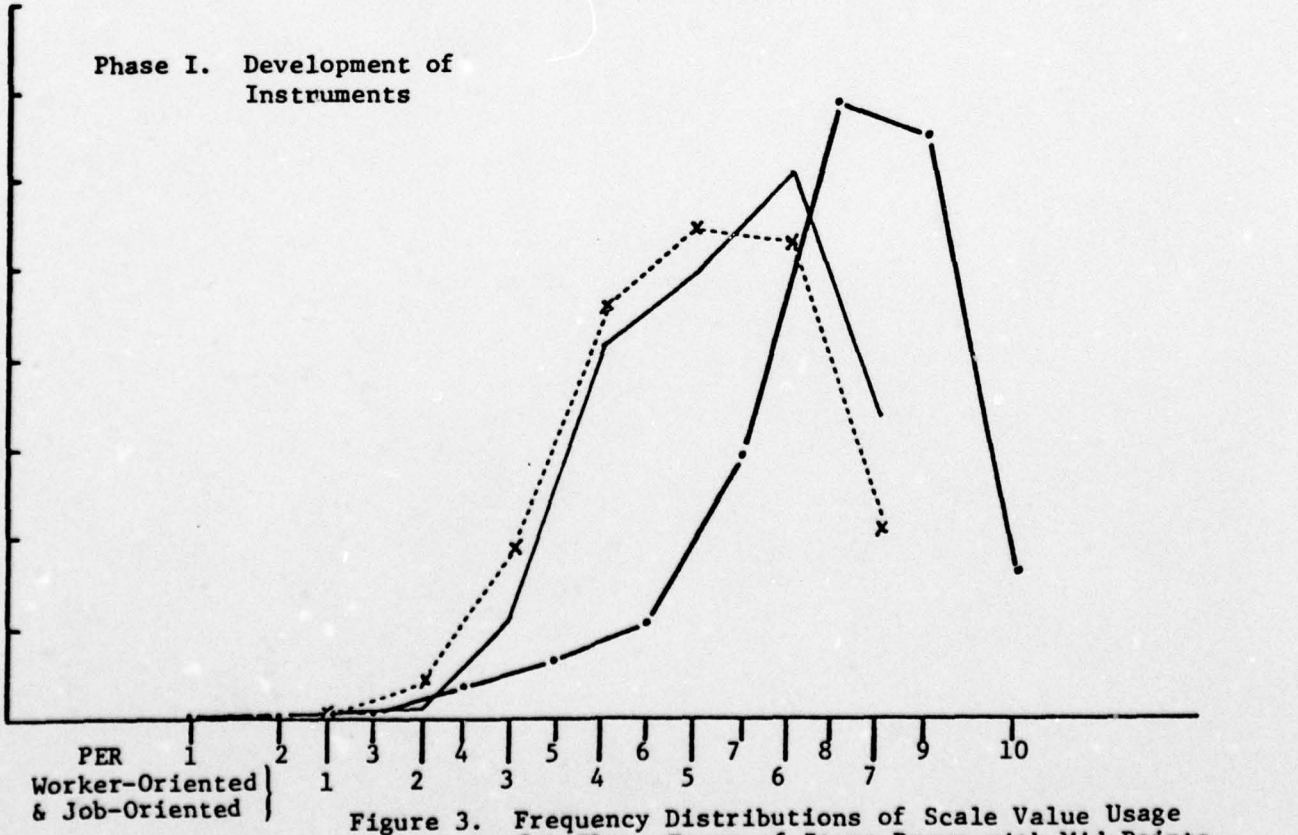




Figure 3. Frequency Distributions of Scale Value Usage for Three Types of Items Drawn with Mid-Points of Scale Coinciding - Grade E4

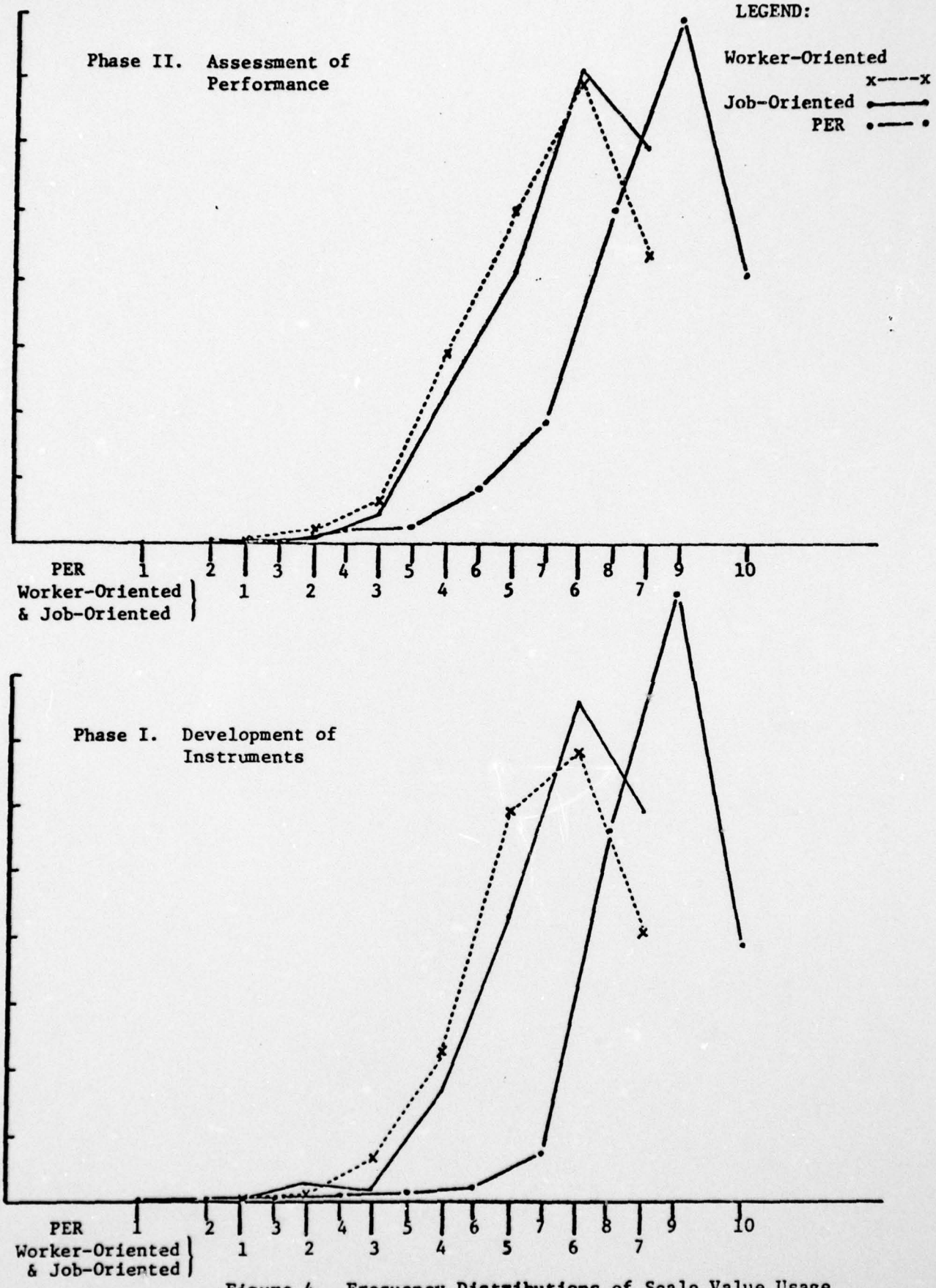



Figure 4. Frequency Distributions of Scale Value Usage for Three Types of Items Drawn with Mid-Points of Scale Coinciding - Grade E5

TABLE 5

Means and Standard Deviations of Subject Means for Three Types of Rating Items

| | Worker-Oriented | | | Job-Oriented | | | Adjusted PER | | |
|---|---|---|---|---|---|---|---|---|---|
| | Mean | Standard Deviation | N | Mean | Standard Deviation | N | Mean | Standard Deviation | N |
| E3 | | | | | | | | | |
| ABE | 4.82 | 1.12 | 50 | 5.14 | 1.21 | 50 | 5.36 | 1.02 | 50 |
| ABF | 4.82 | .80 | 33 | 4.77 | .86 | 32 | 5.35 | .89 | 32 |
| ABH | 4.56 | 1.10 | 33 | 4.52 | .98 | 33 | 5.30 | .74 | 33 |
| AO | 4.46 | 1.02 | 48 | 4.75 | .99 | 49 | 5.48 | .76 | 49 |
| EM | 4.29 | .99 | 57 | — | — | — | 5.16 | .87 | 57 |
| HT | 4.54 | 1.02 | 69 | — | — | — | 5.25 | .77 | 69 |
| IC | 4.77 | 1.04 | 26 | — | — | — | 4.91 | .92 | 26 |
| MS-S2 | 4.26 | 1.26 | 32 | 4.72 | 1.22 | 30 | 5.39 | 1.04 | 32 |
| MS-S5 | 4.18 | 1.35 | 31 | 4.82 | 1.03 | 28 | 5.50 | 1.26 | 24 |
| SK | 4.43 | .98 | 25 | 4.58 | .73 | 25 | 5.12 | .97 | 25 |
| All jobs combined | 4.51 | 1.08 | 404 | 4.79 | 1.04 | 247 | 5.29 | .90 | 397 |
| E4 | | | | | | | | | |
| ABE | 5.62 | 1.00 | 42 | 5.67 | .92 | 43 | 5.92 | .84 | 43 |
| ABF | 5.14 | .91 | 31 | 5.20 | .81 | 31 | 5.42 | .77 | 30 |
| ABH | 4.87 | .75 | 29 | 4.90 | .81 | 29 | 5.48 | .76 | 27 |
| AO | 5.16 | 1.03 | 35 | 5.34 | 1.01 | 35 | 5.75 | .86 | 35 |
| EM | 4.89 | .91 | 63 | — | — | — | 5.37 | .88 | 63 |
| HT | 5.18 | .93 | 44 | — | — | — | 5.75 | .70 | 44 |
| IC | 4.64 | 1.02 | 32 | — | — | — | 5.14 | 1.05 | 32 |
| MS-S2 | 4.52 | 1.40 | 30 | 4.66 | 1.31 | 30 | 5.24 | 1.26 | 28 |
| MS-S5 | 5.09 | .96 | 21 | 5.78 | .91 | 20 | 6.14 | .49 | 19 |
| SK | 4.24 | 1.21 | 19 | 4.25 | 1.25 | 19 | 4.95 | 1.15 | 19 |
| All jobs combined | 4.98 | 1.05 | 346 | 5.15 | 1.08 | 207 | 5.53 | .93 | 340 |
| E5 | | | | | | | | | |
| ABE | 5.25 | 1.26 | 25 | 5.64 | 1.03 | 24 | 5.89 | .85 | 25 |
| ABF | 5.90 | .56 | 11 | 6.01 | .58 | 11 | 6.09 | .47 | 11 |
| ABH | 5.00 | .85 | 15 | 5.16 | .86 | 15 | 5.70 | .61 | 15 |
| AO | 5.49 | .94 | 23 | 5.55 | .96 | 23 | 6.09 | .76 | 19 |
| EM | 5.33 | 1.02 | 49 | — | — | — | 5.68 | .86 | 49 |
| HT | 5.72 | .87 | 31 | — | — | — | 6.05 | .68 | 31 |
| IC | 5.93 | .58 | 14 | — | — | — | 5.88 | .53 | 14 |
| MS-S2 | 5.75 | .88 | 19 | 5.88 | .83 | 19 | 6.28 | .49 | 19 |
| MS-S5 | 5.84 | .80 | 36 | 6.10 | .67 | 30 | 6.44 | .51 | 34 |
| SK | 5.40 | .86 | 9 | 5.58 | .56 | 9 | 6.17 | .53 | 9 |
| All jobs combined | 5.55 | .95 | 232 | 5.75 | .86 | 137 | 6.01 | .73 | 226 |
| Pay grade & Jobs Combined | 4.92 | 1.12 | 982 | 5.14 | 1.02 | 591 | 5.55 | .91 | 963 |

Leniency effects as demonstrated by the mean values for each type of item are summarized in Table 6. As was apparent in the shapes of the distributions of scale value usage seen earlier, worker-oriented items show less leniency than job-oriented items which in turn show less leniency that the PER. For example, for E3 worker-oriented means are lower than job-oriented means in five of the seven jobs where comparisons can be made; worker-oriented means are lower than PER means in all ten jobs; and job-oriented means are lower than PER means in seven out of seven jobs. This relationship is consistent across all pay grades.

TABLE 6

Number of Times Means for Each
Type of Item are Lower than Another

| | Worker-Oriented < Job-Oriented | Worker-Oriented < PER | Job-Oriented < PER |
|---|---|---|---|
| E3 | 5/7 | 10/10 | 7/7 |
| E4 | 7/7 | 10/10 | 7/7 |
| E5 | 7/7 | 9/10 | 7/7 |

Comparisons of standard deviations of means for different types of items are summarized in Table 7. Means of worker-oriented items show greater differentiation across individuals (greater dispersion) than job-oriented items. Means of job-oriented items show greater differentiation than those of the PER.

TABLE 7

Number of Times Standard Deviations
of Means for Each Type of Item Exceed Another

| | Worker-Oriented > Job-Oriented | Worker-Oriented > PER | Job-Oriented > PER |
|---|---|---|---|
| E3 | 5/7 | 9/10 | 4/7 |
| E4 | 5/7 | 8/10 | 7/7 |
| E5 | 4/7 | 10/10 | 7/7 |

Halo effects can be seen by examining the standard deviation of all ratings given on a particular type of item for each individual. That is, when a rater tends to assign similar scale values to a ratee, the standard deviation for that individual will tend to approach zero. Standard deviations of ratings for each job incumbent were averaged for each type of item by job and pay grade (see Table 8). These data have been summarized to indicate halo effects as they vary by pay grade (Table 9) and type of item (Table 10).

TABLE 8. Means of Subject Standard Deviations for Three Types of Rating Items

| | Worker-Oriented | Job-Oriented | Adjusted PER |
|---|---|---|---|
| **E3** | | | |
| ABE | .86 | .71 | .44 |
| ABF | .73 | .76 | .43 |
| ABH | .80 | .68 | .38 |
| AO | .69 | .59 | .35 |
| EM | .77 | - | .51 |
| HT | .63 | - | .46 |
| IC | .73 | - | .63 |
| MS-S2 | .68 | .63 | .38 |
| MS-S5 | .89 | .74 | .40 |
| SK | .73 | .73 | .51 |
| **E4** | | | |
| ABE | .68 | .63 | .38 |
| ABF | .60 | .58 | .38 |
| ABH | .75 | .77 | .44 |
| AO | .60 | .60 | .37 |
| EM | .72 | - | .52 |
| HT | .62 | - | .42 |
| IC | .78 | - | .62 |
| MS-S2 | .61 | .62 | .35 |
| MS-S5 | .74 | .72 | .43 |
| SK | .69 | .65 | .61 |
| **E5** | | | |
| ABE | .67 | .68 | .44 |
| ABF | .62 | .51 | .45 |
| ABH | .66 | .74 | .50 |
| AO | .57 | .72 | .32 |
| EM | .68 | - | .53 |
| HT | .50 | - | .34 |
| IC | .71 | - | .44 |
| MS-S2 | .50 | .65 | .29 |
| MS-S5 | .61 | .51 | .36 |
| SK | .71 | .62 | .46 |

TABLE 9

Number of Times Mean Subject Standard Deviations in One Pay Grade Exceed Another

| | E3 > E4 | E3 > E5 | E4 > E5 |
|---|---|---|---|
| Worker-Oriented | 7/10 | 10/10 | 8/9* |
| Job-Oriented | 5/7 | 4/7 | 4/7 |
| PER | 5/10 | 6/9* | 6/10 |

*A tie occurred in one comparison.

TABLE 10

Number of Times Mean Subject Standard Deviations for One Type of Item Exceed Another

| | Worker-Oriented > Job-Oriented | Worker-Oriented > PER | Job-Oriented > PER |
|---|---|---|---|
| E3 | 5/6* | 10/10 | 7/7 |
| E4 | 4/6* | 10/10 | 7/7 |
| E5 | 3/7 | 10/10 | 7/7 |

*A tie occurred in one comparison.

Table 9 reveals that halo effects increase with pay grade. Table 10, in which the different types of items are compared, shows clear differences in halo effects. Worker-oriented items show less halo than job-oriented items. In all comparisons, both worker-oriented and job-oriented items show less halo than the PER.

Information about the capacity of the individual task level items (worker-oriented and job-oriented) to assess different aspects of job performance can be obtained through correlational analysis of item relationships. It was possible to undertake such an analysis for the nineteen worker-oriented items that were common to all jobs but not for the job-

oriented items. All job-oriented items are job specific. As noted earlier, they were not available for three of the jobs, and the number of incumbents in each of the remaining jobs who performed all tasks was too small for meaningful within-job analysis.[1]

Intercorrelations of the nineteen common worker-oriented items were high, ranging between .59 and .89. See Table 11. Using the matrix of intercorrelations, a principal axis factor analysis using the varimax method was performed. Three factors were extracted that account for 84.4% of the variance, with Factor I accounting for 76.6%, Factor II accounting for only 4.2% and Factor III, only 3.5%. Table 12 shows the factor loadings of the 19 common worker-oriented items on each of the 3 factors.

All items load heavily on Factor I, which might be interpreted as a "general performance measure" reflecting an overall impression by supervisors of the effectiveness of job incumbents. Since the loadings on Factors II and III are not large, any interpretation should only be considered suggestive. Items 14-18[2] load somewhat on Factor II. This factor may reflect sensitivity to job information and attending to a broad range of situational demands. Items 10 and 11[3] load positively and items 17 and 18 load negatively on Factor III. Items 10 and 11 suggest that this factor may have to do with the ability to get a job done: to solve problems,

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[1] See p. 38. Relation Between Mental Category and Job Duties

[2] (14) "Getting job information by reading written materials", (15) "Accuracy in getting job information that is given in numbers and doing arithmetic", (16) "Remembering information for a brief period of time", (17) "Showing responsibility for material goods, equipment, etc...", (18) "Observing safety precautions on the job".

[3] (10) "Reasoning in situations where procedures are not completely specified. Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks...", and (11) "Planning, scheduling, and estimating time to complete activities...".

TABLE 11: Matrix of Intercorrelations* Among Common Worker-Oriented Items

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Time Pressure | – | | | | | | | | | | | | | | | | | | |
| 2. | Supervision Requirements | 76 | – | | | | | | | | | | | | | | | | | |
| 3. | Interact w/ Petty Officers & Officers | 73 | 85 | – | | | | | | | | | | | | | | | | |
| 4. | Interact with Co-Workers | 68 | 80 | 83 | – | | | | | | | | | | | | | | | |
| 5. | Instructing | 79 | 84 | 86 | 84 | – | | | | | | | | | | | | | | |
| 6. | Supervise Others | 72 | 82 | 83 | 76 | 89 | – | | | | | | | | | | | | | |
| 7. | Reliability | 69 | 85 | 83 | 79 | 78 | 77 | – | | | | | | | | | | | | |
| 8. | Initiative | 76 | 85 | 81 | 79 | 85 | 83 | 86 | – | | | | | | | | | | | |
| 9. | Thoroughness | 74 | 80 | 80 | 79 | 83 | 77 | 85 | 89 | – | | | | | | | | | | |
| 10. | Reasoning | 77 | 76 | 71 | 70 | 75 | 73 | 77 | 81 | 85 | – | | | | | | | | | |
| 11. | Planning/Scheduling | 72 | 75 | 73 | 71 | 79 | 77 | 74 | 82 | 84 | 83 | – | | | | | | | | |
| 12. | Fixed Procedures | 78 | 79 | 74 | 72 | 78 | 75 | 77 | 77 | 77 | 77 | 75 | – | | | | | | | |
| 13. | Distractions | 70 | 72 | 71 | 71 | 72 | 73 | 72 | 72 | 73 | 76 | 74 | 83 | – | | | | | | |
| 14. | Written Information | 68 | 75 | 72 | 63 | 71 | 70 | 68 | 74 | 77 | 76 | 77 | 73 | 75 | – | | | | | |
| 15. | Numerical Information | 66 | 72 | 72 | 64 | 71 | 66 | 71 | 72 | 76 | 72 | 74 | 72 | 77 | 88 | – | | | | |
| 16. | Remembering | 67 | 74 | 75 | 71 | 75 | 74 | 70 | 74 | 74 | 72 | 70 | 76 | 82 | 78 | 83 | – | | | |
| 17. | Responsibility for Materiel | 64 | 77 | 76 | 72 | 77 | 72 | 70 | 75 | 76 | 68 | 67 | 75 | 73 | 75 | 79 | 84 | – | | |
| 18. | Observing Safety | 60 | 72 | 73 | 69 | 67 | 65 | 73 | 71 | 72 | 63 | 59 | 69 | 65 | 72 | 73 | 77 | 83 | – | |
| 19. | Spoken Information | 72 | 81 | 83 | 77 | 82 | 80 | 79 | 83 | 76 | 72 | 73 | 75 | 68 | 70 | 70 | 74 | 78 | 78 | – |

*Rounded to two places, decimals omitted.

TABLE 12. Factor Loadings of Common Worker-Oriented Items

| | Factor I | Factor II | Factor III |
|---|---|---|---|
| 1. Time Pressure | 82 | -11 | 13 |
| 2. Supervision Requirements | 90 | -12 | -08 |
| 3. Interact Officers | 90 | -13 | -17 |
| 4. Interact Co-workers | 85 | -18 | -14 |
| 5. Instructing | 91 | -20 | -06 |
| 6. Supervise Others | 88 | -17 | -04 |
| 7. Reliable | 88 | -15 | -04 |
| 8. Initiative | 92 | -17 | 03 |
| 9. Thoroughness | 91 | -07 | 11 |
| 10. Reasoning | 86 | -04 | 29 |
| 11. Planning/Scheduling | 86 | -07 | 28 |
| 12. Fixed Procedures | 87 | 02 | 09 |
| 13. Distractions | 84 | 15 | 13 |
| 14. Written Information | 85 | 28 | 15 |
| 15. Numerical Information | 85 | 36 | 09 |
| 16. Remembering | 87 | 28 | -07 |
| 17. Responsibility for Materiel | 86 | 24 | -22 |
| 18. Observing Safety | 81 | 22 | -28 |
| 19. Spoken Information | 88 | -08 | -18 |

anticipate requirements, and deal with non-routine situations. The interpretation to be given to the negative loading on items 17 and 18 is less clear. Conceivably Factor III reflects the capacity to get a job done without being inhibited by cautionary and other considerations (e.g., concerns about safety, costs, waste, etc.).

In summary, the task level worker-oriented and job-oriented items reveal more promising characteristics than the PER used operationally in the Navy. The task level items are, however, subject to some of the same forms of bias which have traditionally plagued the use of rating scales. They show some leniency and halo but less than the PER. For all types of items, leniency and halo increase with pay grade. The worker-oriented and job-oriented items also show greater discrimination among individuals than the PER. With respect to all three characteristics - leniency, halo, and differentiation among persons - the worker-oriented items have the most favorable properties.

Examination of zero order correlations and a factor analysis of relationships among a selected sample of worker-oriented items (measuring elements common to all jobs) revealed little discrimination among different aspects of job performance. A single general factor appears to account for the bulk of the variation that supervisors perceive in the performance of their subordinates. The capacity of job-oriented items to detect differences in the performance of individual tasks could not be analyzed because of an insufficient sample size in any given job.

## RELATIONSHIP BETWEEN PAY GRADE AND PERFORMANCE RATING

As indicated in Table 5, rating scores increased with pay grade despite instructions given to the raters that performance was to be evaluated relative "to all others you have observed in this rate [job and grade]". Analyses of variance testing these differences are summarized in Tables 13-15 and indicate that differences between pay grade means for all three types items are significant. Correlations between pay grade and performance ratings are shown in Table 16.

TABLE 13.

Analysis of Variance of Three Pay Grades on Worker-Oriented Items

| Pay Grade | Mean | Std. Dev. | N |
|---|---|---|---|
| E3 | 4.513 | 1.078 | 404 |
| E4 | 4.985 | 1.054 | 346 |
| E5 | 5.547 | 0.949 | 232 |
| Within groups total | 4.924 | 1.040 | 982 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 159.413 | 2 | 79.707 | 73.637 | 0.0000 |
| Within Groups | 1059.689 | 979 | 1.082 | | |

TABLE 14

Analysis of Variance of Three Pay Grades on Job-Oriented Items

| Pay Grade | Mean | Std. Dev. | N |
|---|---|---|---|
| E3 | 4.789 | 1.044 | 247 |
| E4 | 5.147 | 1.075 | 207 |
| E5 | 5.752 | 0.857 | 137 |
| Within groups total | 5.137 | 1.016 | 591 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 81.814 | 2 | 40.907 | 39.658 | 0.0000 |
| Within Groups | 606.512 | 588 | 1.031 | | |

TABLE 15

Analysis of Variance of Three Pay Grades on PER*

| Pay Grade | Mean | Std. Dev. | N |
|---|---|---|---|
| E3 | 7.427 | 1.354 | 397 |
| E4 | 7.790 | 1.395 | 340 |
| E5 | 8.507 | 1.088 | 226 |
| Within groups total | 7.809 | 1.312 | 963 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 168.152 | 2 | 84.076 | 48.853 | 0.0000 |
| Within Groups | 1652.143 | 960 | 1.721 | | |

*The analysis was performed on unadjusted (10-Point scale) PER means.

TABLE 16

Spearman Correlations Between Pay Grade
and Performance Ratings on Three Types of Items

| Items | $r_s$ | Sig |
|---|---|---|
| Worker-Oriented | .37 | .001 |
| Job-Oriented | .35 | .001 |
| PER | .33 | .001 |

## RELATIONSHIP BETWEEN PAY GRADE AND MENTAL CATEGORY

Pay grade and mental category were related in the study sample. Table 17 gives a cross tabulation of the sample by grade and category. Cell entries in the Table give the count, row percent, column percent, and total percent. For example, there are 18 persons in pay grade E3 that are in Mental Category 1; these 18 persons are 58.1 percent of all persons in Mental Category 1 and 4.4 percent of all persons in pay grade E3; they are 1.8 persons of all persons in the sample.

The Chi Square is highly significant, indicating that the hypothesis that pay grade and mental category are independent can be rejected. The relationship appears attributable primarily to variation within grade E5. Persons in the upper and lower categories tend to be over-represented in Grade E5. Persons in the middle categories tend to be under-represented. Ignoring Category 1 that has a very small number of cases, in Category 2 there are 35.3 percent of E5s versus 28.3 percent of E3s and 30.7 percent of E4s. In Category 4, there are 33.2 percent of E5s versus 10.8 percent of E3s and 17.0 percent of E4s.

Examination of cross tabulations by grade and category for individual jobs (see Appendix C) reveals that this pattern results largely from the combined effects of variation within four particular jobs - ABE, EM, MS-S2 and MS-S5. In ABE a pattern similar to that of the overall sample emerges.

TABLE 17

Cross Tabulation of the Sample by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 18[1] | 6 | 7 | 31 |
| | 58.1[2] | 19.4 | 22.6 | |
| | 4.4[3] | 1.7 | 3.0 | 3.1 |
| | 1.8[4] | 0.6 | 0.7 | |
| Category 2 | 115 | 108 | 82 | 305 |
| | 37.7 | 35.4 | 26.9 | |
| | 28.3 | 30.7 | 35.3 | 30.8 |
| | 11.6 | 10.9 | 8.3 | |
| Category High 3 | 117 | 92 | 36 | 245 |
| | 47.8 | 37.6 | 14.7 | |
| | 28.7 | 26.1 | 15.5 | 24.7 |
| | 11.8 | 9.3 | 3.6 | |
| Category Low 3 | 113 | 86 | 30 | 229 |
| | 49.3 | 37.6 | 13.1 | |
| | 27.8 | 24.4 | 12.9 | 23.1 |
| | 11.4 | 8.7 | 3.0 | |
| Category 4 | 44 | 60 | 77 | 181 |
| | 24.3 | 33.1 | 42.5 | |
| | 10.8 | 17.0 | 33.2 | 18.3 |
| | .4 | 6.1 | 7.8 | |
| Column Total | 407 | 352 | 232 | 991 |
| | 41.1 | 35.5 | 23.4 | 100.0 |

Chi Square = 73.233 with 8 Degrees of Freedom

Significance = 0.000 Contingency Coefficient = 0.262

[1]Count
[2]Row Percent
[3]Column Percent
[4]Total Percent

In EM, there is a large over-representation of persons in the upper mental categories in pay grade E5. In MS-S2 and MS-S5 there is a large over-representation of persons in Category 4 in grade E5.[1]

## RELATIONSHIP BETWEEN MENTAL CATEGORY AND PERFORMANCE RATING

As indicated in the previous sections, pay grade is related to job performance rating, and in some jobs pay grade is also related to mental category. This has made it essential to control pay grade in analyzing the relationship between mental category and job performance. Ideally each job should also be analyzed separately to control for interaction effects between mental category and job as they affect the performance rating. Unfortunately, the unevenness of the distribution of mental category and pay grade coupled with the smallness of the sample with such partitioning precludes separate analysis for each job. Thus information is presented on the relationship of mental category to performance ratings by pay grade for variables that can be measured over all jobs, i.e., means of subject mean scores for worker-oriented items, job-oriented items, and the PER and means of individual worker-oriented items that are common to all jobs. Information is not presented for variables that are job specific, i.e., individual worker-oriented items that are not common to all jobs, and individual job-oriented items.

Comparisons of performance ratings for different mental categories on the three types of items are shown in Tables 18-20. Mental Categories 1 and 2 have been combined because of the small number of cases in Mental Category 1.

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[1] It seems likely that the high proportion of persons in Mental Category 4 for grade E5 in the two Mess Management Specialist jobs results from the over-representation of persons in this rate for whom English is a second language (e.g., Filipino). Such persons are likely to receive a low score on the verbal subtest of the AFQT.

TABLE 18: Comparison of Four Mental Categories on Worker-Oriented Items by Pay Grade

| Mental Category | E3 N | E3 Mean | E3 Std. Dev. | E4 N | E4 Mean | E4 Std. Dev. | E5 N | E5 Mean | E5 Std. Dev. |
|---|---|---|---|---|---|---|---|---|---|
| 1 & 2 | 133 | 4.56 | 1.02 | 114 | 5.08 | 1.05 | 89 | 5.52 | 1.08 |
| High 3 | 115 | 4.50 | 1.06 | 91 | 4.92 | 1.03 | 36 | 5.42 | .78 |
| Low 3 | 112 | 4.44 | 1.17 | 84 | 4.92 | 1.05 | 30 | 5.61 | .86 |
| 4 | 44 | 4.61 | 1.20 | 57 | 4.99 | 1.11 | 77 | 5.62 | .90 |
| | | df = 3, 400<br>F = .376<br>Sig = .770 | | | df = 3, 342<br>F = .579<br>Sig = .629 | | | df = 3, 728<br>F = .422<br>Sig = .738 | |

*See Appendix D for Analysis of Variance

TABLE 19: Comparison of Four Mental Categories on Job-Oriented Items by Pay Grade

| | GRADE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | E3 | | | E4 | | | E5 | | |
| Mental Category | N | Mean | Std. Dev. | N | Mean | Std. Dev. | N | Mean | Std. Dev. |
| 1 & 2 | 67 | 4.65 | 1.02 | 52 | 5.29 | .93 | 27 | 5.63 | 1.12 |
| High 3 | 71 | 4.65 | 1.05 | 54 | 5.06 | 1.17 | 19 | 5.58 | .81 |
| Low 3 | 76 | 4.83 | 1.07 | 56 | 5.09 | 1.07 | 21 | 5.74 | .83 |
| 4 | 33 | 4.85 | 1.04 | 45 | 5.16 | 1.14 | 70 | 5.85 | .76 |
| | df = 3, 243<br>F = .528<br>Sig = .664 | | | df = 3, 203<br>F = .487<br>Sig = .691 | | | df = 3, 133<br>F = .778<br>Sig = .508 | | |

*See Appendix D for Analysis of Variance

TABLE 20: Comparison of Four Mental Categories on PER by Pay Grade

| | GRADE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | E3 | | | E4 | | | E5 | | |
| Mental Category | N | Mean | Std. Dev. | N | Mean | Std. Dev. | N | Mean | Std. Dev. |
| 1 & 2 | 131 | 5.33 | .81 | 113 | 5.49 | .94 | 88 | 5.87 | .82 |
| High 3 | 113 | 5.19 | .86 | 90 | 5.49 | .91 | 34 | 5.94 | .54 |
| Low 3 | 110 | 5.29 | .98 | 82 | 5.51 | .91 | 29 | 6.08 | .72 |
| 4 | 43 | 5.40 | 1.06 | 55 | 5.70 | .98 | 75 | 6.17 | .65 |
| | | df = 3, 393<br>F = .842<br>Sig = .471 | | | df = 3, 336<br>F = .723<br>Sig = .539 | | | df = 3, 222<br>F = 2.462<br>Sig = .063 | |

*See Appendix D for Analysis of Variance

No significant differences emerge in ratings of the performance of men in different mental categories. Overall, however, there is a trend for men in Category 4 to receive higher ratings. With two exceptions Category 4 s in all three grades have the highest mean on all three types of items. This finding must be viewed cautiously since ratings on the different kinds of items are not independent, having been made for each job incumbent by the same supervisor. But at least this much is clear: in the jobs and pay grades under consideration persons in Category 4 are not viewed by their supervisors as performing in an inferior manner.[1]

The absence of a statistically significant difference in rated performance among men in different mental categories is not altogether surprising. Vineberg and Taylor (1972) in a study of Army jobs, found that both job sample test scores and supervisor ratings showed only small differences as a function of AFQT. Job experience (months on the job) was found to be a far more potent determinant of performance. Moreover, while mental category was found to be related to job sample test scores in four jobs, the use of supervisor ratings yielded statistically significant differences among mental categories in only two of the four. The different results for job sample tests and supervisor ratings probably occurred because job sample tests measure only the technical aspects of performance (skill & knowledge) whereas supervisor ratings can be affected by the nontechnical aspects of performance (e.g., persistence and motivation, inter-personal skill). Thus the Vineberg and Taylor results not only indicate that the relationship between mental category and performance is moderate, but also

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[1] Using supervisor evaluations in a study of 16 Navy jobs, Cory (1976) found that, overall, persons in Category 4 "...exhibited consistent but relatively small deficits in performance" in comparison to persons in Categories 1-3. The study shared five jobs in common with the present study: Aviation Boatswain's Mate (ABE, ABF, ABH in the present study), Electrician's Mate, Hull Technician, Storekeeper and Commissaryman (MS-S5 in the present study). In these five jobs (and four others) Category 4 personnel did not differ significantly from persons in Categories 1-3.

Cory's findings about the performance of persons in different mental categories, however, are not conclusive. He did not control sufficiently for or analyze results by pay grade, a variable that clearly has a profound effect on supervisor ratings (see p. 26 in the present report).

that the relationship is in fact between mental category and the technical aspects of performance. When supervisor ratings are used to assess the performance of specific tasks, as in the present study, the moderate relationship between mental category and the technical components of performance can easily be masked.

In the present study, when mean scores for individual common worker-oriented items are examined, the highest ratings are obtained almost exclusively by persons in either the highest or two lowest mental categories. This pattern may be interpreted in terms of the relative influence of technical and non-technical factors on ratings of performance, as determined by pay grade and mental category. In grades E3 and E4, the highest ratings are received primarily by Mental Category 1-2 and Mental Category 4. In grade E5, the highest ratings are received primarily by Mental Category Low 3 and Mental Category 4. It seems likely that in grades E3 and E4 persons in the upper categories tend to be rated high because of the influence of mental ability on the technical aspects of performance. Persons in Category 4 may be rated high for any of several reasons related to the non-technical aspects. The Category 4 population that has qualified for Navy service and earned a rate may represent a select sub-group of persons of lower mental ability with higher than average motivation, persistence, etc. They may simply work harder. Conceivably, they may tend to be perceived as slightly less intelligent and thus be given more credit for work that is done well.

In Grade E5, the relative superiority of Category Low 3 and Category 4 may be due to the possible attrition from the Navy of the most effective Category 1 and 2 personnel (who as E3 and E4 were responsible for the higher means) leaving only the average and below average performers of the upper categories.[1] On the other hand persons in the lower mental categories who have been effective performers in the Navy may tend to remain there. Thus, the superior ratings of men of lower mental ability in all pay grades

[1]Caylor (1969) found that men in the Army who had higher aptitudes and were better performers tended to have less favorable attitudes toward military service and tended to leave the Army after their first tour.

may be accounted for in terms of selective processes which favor the acquisition and retention of effective performers in the lower mental categories.

When the common items are examined individually, there appears to be some support for the interpretation that the pattern of ratings is due to differences in performance in the technical and non-technical components of jobs. The items in which lower mental ability groups in all pay grades consistently receive the highest ratings are the first seven items in Table 21. These items focus on non-technical/motivational aspects of job performance (providing supervision to others, working under time pressure, working under distractions, amount of supervision required, interacting with petty officers and officers, reliability in work habits, showing initiative). These characteristics can perhaps be summarized as ability to get the job done.

Of the remaining common items, six appear to focus on the technical aspects of job performance: written information (getting job information by reading written materials), numerical information (getting job information given in numbers), fixed procedures (following required fixed task procedures), spoken information (getting job information through orders, requests or verbal instruction), instructing (giving information to superiors and information/instruction to subordinates), and reasoning (reasoning in situations where procedures are not completely specified, applying principles to solve problems). In grades E3 and E4, persons in Category 1 and 2 obtain the highest means on three of these items: spoken information, instructing, and reasoning. In grade E5, the highest mean ratings on these three items are obtained by persons in Category Low 3 and 4. This shift may be due to the possible attrition of the more effective performers from the higher categories, as mentioned above.

The remainder of the items show a fairly mixed pattern and no further interpretation seems warranted. Because differences between many of the means are small and because the items are not independent, all data for individual items should be interpreted cautiously.

TABLE 21. Comparison of Mean Scores of Four Mental Categories on Common Worker-Oriented Items by Pay Grade*

| | GRADE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | E3 | | | | E4 | | | | E5 | | | |
| | MENTAL CATEGORY | | | | | | | | | | | |
| | 1&2 | High 3 | Low 3 | 4 | 1&2 | High 3 | Low 3 | 4 | 1&2 | High 3 | Low 3 | 4 |
| Supervise Others | 4.23 | 4.35 | 4.18 | [4.81] | 4.63 | 4.42 | [4.65] | 4.64 | 5.15 | 5.50 | [5.53] | 5.45 |
| Time Pressure | 4.64 | 4.67 | 4.54 | [4.73] | 5.02 | 4.98 | 5.09 | [5.25] | 5.45 | 5.48 | [5.74] | 5.56 |
| Distractions | 4.37 | 4.24 | 4.12 | [4.41] | 4.83 | 4.64 | 4.71 | [4.89] | 5.29 | 5.11 | [5.37] | 5.30 |
| Supervision Requirements | [4.60]** | 4.56 | 4.38 | [4.60]** | 4.99 | 4.90 | 4.84 | [5.25] | 5.40 | 5.64 | [5.67]** | [5.67]** |
| Interact with Petty Officers & Officers | 4.59 | 4.59 | 4.45 | [4.60] | 5.08 | 4.91 | 4.98 | [5.23] | 5.28 | 5.50 | 5.43 | [5.64] |
| Reliability | 4.60 | 4.56 | 4.47 | [4.74] | 5.00 | 4.82 | 4.86 | [5.38] | 5.45 | 5.75 | 5.73 | [5.92] |
| Initiative | 4.49 | 4.23 | 4.33 | [4.63] | 4.88 | 4.72 | 4.82 | [5.16] | 5.22 | 5.67 | 5.57 | [5.86] |
| Planning/Scheduling | 4.12 | 3.77 | 3.93 | [4.15] | [4.74] | 4.42 | 4.53 | 4.71 | 5.06 | 5.33 | 5.30 | [5.36] |
| Written Information | 4.23 | 3.97 | 4.12 | [4.25] | [4.96] | 4.78 | 4.60 | 4.91 | 5.52 | [5.60] | 5.52 | 5.43 |
| Numerical Information | 4.39 | 4.42 | 4.32 | [4.53] | [5.15] | 4.80 | 4.79 | 4.87 | 5.40 | 5.42 | [5.54] | 5.48 |
| Remembering | 4.69 | 4.64 | 4.42 | [4.73] | [5.32] | 4.96 | 4.98 | 4.95 | 5.71 | 5.47 | [5.77] | 5.55 |
| Fixed Procedures | 4.37 | [4.38] | 4.32 | 4.31 | [5.11] | 4.85 | 4.86 | 4.89 | 5.44 | 5.36 | [5.67] | 5.43 |
| Observing Safety | 4.83 | [4.84] | 4.82 | 4.80 | [5.34] | 5.22 | 5.16 | 5.33 | 5.73 | 5.61 | [5.93] | 5.80 |
| Interact with Co-Workers | 4.83 | [4.93] | 4.63 | 4.90 | 5.03 | 5.05 | 5.11 | [5.39] | 5.44 | 5.44 | 5.43 | [5.67] |
| Thoroughness | [4.58] | 4.20 | 4.25 | 4.48 | 4.83 | 4.63 | 4.61 | [4.91] | 5.17 | 5.42 | 5.50 | [5.64] |
| Spoken Information | [4.64] | 4.59 | 4.51 | 4.55 | [5.13] | 5.04 | 4.93 | 5.05 | 5.55 | 5.36 | 5.50 | [5.63] |
| Instructing | [4.53] | 4.35 | 4.34 | 4.23 | [5.03] | 4.91 | 4.92 | 5.00 | 5.31 | 5.39 | [5.53] | 5.50 |
| Reasoning | [4.43] | 4.16 | 4.26 | 4.41 | [4.93] | 4.78 | 4.61 | 4.64 | 5.26 | 5.14 | [5.43] | 5.38 |
| Responsibility for materiel | [4.55] | 4.43 | 4.37 | 4.51 | [5.15] | 4.86 | 4.82 | 4.95 | 5.55 | 5.61 | [5.73] | 5.62 |

*Highest mean value for each pay grade indicated in bracket.

**Tie.

In summary, no significant differences were obtained in performance ratings of persons in different mental categories. Individuals in Category 4 are not perceived as any less effective than persons in other mental categories. There is instead an overall trend for persons in Category 4 to receive slightly higher ratings. When individual items and patterns of items are examined the highest mean ratings are consistently obtained by persons in either the highest or lowest mental categories. In all pay grades, persons in the lower categories appear to be rated higher on items that focus on motivational and other non-technical components of job performance. In grades E3 and E4, persons in the highest categories are rated higher on some of the items that focus on technical components of job performance. Attrition of the more effective performers in the higher mental categories after their first tour of duty may account for the disappearance of this effect in grade E5.

## RELATIONSHIP BETWEEN MENTAL CATEGORY AND JOB DUTIES

In addition to direct evaluation of job performance, analysis of the job duties of men of different mental ability can be suggestive of their capabilities. If the performance of men in certain mental categories is not satisfactory, it can be expected that ultimately their shortcomings will be recognized, and they will be assigned to other duties. The effects of such a selective process should be most noticeable when comparing the number and kinds of duties performed by individuals at the extremes of the AFQT distribution.

Whether or not particular job duties are performed can be determined by analyzing the "never has to" (NHT) responses to the job-oriented items. These items are derived from NOTAP job inventory data and represent specific job duties.

NHT responses to each job-oriented item were tabulated in each of seven jobs for three mental category groupings: High (Category 1 and 2), middle (Category High 3) and low (Category Low 3 and 4). It was not possible to

control for pay grade by analyzing items by job by grade by mental category because of the low number of cases that would occur in each cell with such a design. Differences in percent NHT between high and low groups and middle and low groups were calculated for each item. These data are summarized in Table 22 for items that are common to all pay grades.[1] For example, in ABE, for those items that were common to all three pay grades, 17 items (duties) showed a greater percentage of NHT responses for the low aptitude group (Category Low 3 and 4) than for the high aptitude group Category 1 and 2); 13 items showed a greater percentage of NHT responses for the high group than the low; and four items showed no difference in percent NHT. See Table 22.

When the high aptitude and low aptitude groups are compared on the basis of percentage of persons performing, it is seen that four jobs show more duties with a higher percentage performed (lower percent NHT) by low aptitude personnel, and three jobs show more duties with a higher percentage performed by the high group. When the middle aptitude and low aptitude groups are compared on the same basis, five jobs show more duties with a higher percentage performed by the low group, and two jobs show more duties with a higher percentage performed by the middle group. Thus there is no clear evidence of a difference in the number of duties performed by persons in different aptitude groups. Persons of lower mental ability do not perform fewer tasks than persons in higher mental categories. There is, in fact, a suggestion that overall, persons in the upper and middle aptitude range may perform fewer tasks. However, because of the small number of cases in several of the job/category groups, this latter observation can only be viewed as suggestive.

The items/duties that showed differences in frequency of performance between low aptitude groups and high and middle aptitude groups were examined for each of the jobs. See Appendix F. No clear differences in the qualitative characteristics and demands of these duties were discernible.

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[1]The low number of cases precluded analysis of items that are specific to grade E5. For completeness, these data are reported in Appendix E.

TABLE 22

Number of Job-Oriented Items Showing Increase/Decrease in Percent "Never Has To" in Two Comparisons

| | | From Category 1 & 2 To Category Low 3 & 4 | From Category High 3 To Category Low 3 & 4 | Cat. | N |
|---|---|---|---|---|---|
| ABE | | | | | |
| | + | 17* | 11 | 1 & 2 | 39 |
| | – | 13** | 14 | High 3 | 28 |
| | NC | 4*** | 1 | Low 3 & 4 | 42 |
| ABF | | | | | |
| | + | 19 | 18 | 1 & 2 | 29 |
| | – | 13 | 14 | High 3 | 17 |
| | NC | 0 | 0 | Low 3 & 4 | 28 |
| ABH | | | | | |
| | + | 8 | 11 | 1 & 2 | 13 |
| | – | 16 | 11 | High 3 | 21 |
| | NC | 0 | 2 | Low 3 & 4 | 43 |
| AO | | | | | |
| | + | 21 | 15 | 1 & 2 | 34 |
| | – | 4 | 9 | High 3 | 29 |
| | NC | 0 | 1 | Low 3 & 4 | 44 |
| SK | | | | | |
| | + | 2 | 8 | 1 & 2 | 13 |
| | – | 20 | 13 | High 3 | 9 |
| | NC | 1 | 2 | Low 3 & 4 | 36 |
| MS-S2 | | | | | |
| | + | 6 | 6 | 1 & 2 | 11 |
| | – | 21 | 21 | High 3 | 14 |
| | NC | 1 | 1 | Low 3 & 4 | 54 |
| MS-S5 | | | | | |
| | + | 4 | 14 | 1 & 2 | 7 |
| | – | 37 | 27 | High 3 | 18 |
| | NC | 1 | 1 | Low 3 & 4 | 59 |

*Number of items showing increase in percent "never has to".
**Number of items showing decrease in percent "never has to".
***Number of items showing no change in percent "never has to".

## CONCLUSIONS AND RECOMMENDATIONS

This study produced no clear evidence of less effective job performance by persons in lower mental categories either in the rated quality of their performance or in the number and characteristics of the duties they perform.

In the jobs studied, supervisors perceive the most effective job incumbents in pay grades E3 and E4 to be persons in either the highest or lowest mental categories. They perceive persons in the lower mental categories to be the most effective job incumbents in grade E5. This pattern may be interpreted in terms of (1) the relative importance of technical (skill and knowledge) factors and non-technical (e.g., motivation) factors in job performance and their influence on ratings of performance, and (2) selective processess which favor the acquisition and retention of effective performers in the lower mental categories.

The finding that men in lower categories are not viewed as performing in an inferior manner supports the findings of an earlier study (Vineberg and Taylor, 1972) that AFQT is not a strong determinant of performance in many jobs and tasks. When more objective procedures (e.g., job sample tests) are used to assess technical competence, job experience is found to be a more potent factor.

The task level worker-oriented and job-oriented rating items developed for this study have more favorable properties for assessing performance than the PER used operationally in the Navy. These items, however, are still subject to bias effects. Leniency and halo increase with pay grade, a factor that must be controlled in all analyses that seek to determine the relationship between ratings and other variables.

One of the goals of the present study was to determine if men in lower mental categories are equivalent to men in higher categories in performing a broad range of tasks. As indicated above, the data do not indicate any decrement in the performance of men of lower mental ability. Indeed, they

appear to be perceived as more rather than less effective. This conclusion must be qualified in two ways:

1. No highly complex or difficult jobs were included in the study because only jobs that were expected to provide a large sample of persons of low aptitude were used.
2. The rating instruments used to assess proficiency proved to be limited in their power to detect qualitative differences among the technical aspects of performance.

These limitations should be addressed in a study that evaluates performance of persons of low aptitude in relatively complex/difficult jobs by means of both supervisor ratings and more objective techniques such as job sample testing.[1] The latter would permit a separate evaluation of the technical aspects of job performance. It is recommended that the Navy undertake an intensive study of the performance of persons of lower mental ability in one or two jobs selected for the difficulty of their cognitive and technical demands. The study should include a longitudinal component that would allow analysis of the performance of those persons in their first tour who later reenlist and of persons who subsequently leave the Navy. The relationships between mental category, attrition from the Navy, and job performance can be most clearly understood by analyzing the proficiency and duties of a cohort of men as they proceed through their first tour and elect to remain in or leave the Navy.

[1] A recent study (Wiley & Hahn, 1977) has demonstrated that supervisor ratings possess better measurement characteristics when applied to more difficult tasks.

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# APPENDIX A

## Performance Rating Instruments

## APPENDIX A-1

## Inventories Containing Worker-Oriented and Job-Oriented Items

Samples shown are for:

Aviation Boatswain's Mate - Equipment
E3/E4; E5

Aviation Ordnance
E3/E4; E5

Electricians Mate
E3 - E5

Storekeeper
E3/E4; E5

Mess Management Specialist - S2 Division
E5

Mess Management Specialist - S5 Division
E3/E4

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated: _____ Please Circle: Striker or ABE3

Rater's Name & Division: _____

Number of months you have been this person's supervisor: _____

Date: _____

This form is to be used to describe the performance of persons in the rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E3 or E4 level.

Your task is to consider each item and evaluate the person's performance compared to all others you have observed in this rate.

Here is an example:

Operating keyboard devices. (Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | Slow or With Many Errors | | Never Has To |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with keyboard devices, you would select and circle the number on the scale that best fits your appraisal of his performance. If he never has to work with keyboard devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January, 1977
Form M ABE E3 or E4

## I. USE OF TOOLS & EQUIPMENT

1. Work produced using non-precision tools/instruments. (Tools used to perform operations <u>not</u> requiring great accuracy or precision: hammers, wrenches, hand grease guns, electric grinder, drills, welding equipment, et.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

2. Work accomplished using handling devices. (Pouring zinc from ladles, using mechanical fingers, etc.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

3. Accurate use of measuring devices. (Micrometers, rulers, tensiometers, stop watches, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

4. Work accomplished using long-handle tools or applicators. (Mopping up fuel spills, using brooms, brushes, paint rollers, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

5. Using activation controls. (Hand or foot operated devices used to start, stop, or otherwise activate energy-using systems or mechanisms, buttons, levers, hand cranks, switches, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

6. Using fixed setting controls. (Hand or foot operated devices with distinct positions, detents, or definite settings; declutch lever for arresting gear, mechanical lock for launching control valve, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

7. Using variable setting controls. (Hand or foot operated devices that can be set at the beginning of operation, or infrequently, at any position along a scale; pressure set regulator valve, CSV, control valve for arresting gear, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

II. HAND-ARM MANIPULATIONS

8. Setting up/adjusting machines or equipment. (Adjusting, calibrating, aligning, and/or setting up; adjusting cable tension, calibrating gages, calibrating equipment for electrical readouts, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

9. Assembling/disassembling machines or equipment, either manually or with the use of hand tools. (For example, tearing down and setting up catapult, etc.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

10. Maintaining hand-arm steadiness. (Maintaining a uniform, controlled hand-arm posture or movement; using a welding torch, soldering, etc.)

| Highly Controlled, Steady | | | Adequate | | | Poorly Controlled, Unsteady | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

## III. COORDINATION

11. Skill or precision in coordinating hand or foot movements with eye. (The coordination of hand and/or foot movements where the movement must be coordinated with what is seen; for example, in gage adjustment, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

12. Coordination of entire body. (Activities involving extensive and often highly-practiced coordination activities of the whole body; crawling under aircraft, regging barricade, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

13. Balancing. (Maintaining balance on narrow, slippery, steeply inclined or erratically moving surfaces; walking on narrow elevated plank, standing on cat walk, during underway replenishment, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

## IV. WORK HABITS & PROCESS

14. Maintaining specified work pace. (Operating catapult or arresting gear, hooking up, launching, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

15. Maintains quality of work when performing under time pressure. (Launching and recovery, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

16. The amount of supervision this person requires compared to the amount that is normally given in this rate and rating.

| Needs Much Less Supervision Than Normal | | | Average | | | Needs Much More Supervision Than Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

17. Interacting with petty officers and officers.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, team, or crew, etc.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

19. Giving information to superiors and giving information or instruction to subordinates.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Providing supervision to other persons.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

22. Showing initiative. (Carrying out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Thorough | | | Satisfactory | | | Exceptional Lack of Thoroughness |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

24. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

25. Planning, scheduling, and estimating time to complete activities. (Scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

26. Following fixed procedures when required as part of task. (Launching and recovery activities, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Sometimes Deviates | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

27. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Much Better Than Average Person Under Distraction | | | Average | | | Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

28. Getting job information by reading written materials. (Launching bulletins, manuals, service charges, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

29. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | Exceptionally Inaccurate | | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

30. Remembering information for a brief period of time. (Console recorder, launch valve strobe timer readings, steam pressures, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

31. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

32. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

ABE E3 or E4

33. Being aware of and alert to the condition/quality of equipment, material or weapon systems. (For example, condition of components in catapult and recovery gear, etc.)

| Exceptionally Aware | | Satisfactory | | Exceptionally Unaware |
|---|---|---|---|---|
| 7 | | 4 | | 1 |

34. Being accurate in transcribing. (Copying or posting data or information for later use; water brake readings, fluid history reports, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

35. Being thorough or complete in compiling data. (Gathering and arranging information or data in some meaningful order or form; for example, listing maintenance work for yard and shipboard personnel, etc.)

| Exceptionally Complete | | | Satisfactory | | | Exceptionally Incomplete | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

36. Giving signals. (Communicating by some type of signal; hand signals, whistles, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

37. Understanding and responding to signals. (Hand signals, whistles, lights, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

## V. OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

38. Getting job information from pictures. (Pictures or picture-like materials used as sources of information; drawings in manuals, blueprints, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

39. Accuracy in getting job information from visual displays and measuring devices. (Dials, gages, signal lights, micrometers, tensiometers, rulers, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

40. Obtaining job information by attending to spoken orders, requests, or verbal instructions.

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

41. Being sensitive to events or circumstances that change the job situation. (Movement of aircraft, movement of personnel, etc.)

| Exceptionally Aware | | | Satisfactory | | | Exceptionally Unaware |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

42. Obtaining job information by attending to sounds or patterns of sounds. (For example, malfunction in arresting gear, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

43. Being sensitive to changes in temperature, moisture or pressure that can be detected by touching. (Hot components such as launching valves, bearings, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

44. Obtaining job information by seeing differences using far vision. (Deck edge operator, aircraft identification to determine correct settings for arresting gear, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

45. Attending to differences in color. (Differentiating or identifying objects, materials, or details on the basis of color; for example, indicating lights, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

46. Being vigilant in observing continually changing events. (Continually watching frequently changing dials and gages, aircraft that are landing, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Nonobservant | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

47. Being vigilant in observing infrequent events. (For example, observing instrument panel to identify infrequent change from "normal", etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Nonobservant | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

**For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.**

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 48. Participating in field days, sweep downs, etc.

☐ 49. Painting work spaces, etc.

☐ 50. Inspecting spaces for safety, cleanliness, etc.

☐ 51. Assigning personnel to work.

☐ 52. Picking up/turning in tools, equipment, and supplies.

☐ 53. Performing dye penetrant test.

☐ 54. Greasing equipment.

☐ 55. Replacing gaskets and seals in equipment (pumps, valves, etc.) or replacing packing in pistons/cylinders.

☐ 56. Measuring throat depth wear on sheaves.

☐ 57. Checking sound powered phones for proper operation.

☐ 58. Removing and replacing packing glands.

☐ 59. Participating in "hang-fire" drills.

☐ 60. Removing/replacing gages (hydraulic, pneumatic, steam).

☐ 61. Bleeding air from hydraulic system.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 62. Building up barricades.

☐ 63. Applying preservatives to cables (CDPS, purchase cables, bridles, etc.).

☐ 64. Cleaning hydraulic filters.

☐ 65. Stowing/breaking out parts/equipment.

☐ 66. Rigging the barricade.

☐ 67. Changing bridle arrestor straps.

☐ 68. Replacing "O" rings in valves/cylinders.

☐ 69. Painting safety markings on flight deck.

☐ 70. Maintaining logs/records (catapult, flight deck, fuels, etc.).

☐ 71. Participating in working parties.

☐ 72. Functionally checking catapults by firing no-loads.

☐ 73. Ensuring safety lines are in place during no-load firings.

☐ 74. Safety wiring equipment/gear/switches.

☐ 75. Inspecting components of water brake cylinder (chock ring, etc.).

ABE E3 or E4

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 76. Changing zinc anodes in water cooling systems (fluid coolers).

☐ 77. Breaking out bridles, T-bars, etc.

☐ 78. Removing broken bolts/studs from equipment.

☐ 79. Installing cables in retraction engine (re-reeve).

☐ 80. Taking cylinder elongation readings.

☐ 81. Replacing grease in automatic lubrication system.

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated: _____ (ABE2)

Rater's Name & Division: _____

Number of months you have been this person's supervisor: _____

Date: _____

This form is to be used to describe the performance of persons in the rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E5 level.

Your task is to consider each item and evaluate the person's performance compared to all others you have observed in this rate.

Here is an example:

Operating keyboard devices. (Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | Slow or With Many Errors | | Never Has To |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with keyboard devices, you would select and circle the number on the scale that best fits your appraisal of his performance. If he never has to work with keyboard devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January, 1977
Form M ABE E5

## I. USE OF TOOLS & EQUIPMENT

1. Work produced using non-precision tools/instruments. (Tools used to perform operations <u>not</u> requiring great accuracy or precision: hammers, wrenches, hand grease guns, electric grinder, drills, welding equipment, et.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

2. Work accomplished using handling devices. (Pouring zinc from ladles, using mechanical fingers, etc.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

3. Accurate use of measuring devices. (Micrometers, rulers, tensiometers, stop watches, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

4. Work accomplished using long-handle tools or applicators. (Mopping up fuel spills, using brooms, brushes, paint rollers, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

5. Using activation controls. (Hand or foot operated devices used to start, stop, or otherwise activate energy-using systems or mechanisms, buttons, levers, hand cranks, switches, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

6. Using fixed setting controls. (Hand or foot operated devices with distinct positions, detents, or definite settings; declutch lever for arresting gear, mechanical lock for launching control valve, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

7. Using variable setting controls. (Hand or foot operated devices that can be set at the beginning of operation, or infrequently, at any position along a scale; pressure set regulator valve, CSV, control valve for arresting gear, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

II. HAND-ARM MANIPULATIONS

8. Setting up/adjusting machines or equipment. (Adjusting, calibrating, aligning, and/or setting up; adjusting cable tension, calibrating gages, calibrating equipment for electrical readouts, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

9. Assembling/disassembling machines or equipment, either manually or with the use of hand tools. (For example, tearing down and setting up catapult, etc.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

10. Maintaining hand-arm steadiness. (Maintaining a uniform, controlled hand-arm posture or movement; using a welding torch, soldering, etc.)

| Highly Controlled, Steady | | | Adequate | | | Poorly Controlled, Unsteady | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

## III. COORDINATION

11. Skill or precision in coordinating hand or foot movements with eye. (The coordination of hand and/or foot movements where the movement must be coordinated with what is seen; for example, in gage adjustment, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

12. Coordination of entire body. (Activities involving extensive and often highly-practiced coordination activities of the whole body; crawling under aircraft, regging barricade, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

13. Balancing. (Maintaining balance on narrow, slippery, steeply inclined or erratically moving surfaces; walking on narrow elevated plank, standing on cat walk, during underway replenishment, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

## IV. WORK HABITS & PROCESS

14. Maintaining specified work pace. (Operating catapult or arresting gear, hooking up, launching, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

15. Maintains quality of work when performing under time pressure. (Launching and recovery, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

16. The amount of supervision this person requires compared to the amount that is normally given in this rate and rating.

| Needs Much Less Supervision Than Normal | | | Average | | | Needs Much More Supervision Than Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

17. Interacting with petty officers and officers.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Effectiveness in dealing with co-workers. (Interacting with another person; working as a memberof a group, team, or crew, etc.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

19. Giving information to superiors and giving information or instruction to subordinates.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Providing supervision to other persons.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

22. Showing initiative. (Carrying out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Thorough | | | Satisfactory | | | Exceptional Lack of Thoroughness |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

24. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

25. Planning, scheduling, and estimating time to complete activities. (Scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

26. Following fixed procedures when required as part of task. (Launching and recovery activities, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Sometimes Deviates | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

27. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Much Better Than Average Person Under Distraction | | | Average | | | Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

28. Getting job information by reading written materials. (Launching bulletins, manuals, service charges, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

29. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | Exceptionally Inaccurate | | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

30. Remembering information for a brief period of time. (Console recorder, launch valve strobe timer readings, steam pressures, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

31. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

32. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

33. Being aware of and alert to the condition/quality of equipment, material or weapon systems. (For example, condition of components in catapult and recovery gear, etc.)

| Exceptionally Aware | | Satisfactory | | Exceptionally Unaware |
|---|---|---|---|---|
| 7 | | 4 | | 1 |

34. Being accurate in transcribing. (Copying or posting data or information for later use; water brake readings, fluid history reports, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

35. Being thorough or complete in compiling data. (Gathering and arranging information or data in some meaningful order or form; for example, listing maintenance work for yard and shipboard personnel, etc.)

| Exceptionally Complete | | | Satisfactory | | | Exceptionally Incomplete | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

36. Giving signals. (Communicating by some type of signal; hand signals, whistles, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

37. Understanding and responding to signals. (Hand signals, whistles, lights, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

## V. OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

38. Getting job information from pictures. (Pictures or picture-like materials used as sources of information; drawings in manuals, blueprints, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

39. Accuracy in getting job information from visual displays and measuring devices. (Dials, gages, signal lights, micrometers, tensiometers, rulers, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

40. Obtaining job information by attending to spoken orders, requests, or verbal instructions.

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

41. Being sensitive to events or circumstances that change the job situation. (Movement of aircraft, movement of personnel, etc.)

| Exceptionally Aware | | | Satisfactory | | | Exceptionally Unaware |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

42. Obtaining job information by attending to sounds or patterns of sounds. (For example, malfunction in arresting gear, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

43. Being sensitive to changes in temperature, moisture or pressure that can be detected by touching. (Hot components such as launching valves, bearings, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

44. Obtaining job information by seeing differences using far vision. (Deck edge operator, aircraft identification to determine correct settings for arresting gear, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

45. Attending to differences in color. (Differentiating or identifying objects, materials, or details on the basis of color; for example, indicating lights, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

46. Being vigilant in observing continually changing events. (Continually watching frequently changing dials and gages, aircraft that are landing, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Nonobservant | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

47. Being vigilant in observing infrequent events. (For example, observing instrument panel to identify infrequent change from "normal", etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Nonobservant | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

**For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.**

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 48. Participating in field days, sweep downs, etc.

☐ 49. Painting work spaces, etc.

☐ 50. Inspecting spaces for safety, cleanliness, etc.

☐ 51. Assigning personnel to work.

☐ 52. Picking up/turning in tools, equipment, and supplies.

☐ 53. Performing dye penetrant test.

☐ 54. Greasing equipment.

☐ 55. Replacing gaskets and seals in equipment (pumps, valves, etc.) or replacing packing in pistons/cylinders.

☐ 56. Measuring throat depth wear on sheaves.

☐ 57. Checking sound powered phones for proper operation.

☐ 58. Removing and replacing packing glands.

☐ 59. Participating in "hang-fire" drills.

☐ 60. Removing/replacing gages (hydraulic, pneumatic, steam).

☐ 61. Bleeding air from hydraulic system.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 62. Building up barricades.

☐ 63. Applying preservatives to cables (CDPS, purchase cables, bridles, etc.).

☐ 64. Cleaning hydraulic filters.

☐ 65. Stowing/breaking out parts/equipment.

☐ 66. Rigging the barricade.

☐ 67. Changing bridle arrestor straps.

☐ 68. Replacing "O" rings in valves/cylinders.

☐ 69. Painting safety markings on flight deck.

☐ 70. Maintaining logs/records (catapult, flight deck, fuels, etc.).

☐ 71. Participating in working parties.

☐ 72. Functionally checking catapults by firing no-loads.

☐ 73. Ensuring safety lines are in place during no-load firings.

☐ 74. Safety wiring equipment/gear/switches.

☐ 75. Inspecting components of water brake cylinder (chock ring, etc.).

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 76. Changing zinc anodes in water cooling systems (fluid coolers).

☐ 77. Breaking out bridles, T-bars, etc.

☐ 78. Removing broken bolts/studs from equipment.

☐ 79. Installing cables in retraction engine (re-reeve).

☐ 80. Taking cylinder elongation readings.

☐ 81. Replacing grease in automatic lubrication system.

☐ 82. Ordering tools, equipment, and supplies.

☐ 83. Repairing grab by replacing parts (latch, rollers, etc.)

☐ 84. Inventorying tools, equipment, and supplies.

☐ 85. Removing/replacing valves.

☐ 86. Removing/replacing tubing/hoses.

☐ 87. Breaking down/inspecting trail bars for nose tow aircraft.

☐ 88. Visually inspecting catapult track for obstructions.

☐ 89. Operating catapult deck edge panel.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 90. Visually inspecting bridle arrestor track for broken bolts, alignment, etc.

☐ 91. Removing/replacing catapult shuttle assembly.

☐ 92. Removing/replacing catapult power piston assembly.

☐ 93. Preparing/reviewing enlisted performance evaluations.

☐ 94. Making up planned maintenance system (PMS) schedule.

☐ 95. Inspecting catapult cylinders, cylinder covers, and connecting bolts for proper installation.

☐ 96. Calibrating/qualifying gages.

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated:_____ Please Circle: (AO striker, AO3)

Rater's name and Division:_____

Number of months you have been this person's supervisor:_____

Date:_____

This form is to be used to describe the performance of persons in the AO rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E3 or E4 level.

Your task is to consider each item and evaluate the person's performance compared to all other AOs you have observed in the same rate as this person.

Here is an example:

Operating key-board devices. (Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | | | Slow or with Many Errors | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with key-board devices, you would circle the number on the scale that best fits your appraisal of his performance. If he never has to work with key-board devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January 1977
Form M AO E3 or E4

I. USE OF TOOLS AND EQUIPMENT

1. Work produced using energy-powered precision tools/instruments. (Powered tools or instruments used to perform operations requiring great accuracy or precision; for example, soldering irons, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

2. Work produced using non-precision tools/instruments. (Tools used to perform operations not requiring great accuracy or precision; pliers, screwdrivers, socket wrenches, air drills, air socket gun, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

3. Using activation controls. (Hand or foot operated devices used to start, stop, or otherwise activate energy-using systems or mechanisms; fork lifts, test equipment, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

4. Using fixed setting controls. (Hand or foot operated devices with distinct positions, detents, or definite settings; weapon testing, continuity checks, hi-pot test, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

AO E3 or E4

5. Effective use of powered mobile equipment. (Fork lifts, flat beds, bomb trucks and trailers, weapons loaders, etc.)

| Highly Effective | | | Satisfactory | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

II. HAND/ARM MANIPULATIONS

6. Assembling/disassembling machines or equipment either manually or with the use of hand tools. (Bomb racks, photo pods, launchers, bombs, missiles, etc.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

7. Care or speed in arranging objects, materials, etc. in a specific position or arrangement. (Magazine handling, loading aircraft, loading ordnance, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

8. Speed or thoroughness in physical handling. (Physically handling objects or materials, either manually or with use of aiding devices when there is little requirement for careful positioning or arrangement of objects)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

III. COORDINATION

9. Skill or precision in coordinating hand or foot movements with eye. (The coordination of hand and/or foot movements where the movement must be coordinated with what is seen; aero 47 loader, bomb hoist, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

## IV. WORK HABITS AND PROCESS

10. Maintaining specified work pace (Assembling ordnance, belting ammunition, missile testing, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

11. Maintains quality of work when performing under <u>time pressure</u>. (For example, ordnance assembly during strike preparation, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

12. The amount of supervision this person requires compared to the amount that is <u>normally</u> given <u>in this rate</u> and rating.

| Needs Much Less Supervision Than Is Normal | | | Average | | | Need Much More Supervision Than Is Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

13. Interacting with petty officers and officers.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

14. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, team or crew, etc.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

15. Giving information to superiors and giving information or instruction to subordinates.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

16. Providing supervision to other persons.

| Very Effective | | | Satisfactory | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

17. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Showing initiative. (Carrying out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

19. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Planning, scheduling, and estimating tiem to complete activities. (Scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Exceptionally Reliable | | | Satisfactory | | | Exceptionally Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 5 | 2 | 1 |

22. Following fixed procedures when required as part of task. (Following specific set procedures or routines in order to obtain satisfactory outcomes; for example, using loading check list, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Satisfactory | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Performs Much Better Than Average Person Under Distraction | | | Average | | | Performs Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

24. Getting job information by reading written materials. (Tech manuals, safety bulletins, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

25. Accuracy in getting job information that is given in numbers & doing arithmetic

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

26. Remembering information for a brief period of time.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

27. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

28. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

29. Obtaining job information by attending to spoken orders, requests or verbal instructions. (Arming aircraft as a team, loading and unloading aircraft, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

30. Being aware of and alert to the condition/quality of equipment, material or weapon systems. (Weapons readiness inspection, inspecting bombs, photo pods, launchers, etc.)

| Exceptionally Aware | | | Satisfactory | | | Exceptionally Unaware |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

V. OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

31. Getting job information from visual displays. (For example, from test equipment, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

32. Obtaining job information by observing materials as they are being worked with or modified. (Parts, materials, objects, etc., which are sources of information when being modified, worked on, or otherwise processed; magazine and weapons inspection, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

33. Observing or inspecting products, objects, materials, etc. in terms of established standards. (Either one's own work products or those of others; for example, inspecting ordnance, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

34. Attending to differences in color. (Differentiating or identifying objects, materials, or details on the basis of color; magazine colors, electrical wiring, ordnance color codes, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

35. Being vigilant in observing continually changing events. (For example, controlling aircraft into and out of arming area, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Non-observant | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

36. Being vigilant in observing infrequent events. (For example, safety monitoring, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Non-observant | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

37. Judging depth or distance. (Judging the distance from the observer to objects or the distances between objects as they are positioned in space; positioning ordnance under aircraft, positioning handling equipment, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 38. Participating in field days, sweep down, etc.

☐ 39. Painting work spaces, magazines, etc.

☐ 40. Assigning personnel to work.

☐ 41. Inventorying ordnance, tools, equipment, or supplies.

☐ 42. Uncrating ordnance/equipment or breaking out/stowing ordnance or parts.

☐ 43. Picking up/turning in tools, equipment, and supplies.

☐ 44. Conducting general safety inspections of spaces/equipment.

☐ 45. Participating in ordnance evolutions (VERTREP, UNREP, etc.).

☐ 46. Issuing/receiving ordnance.

☐ 47. Preparing ordnance/equipment for shipment (palletize, crate).

☐ 48. Participating in working parties.

☐ 49. Maintaining logs/records (magazine temperatures, small arms issue, supply, etc.).

☐ 50. Performing magazine maintenance (clean vents, clean drains, change bulbs, etc.).

☐ 51. Picking up/turning in ordnance.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 52. Taking/recording magazine temperatures.

☐ 53. Preparing training lectures.

☐ 54. Placing identifying marks on tools, equipment, or ordnance (paint, stencil, etch, tape, etc.).

☐ 55. Cleaning ordnance.

☐ 56. Performing quality assurance (QA) inspection on ordnance in ready/build-up area.

☐ 57. Filling out work requests/work orders.

☐ 58. Counseling personnel on military/personal matters.

☐ 59. Replacing "O" rings, gaskets, seals, etc.

☐ 60. Maintaining status boards.

☐ 61. Lubricating mechanical components.

☐ 62. Configuring ordnance handling equipment (change adapters) as required.

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated:_____ (AO2)

Rater's name and Division:_____

Number of months you have been this person's supervisor:_____

Date:_____

This form is to be used to describe the performance of persons in the AO rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E5 level.

Your task is to consider each item and evaluate the person's performance compared to all other AOs you have observed in the same rate as this person.

Here is an example:

Operating key-board devices. (Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | Slow or with Many Errors | | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with key-board devices, you would circle the number on the scale that best fits your appraisal of his performance. If he never has to work with key-board devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January 1977
Form M AO E5

AD-A061 095 HUMAN RESOURCES RESEARCH ORGANIZATION ALEXANDRIA VA F/G 5/10
PERFORMANCE OF MEN IN DIFFERENT MENTAL CATEGORIES: 2. ASSESSMEN--ETC(U)
SEP 78 R VINEBERG, J N JOYNER N00014-75-C-0938
UNCLASSIFIED HUMRRO-TR-78-1 NL

2 OF 3
ADA
061095



I. USE OF TOOLS AND EQUIPMENT

1. Work produced using energy-powered precision tools/instruments. (Powered tools or instruments used to perform operations requiring <u>great</u> accuracy or precision; for example, soldering irons, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

2. Work produced using non-precision tools/instruments. (Tools used to perform operations <u>not</u> requiring great accuracy or precision; pliers, screwdrivers, socket wrenches, air drills, air socket gun, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

3. Using activation controls. (Hand or foot operated devices used to start, stop, or otherwise activate energy-using systems or mechanisms; fork lifts, test equipment, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

4. Using fixed setting controls. (Hand or foot operated devices with distinct positions, detents, or definite settings; weapon testing, continuity checks, hi-pot test, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

5. Effective use of powered mobile equipment. (Fork lifts, flat beds, bomb trucks and trailers, weapons loaders, etc.)

| Highly Effective | | | Satisfactory | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

II. HAND/ARM MANIPULATIONS

6. Assembling/disassembling machines or equipment either manually or with the use of hand tools. (Bomb racks, photo pods, launchers, bombs, missiles, etc.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

7. Care or speed in arranging objects, materials, etc. in a specific position or arrangement. (Magazine handling, loading aircraft, loading ordnance, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

8. Speed or thoroughness in physical handling. (Physically handling objects or materials, either manually or with use of aiding devices when there is little requirement for careful positioning or arrangement of objects)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

III. COORDINATION

9. Skill or precision in coordinating hand or foot movements with eye. (The coordination of hand and/or foot movements where the movement must be coordinated with what is seen; aero 47 loader, bomb hoist, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

IV. WORK HABITS AND PROCESS

10. Maintaining specified work pace (Assembling ordnance, belting ammunition, missile testing, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

11. Maintains quality of work when performing under <u>time pressure</u>. (For example, ordnance assembly during strike preparation, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

12. The amount of supervision this person requires compared to the amount that is <u>normally</u> given <u>in this rate</u> and rating.

| Needs Much Less Supervision Than Is Normal | | | Average | | | Need Much More Supervision Than Is Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

13. Interacting with petty officers and officers.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

14. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, team or crew, etc.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

15. Giving information to superiors and giving information or instruction to subordinates.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

16. Providing supervision to other persons.

| Very Effective | | | Satisfactory | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

17. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Showing initiative. (Carrying out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

19. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Planning, scheduling, and estimating time to complete activities, (Scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Exceptionally Reliable | | | Satisfactory | | | Exceptionally Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 5 | 2 | 1 |

22. Following fixed procedures when required as part of task. (Following specific set procedures or routines in order to obtain satisfactory outcomes; for example, using loading check list, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Satisfactory | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Performs Much Better Than Average Person Under Distraction | | | Average | | | Performs Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

24. Getting job information by reading written materials. (Tech manuals, safety bulletins, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

25. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

26. Remembering information for a brief period of time.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

27. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

28. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

29. Obtaining job information by attending to spoken orders, requests or verbal instructions. (Arming aircraft as a team, loading and unloading aircraft, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

30. Being aware of and alert to the condition/quality of equipment, material or weapon systems. (Weapons readiness inspection, inspecting bombs, photo pods, launchers, etc.)

| Exceptionally Aware | | | Satisfactory | | | Exceptionally Unaware |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

## V. OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

31. Getting job information from visual displays. (For example, from test equipment, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

32. Obtaining job information by observing materials as they are being worked with or modified. (Parts, materials, objects, etc., which are sources of information when being modified, worked on, or otherwise processed; magazine and weapons inspection, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

33. Observing or inspecting products, objects, materials, etc. in terms of established standards. (Either one's own work products or those of others; for example, inspecting ordnance, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

34. Attending to differences in color. (Differentiating or identifying objects, materials, or details on the basis of color; magazine colors, electrical wiring, ordnance color codes, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

35. Being vigilant in observing continually changing events. (For example, controlling aircraft into and out of arming area, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Non-observant | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

36. Being vigilant in observing infrequent events. (For example, safety monitoring, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Non-observant | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

37. Judging depth or distance. (Judging the distance from the observer to objects or the distances between objects as they are positioned in space; positioning ordnance under aircraft, positioning handling equipment, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 38. Participating in field days, sweep down, etc.

☐ 39. Painting work spaces, magazines, etc.

☐ 40. Assigning personnel to work.

☐ 41. Inventorying ordnance, tools, equipment, or supplies.

☐ 42. Uncrating ordnance/equipment or breaking out/stowing ordnance or parts.

☐ 43. Picking up/turning in tools, equipment, and supplies.

☐ 44. Conducting general safety inspections of spaces/equipment.

☐ 45. Participating in ordnance evolutions (VERTREP, UNREP, etc.).

☐ 46. Issuing/receiving ordnance.

☐ 47. Preparing ordnance/equipment for shipment (palletize, crate).

☐ 48. Participating in working parties.

☐ 49. Maintaining logs/records (magazine temperatures, small arms issue, supply, etc.).

☐ 50. Performing magazine maintenance (clean vents, clean drains, change bulbs, etc.).

☐ 51. Picking up/turning in ordnance.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 52. Taking/recording magazine temperatures.

☐ 53. Preparing training lectures.

☐ 54. Placing identifying marks on tools, equipment, or ordnance (paint, stencil, etch, tape, etc.).

☐ 55. Cleaning ordnance.

☐ 56. Performing quality assurance (QA) inspection on ordnance in ready/build-up area.

☐ 57. Filling out work requests/work orders.

☐ 58. Counseling personnel on military/personal matters.

☐ 59. Replacing "O" rings, gaskets, seals, etc.

☐ 60. Maintaining status boards.

☐ 61. Lubricating mechanical components.

☐ 62. Configuring ordnance handling equipment (change adapters) as required.

☐ 63. Signing for equipment on sub-custody (test equipment, ground support equipment, tools, etc.).

☐ 64. Assigning job priorities.

☐ 65. Ensuring compliance with safety messages, directives, etc.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 66. Filling out maintenance action forms (MAFS).

☐ 67. Screening reports for accuracy/completeness.

☐ 68. Maintaining "required reading" boards.

☐ 69. Inspecting/verifying quality of work performed.

☐ 70. Issuing tools, equipment, and supplies.

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated:_____ Please Circle: (EM striker, EM3 EM2)

Rater's name and Division: _____

Number of months you have been this person's supervisor:_____

Date:_____

This form is to be used to describe the performance of persons in the EM rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E3, E4, or E5 level.

Your task is to consider each item and evaluate the person's performance compared to all other EMs you have observed in the same rate as this person. Here is an example:

> Operating key-board devices (typewriters, adding machines, calculators, keypunch machine, etc.)
>
> | Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | Slow or with Many Errors | | Never Has to |
> |---|---|---|---|---|---|---|
> | 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with key-board devices, you would circle the number on the scale that best fits your appraisal of his performance. If he never has to work with key-board devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
December, 1976
Form M-EM

I. USE OF TOOLS AND EQUIPMENT

1. Work produced using energy-powered precision tools/instruments. (Powered tools or instruments used to perform operations requiring great accuracy or precision; drills, soldering irons, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

2. Work produced using non-precision tools/instruments. (Tools used to perform operations not requiring great accuracy; screw drivers, pliers, socket and combination wrenches, sanders, spray nozzles, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

3. Using fixed setting controls. (Hand or foot operated devices with distinct positions, detents, or definite settings; for example, TV selector switch, etc.)

| Very Good Knowledge of Procedures | | | Satisfactory | | | Very Poor Knowledge of Procedures | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

4. Using variable setting controls. (Hand or foot operated devices that can be set at the beginning of operation, or infrequently, at any position along a scale; switchboards, electric propulsion systems, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

5. Operating key-board devices. (Switchboards, electric propulsion systems, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | | | Slow or With Many Errors | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

6. Using hand-operated controls that require frequent but not continuous adjustment. (Controls operated by hand or arm for making frequent, but not continuous adjustments; switchboards, propulsion and speed control devices on motors, etc.)

| Exceptionally Good | | | Satisfactory | | | Exception-ally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

7. Using foot-operated controls that require frequent but not continuous adjustment. (Controls operated by foot or leg for making frequent, but not continuous adjustments; switchboards, drill presses, etc.)

| Exceptionally Good | | | Satisfactory | | | Exception-ally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

II. HAND-ARM MANIPULATIONS

8. Setting up/adjusting machines or equipment. (Adjusting, calibrating, aligning and/or setting up; coil winders, drill presses, aligning electrical circuitry, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exception-ally Inac-curate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

9. Assembling/disassembling machines or equipment, either manually or with the use of hand tools. (Motors, controllers, generators, switchboards, etc.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

10. Maintaining hand-arm steadiness. (Maintaining a uniform, controlled hand-arm posture or movement; soldering, winding coils, etc.)

| Highly Controlled, Steady | | | Satisfactory | | | Poorly Controlled, Unsteady | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

III. COORDINATION

11. Skill or precision in coordinating hand or foot movements with eye. (The coordination of hand and/or foot movements where the movement must be coordinated with what is seen; rewind machines, switchboards, using electronic test equipment for alignment, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

IV. WORK HABITS AND PROCESSES

12. Maintains quality of work when performing under time pressure. (Repairs in kitchen, other hotel services, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

13. The amount of supervision this person requires compared to the amount that is normally given in this rate and rating.

| Needs Much Less Supervision Than Is Normal | | | Average | | | Needs Much More Supervision Than Is Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

14. Interacting with petty officers and officers.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

15. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, team or crew, etc.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

16. Giving information to superiors and giving information or instructions to subordinates.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

17. Providing supervision to other persons.

| Very Effective | | | *Satisfactory* | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

18. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

19. Showing initiative. (Carrying out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

22. Planning, scheduling, and estimating time to complete activities. (Scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Exceptionally Reliable | | | Satisfactory | | | Exceptionally Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Following fixed procedures when required as part of task. (Following specific set procedures or routine in order to obtain satisfactory outcomes; for example, following check-out list to inspect equipment, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Satisfactory | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

24. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Much Better Than Average Under Distraction | | | Average | | | Much Worse Than Average Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

25. Getting job information by reading written materials. (Technical manuals, manufacturers instructions,etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

26. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | Exception-ally Inac-curate | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

27. Remembering information for a brief period of time. (Telephone operator watch, central switchboard watch, messenger watch, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

28. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

29. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

30. Obtaining job information by attending to spoken orders, requests or verbal instructions. (For example, collecting symptom information from user, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

31. Being aware of and alert to the condition/quality of equipment, material or weapon systems. (Insulation, equipment cleanliness, etc.)

| Exceptionally Aware | | | Satisfactory | | | Exceptionally Unaware |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

32. Being accurate in transcribing. (Copying or posting data or information for later use; for example, keeping switchboard, generator and bell logs, etc.)

| Exceptionally Accurate | | | Satisfactory | | Exceptionally Inaccurate | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

33. Being thorough or complete in compiling data. (Gathering and arranging information or data in some meaningful order or form; for example, MDCS, etc.)

| Exceptionally Complete | | | Satisfactory | | Exceptionally Incomplete | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

34. Analyzing information or data. (For the purpose of identifying underlying principles or facts by breaking down information into component parts; for example, diagnosing electrical malfunctions, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

V. OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

35. Getting job information from pictures. (Pictures or picture-like materials used as sources of information; drawings, blueprints, diagrams, tracings, charts, photographic film, x-ray films, TV pictures, wiring and schematic diagrams, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

36. Accuracy in getting job information from visual displays and measuring devices. (Test equipment, switchboard monitoring, "tell-tale" panels, wire gauges, feeler gauges, thermometers, etc.)

| Exceptionnaly Good | | | Satisfactory | | | Exception-ally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

37. Obtaining job information by observing materials as they are being worked with or modified. (Parts, materials, objects, etc., which are sources of information when being modified, worked on, or otherwise processed; bearings, threads, shafts, rewinding coils, etc.)

| Exceptionally Good | | | Satisfactory | | | Exception-ally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

38. Obtaining job information by attending to sounds or patterns of sounds. (Bearing noises, speed changes in machinery, audio alarms, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exception-ally Inat-tentive | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

39. Being sensitive to changes in temperature, moisture, or pressure that can be detected by touching. (For example, commutator, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exception-ally Inat-tentive | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

40. Obtaining job information by smelling. (Odors which the worker needs to smell in order to perform his job; overheating motors, burning insulation, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

41. Attending to differences in color. (Differentiating or identifying objects, materials, or details on the basis of color; color coded leads, detecting changes in color of insulation, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

42. Being vigilant in observing infrequent events. (Electrical hazards, switchboard watch standing, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Non-Observant | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

43. Estimating speed of moving parts. (Parts of stationary objects; for example, the revolutions per minute of a motor, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

PERFORMANCE ANALYSIS INVENTORY

Person being evaluated:_____ Please Circle:
(SK striker, SK3)

Rater's Name and Division:_____

Number of months you have been this person's supervisor:_____

Date:_____

This form is to be used to describe the performance of persons in the SK rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E3 or E4 level.

Your task is to consider each item and evaluate the person's performance compared to all other SKs you have observed in the same rate as this person.

Here is an example:

Operating key-board devices.(Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | Slow or with Many Errors | | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with key-board devices, you would circle the number on the scale that best fits your appraisal of his performance. If he never has to work with key-board devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January 1977
Form M SK E3 or E4

I. USE OF TOOLS AND EQUIPMENT

1. Operating key-board devices (Typewriters, adding machines, keypunch machines, etc.)

| Fast and Almost Error Free | | | Satisfactory Speed and Accuracy | | Slow or With Many Errors | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

II. HAND/ARM MANIPULATIONS

2. Care or speed in arranging objects, materials, in a specific position or arrangement. (Stocking shelves, keeping stocks secure, keeping heavy and light things separated, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

3. Speed or thoroughness in physical handling. (Physically handling objects or materials, either manually or with use of aiding devices; in certain warehousing activities, loading/unloading conveyor belts, etc. when there is little requirement for careful positioning or arrangement of objects.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

III. WORK HABITS AND PROCESSES

4. Meeting a schedule for a continuing cycle of activities. (Performance of a sequence or schedule of work activities which typically occurs on a weekly, daily, or hourly basis and which typically allows the worker some freedom of action so long as he meets a schedule; reordering, issuing, preparing reports on obligations and consumption of expendables, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

5. The amount of supervision this person requires compared to the amount that is normally given in this rate and rating

| Needs Much Less Supervision Than Is Normal | | | Average | | | Needs Much More Supervision Than Is Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

6. Interacting with petty officers and officers.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

7. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, team or crew, etc.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

8. Giving information to superiors or giving information or instruction to subordinates

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

9. Providing supervision to other persons.

| Very Effective | | | Satisfactory | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

10. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

11. Showing initiative (Carrying out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

12. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

13. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

14. Planning, scheduling, and estimating time to complete activities. (scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Exceptionally Reliable | | | Satisfactory | | | Exceptionally Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

15. Following fixed procedures when required as part of task. (Following specific set procedures or routine in order to obtain satisfactory outcomes; maintaining stock record cards, OPTAR reports, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Satisfactory | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

16. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Performs Much Better Than Average Person Under Distraction | | | Average | | | Performs Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

17. Getting job information by reading written materials (NAVSUP, NAVSO publications, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

19. Remembering information for a brief period of time.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

22. Obtaining job information by attending to spoken orders, requests or verbal instructions. (Verbal instructions to issue stock, instructions for typing requisitions, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Being accurate in transcribing. (copying or posting data or information for later use; OPTAR records, stock issue records, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

24. Coding/decoding. (coding information or converting coded information back to its original form; repair parts codes, billing codes, status codes, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

IV OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

25. Getting job information from pictures. (Pictures or picture-like materials used as sources of information; afloat shopping guide, GSA catalogs, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

26. Getting job information from visual displays. (For example, microfiche, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.

| Very Effective | | | Average | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 27. Making stock checks to determine availability of material.

☐ 28. Issuing tools, parts, supplies, or equipment.

☐ 29. Cross referencing part numbers using micro-fiche/micro-film reader.

☐ 30. Directing (supervising) work in progress.

☐ 31. Assigning work loads.

☐ 32. Sorting cards manually (status, requisitions, etc.).

☐ 33. Preparing receipt for material received without invoice (dummy receipt).

☐ 34. Ensuring work assignments are completed.

☐ 35. Stowing/breaking out tools, parts, supplies, or equipment.

☐ 36. Preparing DOD single line item requisition system document (DD 1348-2, 4 or 6 part) for a part required in direct support of an aircraft or ship.

☐ 37. Palletizing cargo/stores.

☐ 38. Cutting stencils for marking of material for shipment.

| Very Effective | | | Average | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 39. Performing wall to wall/bulkhead to bulkhead inventory.

☐ 40. Performing specific item (spot) inventory (one item).

☐ 41. Screening requisitions for correctness.

☐ 42. Uncrating/unpacking equipment material received.

☐ 43. Performing preventive maintenance in cargo/material storage or hold spaces (clean, replace bulbs, paint, etc.)

☐ 44. Distributing copies of supply documents (requisitions, receipts, etc.)

☐ 45. Verifying quantity of items received (weighing/counting).

☐ 46. Identifying/handling classified publications or material.

☐ 47. Typing messages/correspondence/forms.

☐ 48. Preparing DOD single line item DD 1348M requisition system document.

☐ 49. Preparing DOD single line item requisition system document (DD 1348-2,4, or 6 part) for general support requirements (servmart, seamart, submart, publications, flight clothing, etc.)

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated:_____ (SK2)

Rater's Name and Division:_____

Number of months you have been this person's supervisor:_____

Date:_____

This form is to be used to describe the performance of persons in the SK rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E5 level.

Your task is to consider each item and evaluate the person's performance compared to all other SKs you have observed in the same rate as this person.

Here is an example:

Operating key-board devices.(Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | Slow or with Many Errors | | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with key-board devices, you would circle the number on the scale that best fits your appraisal of his performance. If he never has to work with key-board devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January 1977
Form M SK E5

I. USE OF TOOLS AND EQUIPMENT

1. Operating key-board devices (Typewriters, adding machines, keypunch machines, etc.)

| Fast and Almost Error Free | | | Satisfactory Speed and Accuracy | | Slow or With Many Errors | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 2 | 1 | X |

II. HAND/ARM MANIPULATIONS

2. Care or speed in arranging objects. materials, in a specific position or arrangement. (Stocking shelves, keeping stocks secure, keeping heavy and light things separated, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 2 | 1 | X |

3. Speed or thoroughness in physical handling. (Physically handling object or materials, either manually or with use of aiding devices; in certain warehousing activities, loading/unloading conveyor belts, etc. when there is little requirement for careful positioning or arrangement of objects.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 2 | 1 | X |

III. WORK HABITS AND PROCESSES

4. Meeting a schedule for a continuing cycle of activities. (Performance of a sequence or schedule of work activities which typically occurs on a weekly, daily, or hourly basis and which typically allows the worker some freedom of action so long as he meets a schedule; reordering, issuing, preparing reports on obligations and consumption of expendables, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 2 | 1 | X |

5. The amount of supervision this person requires compared to the amount that is normally given in this rate and rating

| Needs Much Less Supervision Than Is Normal | | | Average | | | Needs Much More Supervision Than Is Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

6. Interacting with petty officers and officers.

| Very Effective | | | Satisfactory | | Very Ineffective | |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

7. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, team or crew, etc.)

| Very Effective | | | Satisfactory | | Very Ineffective | |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

8. Giving information to superiors or giving information or instruction to subordinates

| Very Effective | | | Satisfactory | | Very Ineffective | |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

9. Providing supervision to other persons.

| Very Effective | | | Satisfactory | | Very Ineffective | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

10. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | Very Unreliable | |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

11. Showing initiative (Carrying out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

12. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

13. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

14. Planning, scheduling, and estimating time to complete activities. (scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Exceptionally Reliable | | | Satisfactory | | | Exceptionally Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

15. Following fixed procedures when required as part of task. (Following specific set procedures or routine in order to obtain satisfactory outcomes; maintaining stock record cards, OPTAR reports, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Satisfactory | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

16. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Performs Much Better Than Average Person Under Distraction | | | Average | | | Performs Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

17. Getting job information by reading written materials (NAVSUP, NAVSO publications, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

19. Remembering information for a brief period of time.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

22. Obtaining job information by attending to spoken orders, requests or verbal instructions. (Verbal instructions to issue stock, instructions for typing requisitions, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Being accurate in transcribing. (copying or posting data or information for later use; OPTAR records, stock issue records, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

24. Coding/decoding. (coding information or converting coded information back to its original form; repair parts codes, billing codes, status codes, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

## IV OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

25. Getting job information from pictures. (Pictures or picture-like materials used as <u>sources</u> of information; afloat shopping guide, GSA catalogs, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

26. Getting job information from visual displays. (For example, microfiche, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.

| Very Effective | | | Average | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 27. Making stock checks to determine availability of material.

☐ 28. Issuing tools, parts, supplies, or equipment.

☐ 29. Cross referencing part numbers using micro-fiche/micro-film reader.

☐ 30. Directing (supervising) work in progress.

☐ 31. Assigning work loads.

☐ 32. Sorting cards manually (status, requisitions, etc.).

☐ 33. Preparing receipt for material received without invoice (dummy receipt).

☐ 34. Ensuring work assignments are completed.

☐ 35. Stowing/breaking out tools, parts, supplies, or equipment.

☐ 36. Preparing DOD single line item requisition system document (DD 1348-2, 4 or 6 part) for a part required in direct support of an aircraft or ship.

☐ 37. Palletizing cargo/stores.

| Very Effective | | | Average | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 38. Cutting stencils for marking of material for shipment.

☐ 39. Performing wall to wall/bulkhead to bulkhead inventory.

☐ 40. Performing specific item (spot) inventory (one item).

☐ 41. Screening requisitions for correctness.

☐ 42. Uncrating/unpacking equipment material received.

☐ 43. Performing preventive maintenance in cargo/material storage or hold spaces (clean, replace bulbs, paint, etc.)

☐ 44. Distributing copies of supply documents (requisitions, receipts, etc.)

☐ 45. Verifying quantity of items received (weighing/counting).

☐ 46. Identifying/handling classified publications or material.

☐ 47. Typing messages/correspondence/forms.

☐ 48. Preparing DOD single line item DD 1348M requisition system document.

☐ 49. Preparing DOD single line item requisition system document (DD 1348-2,4, or 6 part) for general support requirements (servmart, seamart, submart, publications, flight clothing, etc.)

| Very Effective | | | Average | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 50. Modifying requisitions.

☐ 51. Following up requisitions.

☐ 52. Verifying keypunched cards visually.

☐ 53. Preparing item release/receipt document (DD 1348-1).

☐ 54. Investigating differences between quantify of material inventoried and quantity on stock record card (recount and research).

☐ 55. Researching civilian publications, catalogs for identifying and ordering of material.

☐ 56. Providing status of requisitions to customers.

☐ 57. Participating in loading/off loading evolutions (VERTREP, UNREP, PIERSIDE).

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated: _____ (MS2)

Rater's Name & Division: _____

Number of months you have been this person's supervisor: _____

Date: _____

This form is to be used to describe the performance of persons in the rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E5 level.

Your task is to consider each item and evaluate the person's performance compared to all others you have observed in this rate.

Here is an example:

Operating keyboard devices. (Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | Slow or With Many Errors | | Never Has To |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with keyboard devices, you would select and circle the number on the scale that best fits your appraisal of his performance. If he never has to work with keyboard devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January, 1977
Form MS S2 E5

## I. USE OF TOOLS AND EQUIPMENT

1. Work produced using hand-powered non-precision tools/instruments. (Tools powered by the user to perform operations not requiring great accuracy or precision; knives, paddles, spatulas, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

2. Work accomplished using handling devices. (Tongs, ladles, dippers, etc., used for moving or handling objects and materials.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

3. Accurate use of measuring devices (Measuring cups, tablespoons, scales, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

4. Work accomplished using long-handle tools (brooms, mops,etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

## II. HAND/ARM MANIPULATIONS

5. Thoroughness,speed, or skill required to manually modifying materials. (Using hands directly to form or otherwise modify materials or products; kneading dough by hand, molding a meat loaf, stuffing peppers, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

6. Manually controlling or guiding materials being processed. (Meat slicing, hamburger molding machine, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

III. WORK HABITS AND PROCESSES

7. Maintains quality of work when performing under <u>time pressure</u>. (Having meals ready in mess, last minute changes in menu, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

8. The amount of supervision this person requires compared to the amount that is <u>normally</u> given <u>in this rate</u> and rating.

| Needs Much Less Supervision Than Is Normal | | | Average | | | Needs Much More Supervision Than is Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

9. Interacting with petty officers and officers

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

10. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, tram or crew, etc.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

11. Giving information to superiors and giving information or instructions to subordinates

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

12. Providing supervision to other persons.

| Very Effective | | | Satisfactory | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

13. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

14. Showing initiative. (Carrying out necessary tasks without being told to.)

| Exceptional Amount Of Initiative | | | Average | | | Exceptional Lack Of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

15. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

16. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sense to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

17. Planning, scheduling and estimating time to complete activities. (scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Exceptionally Reliable | | | Satisfactory | | | Exceptionally Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Following fixed procedures when required as part of task. (Following specific set procedures or routines in order to obtain satisfactory outcomes; following recipes, PMS, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Satisfactory | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

19. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Performs Much Better Than Average Person Under Distraction | | | Average | | | Performs Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Getting job information by reading written materials. (Kitchen work sheet, recipe cards, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

21. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

22. Remembering information for a brief period of time.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

24. Observing safety precautions on the job.

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

25. Obtaining job information by attending to spoken orders, requests or verbal instructions.

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

## IV. OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

26. Accuracy in getting job information with measuring devices. (Scales, thermometers, pressure gauges on steamers, etc. used to obtain visual information about physical measurements.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

27. Obtaining job information by observing materials as they are being worked with or modified. (Parts, materials, objects, etc., which are sources of information when being modified, worked on, or otherwise processed; kneading dough, inspecting for spoilage, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

28. Observing or inspecting products, objects, materials, etc. in terms of established standards. (Either one's own work products or products of others; identifying spoilage, judging appearance of food, freshness of fruits, vegetables, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

29. Being sensitive to changes in temperature, moisture, or pressure that can be detected by touching. (Temperature, texture of bread dough, texture and moisture of meat, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

30. Obtaining job information by smelling. (Odors which the worker <u>needs</u> to smell in order to perform his job; burning foods, rancid foods, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

31. Obtaining job information by tasting. (Bitter, sour, sweet, or salty qualities, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

32. Being vigilant in observing infrequent events. (For example, to avoid overcooking, etc.)

| Exceptionally Observant | | | Satisfactory | | | Exceptionally Non-observant | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

33. Estimating speed of processes or events. (On-going processes or a series of events while they are taking place; for example, time required for vegetables to finish cooking, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 34. Making personnel assignments.

☐ 35. Ensuring work assigned to subordinates is completed.

☐ 36. Assigning work priorities.

☐ 37. Defrosting/cleaning/sanitizing freezers, refrigerators, or reefers.

☐ 38. Preparing gravies and sauces.

☐ 39. Preparing dried/dehydrated foods.

☐ 40. Drawing food items for preparation.

☐ 41. Maintaining logs (pass down log (PDL) et cetera).

☐ 42. Cleaning/refilling deep fat fryer.

☐ 43. Determining if food is sufficiently cooked.

☐ 44. Loading/unloading ovens.

☐ 45. Preparing meat/seafood/poultry for cooking.

☐ 46. Roasting, barbecuing, or oven-frying meat/seafood/poultry.

☐ 47. Simmering or sauteing meat/seafood/poultry.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 48. Deep fat frying meat/seafood/poultry.

☐ 49. Grilling or frying meat/seafood/poultry.

☐ 50. Preparing/cooking eggs.

☐ 51. Preparing/cooking cereal.

☐ 52. Preparing ingredients (measuring/reconstituting/mixing/etc.).

☐ 53. Operating electrically controlled food preparation equipment.

☐ 54. Using/complying with recipe cards.

☐ 55. Setting up serving line(s).

☐ 56. Participating in field days, sweeping and swabbing decks, etc.

☐ 57. Cleaning/sanitizing food preparation and serving line areas and equipment.

☐ 58. Disposing of garbage and trash.

☐ 59. Cleaning storage and receiving areas.

☐ 60. Disposing of unusable subsistence supplies.

☐ 61. Processing meats and poultry (thaw/bone/roll/cut/tie).

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 62. Making work assignments.

☐ 63. Writing enlisted performance evaluations.

☐ 64. Preparing dressings for meat/seafood/poultry.

☐ 65. Standing inspections.

☐ 66. Steaming vegetables/fruits.

☐ 67. Preparing soups.

☐ 68. Preparing subsistence item request and issue document (NAVSUP 1282).

☐ 69. Coordinating work within division.

☐ 70. Inspecting prepared foods (serving lines, galley, wardroom, etc.).

☐ 71. Inspecting food handlers for cleanliness.

☐ 72. Braising meat/seafood/poultry.

☐ 73. Stewing vegetables/fruits.

☐ 74. Deep fat frying vegetables.

☐ 75. Sauteing vegetables/fruits.

☐ 76. Filling serving containers.

☐ 77. Inspecting food samples for quality.

# PERFORMANCE ANALYSIS INVENTORY

Person being evaluated: _____ Please Circle: MS Striker or MS3

Rater's Name & Division: _____

Number of months you have been this person's supervisor: _____

Date: _____

This form is to be used to describe the performance of persons in the rating. It is based upon the activities that are typically performed or are considered important in this rating, at the E3 or E4 level.

Your task is to consider each item and evaluate the person's performance compared to all others you have observed in this rate.

Here is an example:

Operating keyboard devices. (Typewriters, adding machines, calculators, keypunch machines, etc.)

| Fast and Almost Error Free | | Satisfactory Speed and Accuracy | | | Slow or With Many Errors | | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

If the person you are evaluating works with keyboard devices, you would select and circle the number on the scale that best fits your appraisal of his performance. If he never has to work with keyboard devices in his present billet, you would circle the X.

*Remember, you are to evaluate this man by comparing him to all men you have observed at his particular rate.*

HumRRO (ONR)
January, 1977
Form M MS S5 E3 or E4

I. USE OF TOOLS AND EQUIPMENT

1.. Work accomplished using handling devices. (Tools, ladles, dippers, etc., used for moving or handling objects and materials.)

| Exceptionally Efficient | | | Satisfactory | | | Exceptionally Inefficient | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

2. Accurate use of measuring devices. (Measuring cups, tablespoons, scales, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

II. HAND/ARM MANIPULATIONS

3. Thoroughness, speed, or skill required in manually modifying materials. (Using hands directly to form or otherwise modify materials or products; kneading dough by hand, decorating foods, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

III. COORDINATION

4. Coordination of entire body.(Activities involving extensive and often highly-practiced coordination activities of the whole body; serving food from big platters, serving soup, etc.)

| Very Well Coordinated | | | Satisfactory | | | Very Poorly Coordinated | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

5. Balancing. (maintaining balance while serving, preparing food, making beds, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

IV. WORK HABITS AND PROCESSES

6. Maintains quality of work when performing under time pressure. (Having meals ready in mess, last minute changes in menu, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

7. The amount of supervision this person requires compared to the amount that is normally given in this rate and rating.

| Needs Much Less Supervision Than is Normal | | | Average | | | Needs Much More Supervision Than is Normal |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

8. Interacting with petty officers and officers

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

9. Effectiveness in dealing with co-workers. (Interacting with another person; working as a member of a group, team or crew.)

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

10. Giving information to superiors and giving information or instruction to subordinates.

| Very Effective | | | Satisfactory | | | Very Ineffective |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

11. Providing supervision to other persons

| Very Effective | | | Satisfactory | | | Very Ineffective | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

12. Being reliable in work habits. (Shows up on time, stays with the job, etc.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

13. Showing initiative. (Carryin out necessary tasks without being told to, etc.)

| Exceptional Amount of Initiative | | | Average | | | Exceptional Lack of Initiative |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

14. Being thorough. (Paying attention to detail, being sure that nothing is left undone, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

15. Reasoning in situations where procedures are not completely specified. (Deciding on the most appropriate action to take in non-routine situations, using common sens to complete tasks, applying principles that have been learned to solve problems, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

16. Planning, scheduling, and estimating time to complete activities. (scheduling own work and work of others, anticipating future events and their requirements, etc.)

| Exceptionally Reliable | | | Satisfactory | | | Exceptionally Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

17. Following fixed procedures when required as part of task. (Following specific set procedures or routines in order to obtain satisfactory outcomes; following recipes, PMS, etc.)

| Never or Almost Never Deviates From Set Procedures | | | Satis-factory | | | Practically Always Deviates From Set Procedures |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

18. Quality or rate of performance when working under distractions. (Interruptions or disturbances of any kind.)

| Performs Much Better Than Average Person Under Distraction | | | Average | | | Performs Much Worse Than Average Person Under Distraction |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

19. Getting job information by reading written materials. (Memos, recipes, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

20. Accuracy in getting job information that is given in numbers and doing arithmetic.

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

21. Remembering information for a brief period of time

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

22. Showing responsibility for material goods, equipment, etc. (Attention to factors that can result in waste, loss, or damage of equipment or materials.)

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

23. Observing safety precautions on the job

| Very Reliable | | | Satisfactory | | | Very Unreliable |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

24. Obtaining job information by attending to spoken orders, requests or verbal instructions.

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive |
|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |

25. Estimating weight, number, volume of objects without direct measurement. (Supplies on hand, sufficiency of storage space, etc.)

| Exceptionally Accurate | | | Satisfactory | | | Exceptionally Inaccurate | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

26. Serving (Attending to the needs of, or performing personal services for others; mess cook, barbers, sick-bay attendant, etc.

| Highly Skilled | | | Satisfactory | | | Not at All Skilled | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

V. OBTAINING AND OBSERVING JOB RELEVANT INFORMATION

27. Obtaining job information by observing materials as they are being worked with or modified. (Parts, materials, objects, etc., which are sources of information when being modified, worked on, or otherwise processed; kneading dough, inspecting for spoilage, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

28. Observing or inspecting products, objects, materials, etc. in terms of established standards. (Either one's own work products or products of others; identifying spoilage, judging appearance of food, freshness of fruits, vegetables, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

29. Being sensitive to changes in temperature, moisture, or pressure that cen be detected by touching. (Temperature, texture of bread dough, texture and moisture of meat, etc.)

| Exceptionally Attentive | | | Satisfactory | | | Exceptionally Inattentive | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

30. Obtaining job information by smelling. (Odors which the worker needs to smell in order to perform his job; burning foods, rancid foods, etc.)

| Exceptionally Good | | | Satisfactory | | | Exceptionally Poor | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

31. Obtaining job information by tasting (Bitter,sour,sweet, or salty qualities, etc.)

| Exceptionally Good | | | Satisfactory | | Exceptionally Poor | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

32. Estimating speed of processes or events. (On-going processes or a series of events while they are taking place; for example, time required for vegetables to finish cooking, etc.)

| Exceptionally Accurate | | | Satisfactory | | Exceptionally Inaccurate | | Never Has to |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

For the remainder of this questionnaire, select the number from the scale at the top of the page that best fits this person. Write the number in the box to the left of the item.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 33. Standing inspection.

☐ 34. Coordinating work within division.

☐ 35. Cleaning serving tables/sideboards.

☐ 36. Setting up dining table for informal meal.

☐ 37. Preparing seating arrangements.

☐ 38. Participating in field days, sweeping and swabbing decks, disposing of garbage and trash, etc.

☐ 39, Cleaning/sanitizing food preparation and serving line areas and equipment.

☐ 40. Serving coffee/tea at meetings, conferences, etc.

☐ 41. Filling serving containers.

☐ 42. Clearing off tables.

☐ 43. Attending general drills.

☐ 44. Defrosting/cleaning/sanitizing freezers, refrigerators, or reefers.

☐ 45. Serving cafeteria style lunch/dinner.

☐ 46. Arranging dining area/facility furniture.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 47. Cleaning/polishing bright work.

☐ 48. Attending meetings, seminars, conferences, etc.

☐ 49. Preparing meat/seafood/poultry for cooking.

☐ 50. Preparing soups.

☐ 51. Setting up or breaking down serving line.

☐ 52. Preparing place cards.

☐ 53. Making work and personnel assignments.

☐ 54. Cleaning storage and receiving areas.

☐ 55. Roasting meat/seafood/poultry.

☐ 56. Ensuring work assigned to subordinates is completed.

☐ 57. Preparing/cooking eggs.

☐ 58. Preparing ingredients (measuring/reconstituting/mixing, etc.)

☐ 59. Assigning work priorities.

☐ 60. Determining if food is sufficiently cooked.

| Very Effective | | | Average | | | Very Ineffective | Never Has To |
|---|---|---|---|---|---|---|---|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | X |

☐ 61. Preparing gravies and sauces.

☐ 62. Disposing of unusable subsistence supplies.

☐ 63. Processing meats and poultry (thaw/bone/roll/cut/tie).

☐ 64. Keeping vegetables/fruits at a simmer.

☐ 65. Operating electrically controlled food preparation equipment.

☐ 66. Using/complying with recipe cards.

☐ 67. Preparing dried/dehydrated foods.

☐ 68. Cleaning/refilling deep fat fryer.

☐ 69. Loading/unloading ovens.

☐ 70. Frying or grilling meat/seafood/poultry.

☐ 71. Roasting, barbecuing, or oven-frying meat/seafood/poultry.

☐ 72. Simmering or sauteing meat/seafood/poultry.

☐ 73. Deep fat frying meat/seafood/poultry.

☐ 74. Preparing/cooking cereal.

# APPENDIX A-2

## Performance Evaluation Report

# REPORT OF ENLISTED PERFORMANCE EVALUATION

NAVPERS 792 (Rev. 6-65)
0105-402-3001

PERIOD OF REPORT _____ To _____

| Name (Last, First, Middle) | SERVICE NO. | RATE ABB. | PRESENT SHIP OR STATION |
|---|---|---|---|
| | | | |

INSTRUCTIONS

1. For each trait, evaluate the man on his actual observed performance. If performance was not observed, check the "Not Observed" box.
2. Compare him with others of the same rate.
3. If the major portion of his work has been outside his rate or pay grade during this reporting period, evaluate him on what he did. Describe what he did in the "Comments" section.
4. Pick the phrase which best fits the man in each trait and check left or right box under it. (Left box is more favorable.)

1. PROFESSIONAL PERFORMANCE: His skill and efficiency in performing assigned duties (except SUPERVISORY)

| NOT OBSERVED | | Extremely effective and reliable. Works well on his own. | | Highly effective and reliable. Needs only limited supervision. | | Effective and reliable. Needs occasional supervision. | | Adequate, but needs routine supervision. | | Inadequate. Needs constant supervision. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | | * | | | | | | | | * | * |

2. MILITARY BEHAVIOR: How well he accepts authority and conforms to standards of military behavior.

| NOT OBSERVED | | Always acts in the highest traditions of the Navy. | | Willingly follows commands and regulations. | | Conforms to Navy standards. | | Usually obeys commands and regulations. Occasionally lax. | | Dislikes and flouts authority. Unseamanlike. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | | * | | | | | | | | * | * |

3. LEADERSHIP AND SUPERVISORY ABILITY: His ability to plan and assign work to others and effectively direct their activities.

| NOT OBSERVED | | Gets the most out of his men. | | Handles men very effectively. | | Gets good results from his men. | | Usually gets adequate results. | | Poor supervisor. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | | * | | | | | | | | * | * |

4. MILITARY APPEARANCE: His military appearance and neatness in person and dress.

| NOT OBSERVED | | Impressive. Wears Naval uniform with great pride. | | Smart. Neat and correct in appearance. | | Conforms to Navy standards of appearance. | | Passable. Sometimes careless in appearance. | | No credit to the Naval Service. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | | * | | | | | | | | * | * |

5. ADAPTABILITY: How well he gets along and works with others.

| NOT OBSERVED | | Gets along exceptionally well. Promotes good morale. | | Gets along very well with others. Contributes to good morale. | | A good shipmate. Helps morale. | | Gets along adequately with others. | | A misfit. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | | * | | | | | | | | * | * |

6. DESCRIPTION OF ASSIGNED TASKS

7. EVALUATION OF PERFORMANCE *(E-5 and above include comment on ability in self expression and command, orally and in writing, of the English language)*

* A. THESE ITEMS MUST BE JUSTIFIED BY COMMENTS IN ADDITION TO THOSE IN ITEM 7 ABOVE

| 9. REASON FOR REPORTING | 10. DATE | 11. SIGNATURE OF REPORTING SUPERIOR |
|---|---|---|
| ☐ SEMIANNUAL ☐ TRANSFER ☐ OTHER _____ | | |

S/N 0105-

# APPENDIX B

## Matrix of Worker-Oriented Items
## By Job

## WORKER-ORIENTED ITEMS

| | ABE | ABF | ABH | AO | EM | HT | IC | MS-S2 | MS-S5 | SK |
|---|---|---|---|---|---|---|---|---|---|---|
| **I. USE OF TOOLS & EQUIPMENT** | | | | | | | | | | |
| Hand-powered precision | | | | | | 1 | | | | |
| Energy-powered precision | | | | 1 | 1 | 2 | 1 | | | |
| Non-precision | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | | |
| Handling devices | 2 | | | | | | | 2 | 1 | |
| Drawing | | | | | | 4 | | | | |
| Measuring devices | 3 | 2 | | | | 5 | 3 | 3 | 2 | |
| Long-handle | 4 | | | | | | | 4 | | |
| Applicators | | 3 | 2 | | | | | | | |
| Activation | 5 | | 3 | 3 | | | 4 | | | |
| Fixed setting | 6 | | 4 | 4 | 3 | | 5 | | | |
| Variable setting | 7 | | | | 4 | 6 | 6 | | | |
| Keyboard devices | | | | | 5 | | | | | 1 |
| Foot, non-continuous | | | 5 | | 7 | | | | | |
| Man-moved mobile | | | 6 | | | | | | | |
| Powered mobile | | | 7 | 5 | | | | | | |
| Operating equipment | | | 8 | | | | | | | |
| **II. HAND/ARM MANIPULATIONS** | | | | | | | | | | |
| Adjusting equipment | 8 | | | | 8 | 7 | 7 | | | |
| Manually modifying | | | | | | 8 | | 5 | 3 | |
| Manually guiding | | | | | | 9 | | 6 | | |
| Assemble/disassemble | 9 | 5 | | 6 | 9 | 10 | 8 | | | |
| Arranging/positioning | | | | 7 | | | | | | 2 |
| Physical Handling | | | 9 | 8 | | 11 | | | | 3 |
| Finger manipulation | | | | | | | 9 | | | |
| Hand/arm steadiness | 10 | | 10 | | 10 | 12 | 10 | | | |
| **III. COORDINATION** | | | | | | | | | | |
| Coordination with eye | 11 | | | 9 | 11 | 13 | 11 | | | |
| Coordination - body | 12 | | 11 | | | | | | 4 | |
| Balancing | 13 | 6 | | | | 14 | | | 5 | |

## WORKER-ORIENTED ITEMS (Continued)

| | ABE | ABF | ABH | AO | EM | HT | IC | MS-S2 | MS-S5 | SK |
|---|---|---|---|---|---|---|---|---|---|---|
| **IV. WORK HABITS & PROCESSES** | | | | | | | | | | |
| Maintaining work pace | 14 | | 12 | 10 | | | | | | |
| Maintaining cycled activities | | 7 | 13 | | | | 12 | | | 4 |
| Common Items: | | | | | | | | | | |
| Time pressure | 15 | 8 | 14 | 11 | 12 | 15 | 13 | 7 | 6 | —* |
| Supervision requirements | 16 | 9 | 15 | 12 | 13 | 16 | 14 | 8 | 7 | 5 |
| Interact with Petty Off. & Off. | 17 | 10 | 16 | 13 | 14 | 17 | 15 | 9 | 8 | 6 |
| Interact with co-workers | 18 | 11 | 17 | 14 | 15 | 18 | 16 | 10 | 9 | 7 |
| Instructing | 19 | 12 | 18 | 15 | 16 | 19 | 17 | 11 | 10 | 8 |
| Supervision-others | 20 | 13 | 19 | 16 | 17 | 20 | 18 | 12 | 11 | 9 |
| Reliability | 21 | 14 | 20 | 17 | 18 | 21 | 19 | 13 | 12 | 10 |
| Initiative | 22 | 15 | 21 | 18 | 19 | 22 | 20 | 14 | 13 | 11 |
| Thoroughness | 23 | 16 | 22 | 19 | 20 | 23 | 21 | 15 | 14 | 12 |
| Reasoning | 24 | 17 | 23 | 20 | 21 | 24 | 22 | 16 | 15 | 13 |
| Planning/Scheduling | 25 | 18 | 24 | 21 | 22 | 25 | 23 | 17 | 16 | 14 |
| Fixed procedure | 26 | 19 | 25 | 22 | 23 | 26 | 24 | 18 | 17 | 15 |
| Distractions | 27 | 20 | 26 | 23 | 24 | 27 | 25 | 19 | 18 | 16 |
| Remembering | 30 | 23 | 29 | 26 | 27 | 30 | 28 | 22 | 21 | 19 |
| Responsibility for materiel | 31 | 24 | 30 | 27 | 28 | 31 | 29 | 23 | 22 | 20 |
| Safety precautions | 32 | 25 | 31 | 28 | 29 | 32 | 30 | 24 | 23 | 21 |
| Alert to condition | 33 | 26 | 33 | 30 | 31 | | 32 | | | |
| Estimating weight | | 27 | 34 | | | | | 25 | | |
| Estimating size | | | 35 | | | 34 | | | | |
| Transcribing | 34 | 28 | | | 32 | | 33 | | | 23 |
| Compiling | 35 | | | | 33 | | 34 | | | |
| Coding | | | | | | | | | | 24 |
| Analyzing | | | | | 34 | | | | | |
| Giving signals | 36 | | | | | | | | | |
| Understanding signals | 37 | | | | | | | | | |
| Serving | | | | | | | | | 26 | |

*Omitted from SK forms.

WORKER-ORIENTED ITEMS (Continued)

| | V. OBTAINING & OBSERVING JOB-RELEVANT INFORMATION | ABE | ABF | ABH | AO | EM | HT | IC | MS-S2 | MS-S5 | SK |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pictures | 38 | 29 | 36 | | 35 | 35 | 35 | | | 25 |
| | Templates | | | 37 | | | 36 | | | | |
| | Visual displays | 39 | 30 | 38 | 31 | 36 | | 36 | | | 26 |
| | Information-measuring devices | | | | | | 37 | | 26 | | |
| | Information-modified | | 31 | | 32 | 37 | 38 | | 27 | 27 | |
| | Observing/inspecting | | 32 | | 33 | | 39 | 37 | 28 | 28 | |
| Common Items | Spoken | 40 | 33 | 32 | 29 | 30 | 33 | 31 | 25 | 24 | 22 |
| Common Items | Reading | 28 | 21 | 27 | 24 | 25 | 28 | 26 | 20 | 19 | 17 |
| Common Items | Numbers & Arithmetic | 29 | 22 | 28 | 25 | 26 | 29 | 27 | 21 | 20 | 18 |
| | Events-changing job | 41 | 34 | 39 | | | | | | | |
| | Sounds | 42 | 35 | 40 | | 38 | | 38 | | | |
| | Temperature | 43 | 36 | | | 39 | 40 | 39 | 29 | 29 | |
| | Smelling | | 37 | | | 40 | | | 30 | 30 | |
| | Tasting | | | | | | | | 31 | 31 | |
| | Far vision | 44 | 38 | 41 | | | | | | | |
| | Color | 45 | 39 | 42 | 34 | 41 | 41 | 41 | | | |
| | Vigilant-changing | 46 | 40 | 43 | 35 | | | 42 | | | |
| | Vigilant-infrequent | 47 | 41 | 44 | 36 | 42 | | 43 | 32 | | |
| | Depth | | | 45 | 37 | | | | | | |
| | Moving objects | | | 46 | | | | | | | |
| | Speed of processes | | | 47 | | | | | 33 | 32 | |
| | Speed-moving parts | | 42 | | | 43 | | | | | |

# APPENDIX C

## Cross Tabulation of the Sample Within Each Job by Pay Grade and Mental Category

## Cross Tabulation of ABE by Pay Grade and Mental Category

| | Pay Grade E3 | Pay Grade E4 | Pay Grade E5 | Row Total |
|---|---|---|---|---|
| Category 1 | 2[1] | 0 | 1 | 3 |
| | 66.7[2] | 0.0 | 33.3 | |
| | 4.0[3] | 0.0 | 4.0 | 2.5 |
| | 1.7[4] | 0.0 | 0.8 | |
| Category 2 | 10 | 15 | 11 | 36 |
| | 27.8 | 41.7 | 30.6 | |
| | 20.0 | 34.9 | 44.0 | 30.5 |
| | 8.5 | 12.7 | 9.3 | |
| Category High 3 | 20 | 12 | 4 | 36 |
| | 55.6 | 33.3 | 11.1 | |
| | 40.0 | 27.9 | 16.0 | 30.5 |
| | 16.9 | 10.2 | 3.4 | |
| Category Low 3 | 12 | 14 | 3 | 29 |
| | 41.4 | 48.3 | 10.3 | |
| | 24.0 | 32.6 | 12.0 | 24.6 |
| | 10.2 | 11.9 | 2.5 | |
| Category 4 | 6 | 2 | 6 | 14 |
| | 42.9 | 14.3 | 42.9 | |
| | 12.0 | 4.7 | 24.0 | 11.9 |
| | 5.1 | 1.7 | 5.1 | |
| Column Total | 50 | 43 | 25 | 118 |
| | 42.4 | 36.4 | 21.2 | 100.0 |

Chi Square = 16.308 with 8 Degrees of Freedom

Significance = 0.038 Contingency Coefficient = 0.348

[1]Count

[2]Row Percent

[3]Column Percent

[4]Total Percent

## Cross Tabulation of ABF by Pay Grade and Mental Category

| | Pay Grade E3 | E4 | E5 | Row Total |
|---|---|---|---|---|
| Category 1 | 1[1] | 0 | 0 | 1 |
| | 100.0[2] | 0.0 | 0.0 | .. |
| | 2.9[3] | 0.0 | 0.0 | 1.3 |
| | 1.3[4] | 0.0 | 0.0 | |
| Category 2 | 14 | 12 | 2 | 28 |
| | 50.0 | 42.9 | 7.1 | |
| | 40.0 | 36.4 | 18.2 | 35.4 |
| | 17.7 | 15.2 | 2.5 | |
| Category High 3 | 8 | 6 | 4 | 18 |
| | 44.4 | 33.3 | 22.2 | |
| | 22.9 | 18.2 | 36.4 | 22.8 |
| | 10.1 | 7.6 | 5.1 | |
| Category Low 3 | 10 | 11 | 4 | 25 |
| | 40.0 | 44.0 | 16.0 | |
| | 28.6 | 33.3 | 36.4 | 31.6 |
| | 12.7 | 13.9 | 5.1 | |
| Category 4 | 2 | 4 | 1 | 7 |
| | 28.6 | 57.1 | 14.3 | |
| | 5.7 | 12.1 | 9.1 | 8.9 |
| | 2.5 | 5.1 | 1.3 | |
| Column Total | 35 | 33 | 11 | 79 |
| | 44.3 | 41.8 | 13.9 | 100.0 |

Chi Square = 4.591 with 8 Degrees of Freedom

Significance = 0.800 Contingency Coefficient = 0.234

[1]Count

[2]Row Percent

[3]Column Percent

[4]Total Percent

Cross Tabulation of ABH
by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 1[1] | 1 | 0 | 2 |
| | 50.0[2] | 50.0 | 0.0 | |
| | 3.0[3] | 3.4 | 0.0 | 2.6 |
| | 1.3[4] | 1.3 | 0.0 | |
| Category 2 | 6 | 4 | 1 | 11 |
| | 54.5 | 36.4 | 9.1 | |
| | 18.2 | 13.8 | 6.7 | 14.3 |
| | 7.8 | 5.2 | 1.3 | |
| Category High 3 | 8 | 9 | 4 | 21 |
| | 38.1 | 42.9 | 19.0 | |
| | 24.2 | 31.0 | 26.7 | 27.3 |
| | 10.4 | 11.7 | 5.2 | |
| Category Low 3 | 10 | 7 | 2 | 19 |
| | 52.6 | 36.8 | 10.5 | |
| | 30.3 | 24.1 | 13.3 | 24.7 |
| | 13.0 | 9.1 | 2.6 | |
| Category 4 | 8 | 8 | 8 | 24 |
| | 33.3 | 33.3 | 33.3 | |
| | 24.2 | 27.6 | 53.3 | 31.2 |
| | 10.4 | 10.4 | 10.4 | |
| Column Total | 33 | 29 | 15 | 77 |
| | 42.9 | 37.7 | 19.5 | 100.0 |

Chi Square = 5.923 with 8 Degrees of Freedom

Significance = 0.656 Contingency Coefficient = 0.267

[1]Count
[2]Row Percent
[3]Column Percent
[4]Total Percent

Cross Tabulation of AO
by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 1 | 1 | 0 | 2 |
| | 50.0 | 50.0 | 0.0 | |
| | 2.0 | 2.9 | 0.0 | 1.9 |
| | 0.9 | 0.9 | 0.0 | |
| Category 2 | 13 | 9 | 10 | 32 |
| | 40.6 | 28.1 | 31.3 | |
| | 26.5 | 25.7 | 43.5 | 29.9 |
| | 12.1 | 8.4 | 9.3 | |
| Category High 3 | 11 | 18 | 5 | 29 |
| | 37.9 | 44.8 | 17.2 | |
| | 22.4 | 37.1 | 21.7 | 27.1 |
| | 10.3 | 12.1 | 4.7 | |
| Category Low 3 | 16 | 10 | 6 | 32 |
| | 50.0 | 31.3 | 18.8 | |
| | 32.7 | 28.6 | 26.1 | 29.9 |
| | 15.0 | 9.3 | 5.6 | |
| Category 4 | 8 | 2 | 2 | 12 |
| | 66.7 | 16.7 | 16.7 | |
| | 16.3 | 5.7 | 8.7 | 11.2 |
| | 7.5 | 1.9 | 1.9 | |
| Column Total | 49 | 35 | 23 | 107 |
| | 45.8 | 32.7 | 21.5 | 100.0 |

Chi Square = 6.839 with 8 Degrees of Freedom

Significance = 0.554 Contingency Coefficient = 0.245

[1]Count
[2]Row Percent
[3]Column Percent
[4]Total Percent

## Cross Tabulation of EM by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 9 | 3 | 6 | 18 |
| | 50.0 | 16.7 | 33.3 | |
| | 15.8 | 4.7 | 12.2 | 10.6 |
| | 5.3 | 1.8 | 3.5 | |
| Category 2 | 19 | 25 | 31 | 75 |
| | 25.3 | 33.3 | 41.3 | |
| | 33.3 | 39.1 | 63.3 | 44.1 |
| | 11.2 | 14.7 | 18.2 | |
| Category High 3 | 15 | 17 | 8 | 40 |
| | 37.5 | 42.5 | 20.0 | |
| | 26.8 | 26.6 | 16.3 | 23.5 |
| | 8.8 | 10.0 | 4.7 | |
| Category Low 3 | 8 | 10 | 4 | 22 |
| | 36.4 | 45.5 | 18.2 | |
| | 14.0 | 15.6 | 8.2 | 12.9 |
| | 4.7 | 5.9 | 2.4 | |
| Category 4 | 6 | 9 | 0 | 15 |
| | 40.0 | 60.0 | 0.0 | |
| | 10.5 | 14.1 | 0.0 | 8.8 |
| | 3.5 | 5.3 | 0.0 | |
| Column Total | 57 | 64 | 49 | 170 |
| | 33.5 | 37.6 | 28.8 | 100.0 |

Chi Square = 18.927 with 8 Degrees of Freedom

Significance = 0.015 Contingency Coefficient = 0.317

[1]Count [3]Column Percent

[2]Row Percent [4]Total Percent

## Cross Tabulation of HT by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 2 | 1 | 0 | 3 |
| | 66.7 | 33.3 | 0.0 | |
| | 2.9 | 2.3 | 0.0 | 2.1 |
| | 1.4 | 0.7 | 0.0 | |
| Category 2 | 20 | 12 | 12 | 44 |
| | 45.5 | 27.3 | 27.3 | |
| | 29.0 | 27.3 | 38.7 | 30.6 |
| | 13.9 | 8.3 | 8.3 | |
| Category High 3 | 25 | 13 | 8 | 46 |
| | 54.3 | 28.3 | 17.4 | |
| | 36.2 | 29.5 | 25.8 | 31.9 |
| | 17.4 | 9.0 | 5.6 | |
| Category Low 3 | 18 | 15 | 5 | 38 |
| | 47.4 | 39.5 | 13.2 | |
| | 26.1 | 34.1 | 16.1 | 26.4 |
| | 12.5 | 10.4 | 3.5 | |
| Category 4 | 4 | 3 | 6 | 13 |
| | 30.8 | 23.1 | 46.2 | |
| | 5.8 | 6.8 | 19.4 | 9.0 |
| | 2.8 | 2.1 | 4.2 | |
| Column Total | 69 | 44 | 31 | 144 |
| | 47.9 | 30.6 | 21.5 | 100.0 |

Chi Square = 9.527 with 8 Degrees of Freedom

Significance = 0.300 Contingency Coefficient = 0.249

[1]Count [3]Column Percent

[2]Row Percent [4]Total Percent

Cross Tabulation of IC
by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 2 | 0 | 0 | 2 |
| | 100.0 | 0.0 | 0.0 | |
| | 7.7 | 0.0 | 0.0 | 2.8 |
| | 2.8 | 0.0 | 0.0 | |
| Category 2 | 14 | 21 | 13 | 48 |
| | 29.2 | 43.8 | 27.1 | |
| | 53.8 | 65.6 | 92.9 | 66.7 |
| | 19.4 | 29.2 | 18.1 | |
| Category High 3 | 4 | 6 | 1 | 11 |
| | 36.4 | 54.5 | 9.1 | |
| | 15.4 | 18.8 | 7.1 | 15.3 |
| | 5.6 | 8.3 | 1.4 | |
| Category Low 3 | 6 | 4 | 0 | 10 |
| | 60.0 | 40.0 | 0.0 | |
| | 23.1 | 12.5 | 0.0 | 13.9 |
| | 8.3 | 5.6 | 0.0 | |
| Category 4 | 0 | 1 | 0 | 1 |
| | 0.0 | 100.0 | 0.0 | |
| | 0.0 | 3.1 | 0.0 | 1.4 |
| | 0.0 | 1.4 | 0.0 | |
| Column Total | 26 | 32 | 14 | 72 |
| | 36.1 | 44.4 | 19.4 | 100.0 |

Chi Square = 11.304 with 8 Degrees of Freedom

Significance = 0.185 Contingency Coefficient = 0.368

[1]Count
[2]Row Percent
[3]Column Percent
[4]Total Percent

## Cross Tabulation of MS-S2 by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 0[1] | 0 | 0 | 0 |
| Category 2 | 8 | 3 | 0 | 11 |
| | 72.7[2] | 27.3 | 0.0 | |
| | 25.0[3] | 9.7 | 0.0 | 13.4 |
| | 9.8[4] | 3.7 | 0.0 | |
| Category High 3 | 9 | 6 | 1 | 16 |
| | 56.3 | 37.5 | 6.3 | |
| | 28.1 | 19.4 | 5.3 | 19.5 |
| | 11.0 | 7.3 | 1.2 | |
| Category Low 3 | 14 | 8 | 1 | 23 |
| | 60.9 | 34.8 | 4.3 | |
| | 43.8 | 25.8 | 5.3 | 28.0 |
| | 17.1 | 9.8 | 1.2 | |
| Category 4 | 1 | 14 | 17 | 32 |
| | 3.1 | 43.8 | 53.1 | |
| | 3.1 | 45.2 | 89.5 | 39.0 |
| | 1.2 | 17.1 | 20.7 | |
| Column Total | 32 | 31 | 19 | 82 |
| | 39.0 | 37.8 | 23.2 | 100.0 |

Chi Square = 38.911 with 8 Degrees of Freedom

Significance = 0.000 Contingency Coefficient = 0.567

[1] Count

[2] Row Percent

[3] Column Percent

[4] Total Percent

## Cross Tabulation of MS-S2 by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 0[1] | 0 | 0 | 0 |
| Category 2 | 3 | 7 | 0 | 7 |
| | 42.9[2] | 57.1 | 0.0 | |
| | 9.7[3] | 19.0 | 0.0 | 8.0 |
| | 3.4[4] | 4.5 | 0.0 | |
| Category High 3 | 12 | 6 | 1 | 19 |
| | 63.2 | 31.6 | 5.3 | |
| | 38.7 | 28.6 | 2.8 | 21.6 |
| | 13.6 | 6.8 | 1.1 | |
| Category Low 3 | 12 | 2 | 1 | 15 |
| | 80.0 | 13.3 | 6.7 | |
| | 38.7 | 9.5 | 2.8 | 17.0 |
| | 13.6 | 2.3 | 1.1 | |
| Category 4 | 4 | 9 | 34 | 47 |
| | 8.5 | 19.1 | 72.3 | |
| | 12.9 | 42.9 | 94.4 | 53.4 |
| | 4.5 | 10.2 | 38.6 | |
| Column Total | 31 | 21 | 36 | 88 |
| | 35.2 | 23.9 | 40.9 | 100.0 |

Chi Square = 51.654 with 6 Degrees of Freedom

Significance = 0.000 Contingency Coefficient - 0.608

[1] Count

[2] Row Percent

[3] Column Percent

[4] Total Percent

## Cross Tabulation of SK by Pay Grade and Mental Category

| | Pay Grade | | | |
|---|---|---|---|---|
| | E3 | E4 | E5 | Row Total |
| Category 1 | 0[1] | 0 | 0 | 0 |
| Category 2 | 8 | 3 | 2 | 13 |
| | 61.5[2] | 23.1 | 15.4 | |
| | 32.0[3] | 15.0 | 22.2 | 24.1 |
| | 14.8[4] | 5.6 | 3.7 | |
| Category High 3 | 5 | 4 | 0 | 9 |
| | 55.6 | 44.4 | 0.0 | |
| | 20.0 | 20.0 | 0.0 | 16.7 |
| | 9.3 | 7.4 | 0.0 | |
| Category Low 3 | 7 | 5 | 4 | 16 |
| | 43.8 | 31.3 | 25.0 | |
| | 28.0 | 25.0 | 44.4 | 29.6 |
| | 13.0 | 9.3 | 7.4 | |
| Category 4 | 5 | 8 | 3 | 16 |
| | 31.3 | 50.0 | 18.8 | |
| | 20.0 | 40.0 | 33.3 | 29.6 |
| | 9.3 | 14.8 | 5.6 | |
| Column Total | 25 | 20 | 9 | 54 |
| | 46.3 | 37.0 | 16.7 | 100.0 |

Chi Square = 5.533 with 6 Degrees of Freedom

Significance - 0.478 Contingency Coefficient = 0.305

[1]Count

[2]Row Percent

[3]Column Percent

[4]Total Percent

# APPENDIX D

## Analyses of Variance: Four Mental Categories on Three Types of Rating Items for Pay Grades E3 - E5

## Analyses of Variance: Four Mental Categories on Worker-Oriented Items for Pay Grades E3 - E5

### Pay Grade E3

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 4.609 | 1.096 | 44 |
| Low 3 | 4.437 | 1.168 | 112 |
| High 3 | 4.501 | 1.059 | 115 |
| 1 & 2 | 4.557 | 1.016 | 133 |
| Within groups total | 4.513 | 1.081 | 404 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 1.317 | 3 | 0.439 | 0.376 | 0.770 |
| Within Groups | 467.083 | 400 | 1.168 | | |

### Pay Grade E4

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 4.991 | 1.115 | 57 |
| Low 3 | 4.917 | 1.050 | 84 |
| High 3 | 4.918 | 1.033 | 91 |
| 1 & 2 | 5.085 | 1.048 | 114 |
| Within groups total | 4.985 | 1.056 | 346 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 1.938 | 3 | 0.646 | 0.579 | 0.629 |
| Within Groups | 381.289 | 342 | 1.115 | | |

### Pay Grade E5

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 5.619 | 0.902 | 77 |
| Low 3 | 5.607 | 0.858 | 30 |
| High 3 | 5.422 | 0.777 | 36 |
| 1 & 2 | 5.515 | 1.080 | 89 |
| Within groups total | 5.547 | 0.953 | 232 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 1.148 | 3 | 0.383 | 0.422 | 0.738 |
| Within Groups | 206.914 | 728 | 0.908 | | |

## Analyses of Variance: Four Mental Categories on Job-Oriented Items for Pay Grades E3 - E5

### Pay Grade E3

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 4.847 | 1.038 | 33 |
| Low 3 | 4.831 | 1.073 | 176 |
| High 3 | 4.846 | 1.048 | 71 |
| 1 & 2 | 4.652 | 1.021 | 67 |
| Within groups Total | 4.789 | 1.047 | 247 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 1.737 | 3 | 0.579 | 0.528 | 0.664 |
| Within groups | 266.594 | 243 | 1.097 | | |

### Pay Grade E4

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 5.160 | 1.143 | 45 |
| Low 3 | 5.086 | 1.066 | 56 |
| High 3 | 5.060 | 1.172 | 54 |
| 1 & 2 | 5.291 | 0.927 | 52 |
| Within groups total | 5.147 | 1.080 | 207 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 1.722 | 3 | 0.568 | 0.487 | 0.691 |
| Within groups | 236.665 | 203 | 1.166 | | |

### Pay Grade E5

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 5.853 | 0.764 | 70 |
| Low 3 | 5.736 | 0.826 | 21 |
| High 3 | 5.576 | 0.809 | 19 |
| 1 & 2 | 5.628 | 1.116 | 27 |
| Within groups total | 5.752 | 0.859 | 137 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 1.705 | 3 | 0.574 | 0.778 | 0.508 |
| Within groups | 98.089 | 133 | 0.738 | | |

## Analyses of Variance: Four Mental Categories on PER for Pay Grades E3-E5*

### Pay Grade E3

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 7.602 | 1.592 | 43 |
| Low 3 | 7.437 | 1.466 | 110 |
| High 3 | 7.273 | 1.292 | 113 |
| 1 & 2 | 7.495 | 1.221 | 131 |
| Within groups total | 7.427 | 1.355 | 397 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 4.641 | 3 | 1.547 | 0.842 | 0.471 |
| Within groups | 721.745 | 393 | 1.837 | | |

### Pay Grade E4

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 8.042 | 1.471 | 55 |
| Low 3 | 7.768 | 1.367 | 82 |
| High 3 | 7.737 | 1.367 | 90 |
| 1 & 2 | 7.727 | 1.403 | 113 |
| Within groups total | 7.790 | 1.396 | 340 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 4.231 | 3 | 1.410 | 0.723 | 0.539 |
| Within groups | 655.071 | 336 | 1.950 | | |

### Pay Grade E5

| Mental Category | Mean | Std. Dev. | N |
|---|---|---|---|
| 4 | 8.748 | 0.982 | 75 |
| Low 3 | 8.614 | 1.080 | 29 |
| High 3 | 8.406 | 0.810 | 34 |
| 1 & 2 | 8.306 | 1.233 | 88 |
| Within groups total | 8.507 | 1.078 | 226 |

| Source | Sum of Squares | df. | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 8.581 | 3 | 2.860 | 2.462 | 0.063 |
| Within groups | 257.875 | 222 | 1.162 | | |

*The analyses were performed on unadjusted (10-point scale) PER means.

# APPENDIX E

## Number of Job-Oriented Items Showing Increase/Decrease in Percent "Never Has To" in Two Comparisons - E5 Items Only

Number of Job-Oriented Items Showing Increase/Decrease in Percent "Never Has To" in Two Comparison - E5 items only

| | | From Category 1 & 2 To Category Low 3 & 4 | From Category High 3 To Category Low 3 & 4 | Cat. | N |
|---|---|---|---|---|---|
| ABE | | | | | |
| | + | 8* | 2 | 1 & 2 | 12 |
| | – | 4** | 11 | High 3 | 4 |
| | NC | 1*** | 0 | Low 3 & 4 | 8 |
| ABF | + | 6 | 7 | 1 & 2 | 2 |
| | – | 4 | 3 | High 3 | 4 |
| | NC | 0 | 0 | Low 3 & 4 | 5 |
| ABH | | | | | |
| | + | 3 | 8 | 1 & 2 | 1 |
| | – | 7 | 2 | High 3 | 4 |
| | NC | 0 | 0 | Low 3 & 4 | 10 |
| AO | | | | | |
| | + | 6 | 7 | 1 & 2 | 10 |
| | – | 2 | 1 | High 3 | 5 |
| | NC | 0 | 0 | Low 3 & 4 | 8 |
| SK | + | 4 | – | 1 & 2 | 2 |
| | – | 4 | – | High 3 | -- |
| | NC | 0 | – | Low 3 & 4 | 7 |
| MS-S2 | | | | | |
| | + | – | 15 | 1 & 2 | – |
| | – | – | 1 | High 3 | 1 |
| | NC | – | 0 | Low 3 & 4 | 18 |
| MS-S5 | | | | | |
| | + | – | 7 | 1 & 2 | – |
| | – | -- | 0 | High 3 | 1 |
| | NC | – | 0 | Low 3 & 4 | 35 |

*Number of items showing increase in percent "never has to".
**Number of items showing decrease in percent "never has to".
***Number of items showing no change in percent "never has to".

# APPENDIX F

Job-Oriented Items Showing Difference of 5% or More "Never Has To" Between Both High (Cat. 1 & 2) and Low (Cat. Low 3 & 4) Categories and Medium (Cat. High 3) and Low (Cat. Low 3 & 4) Categories

Job-Oriented Items Showing Difference of 5% or More "Never Has To" (NHT) Between Both High (Cat. 1 & 2) and Low (Cat. 3 & 4) Categories and Medium (Cat. High 3) and Low (Cat. Low 3 & 4) Categories

ABE

Increase in NHT

Inspecting spaces for safety, cleanliness, etc.
Stowing/breaking out parts/equipment.
Rigging the barricade.
Painting safety markings on flight deck.

Decrease in NHT

Participating in field days, sweep downs, etc.
Ensuring safety lines are in place.
Inspecting components of water brake cylinder.
Breaking out bridles, T-bars, etc.
Taking cylinder elongation readings.

ABF

Increase in NHT

Checking sound powered phones for proper operation.
Determining up or down status of fueling equipment.
Fighting aircraft/fuel fires.
Inspecting fueling operations for safety violations.
Participating in working parties.
Troubleshooting fuel piping system for fuel flow problems.
Ordering tools, equipment, supplies.

Decrease in NHT

Inspecting spaces for safety, cleanliness, etc.
Picking up/turning in tools, equipment, supplies.
Stowing/breaking out parts/equipment.
Conducting general safety inspections.

ABH

Increase in NHT

Picking up/turning in tools, equipment, supplies.
Painting safety markings on flight deck.
Cleaning and painting flight deck.

ABH (Continued)

Decrease in NHT

Attaching/removing aircraft tiedowns or checking aircraft, etc.
Directing aircraft using standard aircraft taxi signals.
Performing as firefighting hose-team leader.
Hooking tow bars to aircraft.
Preparing/reviewing enlisted performance evaluations.
Counseling personnel on military/personal matters.

AO

Increase in NHT

Inventorying ordnance, tools, equipment, supplies.
Picking up/turning in tools, equipment, supplies.
Conducting general safety inspections of spaces/equipment.
Preparing ordnance/equipment for shipment.
Performing QA inspection on ordnance.
Filling out work requests/work orders.
Replacing "O" rings, gaskets, seals, etc.
Lubricating mechanical components.

Decrease in NHT

None

MS-S2 Div.

Increase in NHT

None

Decrease in NHT

Making personnel assignments.
Ensuring work assigned to subordinates is completed.
Assigning work priorities.
Preparing sauces and gravies.
Preparing dried/dehydrated foods.
Drawing food items for preparation
Maintaining logs (PDL, etc.)
Determining if food is sufficiently cooked.
Loading/unloading ovens.
Preparing/cooking cereal.
Preparing ingredients.
Setting up the serving line(s)
Cleaning/sanitizing food preparation areas.
Disposing of unusable subsistence supplies.

MS-S5 Div.

Increase in NHT

Coordinating work within division.
Participating in field days, sweeping and swabbing decks, disposing of garbage and trask, etc.

Decrease in NHT

Clearing off tables.
Attending meetings, seminars, conferences, etc.
Preparing meat/seafood/poultry for cooking.
Preparing soups.
Setting up or breaking down serving line.
Making work and personnel assignments.
Roasting meat/seafood/poultry.
Ensuring work assigned to subordinates is completed.
Preparing/cooking eggs.
Preparing ingredients (measuring/reconstituting/mixing, etc.).
Assigning work priorities.
Determining if food is sufficiently cooked.
Preparing gravies and sauces.
Disposing of unusable subsistence supplies.
Processing meats and poultry (thaw/bone/roll/cut/tie).
Keeping vegetables/fruits at a simmer.
Coordinating with military activities for required maintenance.
Determining number of people to be served.
Monitoring training program.
Preparing rice/pasta.
Determining amount of food to be prepared for meals.
Preparing pancakes/waffles/french toast.
Reviewing manpower requirements.

SK

Increase in NHT

None

Decrease in NHT

Issuing tools, parts, supplies, equipment.
Cross referencing part numbers using microfiche.
Assigning workloads
Preparing receipt for material received w/o invoice.
Stowing/breaking out tools, parts, supplies.
Performing wall to wall/bulkhead to bulkhead inventory.
Performing specific item (spot) inventory (one item).
Uncrating/unpacking equipment material received.
Verifying quantity of items received.
Preparing DoD single line req. for general support requirements.

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