

Task-Worker-Environment Interaction Study Survey Data

Final Report

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ABSTRACT

The Task-Worker-Environment Interaction Study (TWEIS) survey was designed to assess the criticality of attitudinal differences between trainees who had just completed schooling and workers who had been in the field two years or less. Two parallel survey forms were created: Form A consisting of 37 items was given to trainees and worded in terms of expectations; Form B consisted of 44 items (including all of the 37 Form A items) and worded in terms of current experiences.

The questionnaires were administered to trainees and workers in eight Air Force specialties: 811X0 (Security Police), 645X0 (Supply), 622X0 (Food Service), 426X2 (Aircraft Mechanic), 566X0 (Environment), 902X0 (Medical), 314X4 (Communications), and 427X2 (Nondestructive Inspection). Complete and adequate sets of Form A and Form B data were obtained from all but AFSC 314X4 and AFSC 427X2. The primary analyses therefore included the first six specialties.

The common 37 Form A and Form B items were grouped into three clusters: personal-motivational (TSAT), task elements (TCHAR), and personnel interactions (PINT). The data analyses focussed around these clusters. A comparison of trainees and workers attitudes showed widespread decreases in positive feelings, with the most significant occurring for AFSC 811X0 and AFSC 622X0. The TSAT cluster showed the highest percentage of items with statistically significant differences and largest effect sizes.

Factor analyses of the combined Form A and Form B 37 items produced a primary single factor in each specialty, labelled job satisfaction. For AFSC 811X0 and AFSX 622X0 this factor was rather undifferentiated, suggesting poorly defined criteria. For the remaining four specialties, satisfaction appeared more closely associated with the PINT items. Trend analyses of the Form B items showed markedly different patterns within each specialty, with the TCHAR items showing the most changes. There is apparently some accommodation and adaptation to the job elements among the specialties.

Several general conclusions were drawn from the data: (1) each of the specialties has unique problems, although AFSC 811X0 and AFSC 622X0 clearly have the most serious difficulties, (2) the variables entering into the on-site socialization process are undermining much of the effectiveness of training. Job effectiveness, when it does occur, is delayed at least 12-18 months, and (3) alternative research strategies regarding the effectiveness of training and on-site instruction were suggested.

Acknowledgements

A number of individuals contributed to this project, and we would like to take this opportunity to recognize their contributions. First of all, William L. Griffith, Captain, USAF (ret.), now with Martin Marietta was deeply involved in the conceptualization of the TWEIS project, the development of the survey instrumentation, and the data collection. Major Dan Collins, AFHRL, Brooks AFB, Texas, took over the TWEIS project and was responsible for seeing that the data were finally analyzed and reported. His guidelines and suggestions were most helpful.

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I. INTRODUCTION

The first step in developing an instructional program is the analysis of the operational system; specifically, critical task events. Following a behavioral model, this molecular approach reconstructs the task as logical sequences of elements. The Task-Worker-Environment Interaction Study (TWEIS), on the other hand, is based on the assumption that less overt concerns of worker socialization such as expectations, needs, and personnel interactions must also be considered integral components of training concerns regarding effectiveness.

Perhaps the most successful current method for defining training requirements is the USAF Occupational Measurement Center's occupational survey and analysis approach. This has become an increasingly more sophisticated technology, gaining wide acceptance throughout military and civilian circles since the Occupational Measurement Center first began gathering task data in 1967. In fact, products of its analyses are so extensive that sometimes more assistance is offered to developers than can ever be used. However, the major limitation is that the measurement specialists generally concern themselves with the task elements derived from surveys of job performance.

Current organizational theory argues there are other critical variables which contribute to task performance and satisfaction (Schneider, 1985). For this project, job site variables were divided into three categories; the task itself, workers as performers of the tasks, and the environment in which the work is done. All three are considered to be integral to organizational success, but as has been noted previously, traditional methodologies for defining training requirements essentially address only the task itself (Langer 1985). Indeed, the critical TWEIS issues are the identification and determination of the significance of these less precisely defined job elements, and whether these findings can lead to an improvement in training strategies.

The initial data base for TWEIS was an extensive survey among trainees and workers. Several preliminary reports (Langer, 1986; Summers & Griffith, 1985; Langer & Summers, 1986) analyzed some of the differences between trainee expectations (Survey of Job Expectations, Griffith & Summers, 1985a), and the perceived realities of specific aspects of worker tasks (Survey of Job Realities, Griffith & Summers, 1985b). Based on earlier research, differences between expectations and realities were assumed to significantly impact worker motivation and job satisfaction (Langer, 1985; Porter & Steers, 1973).

The Interim Report (Langer & Summers, 1986) presented some initial analyses, and was not meant to be a complete presentation. Rather, it focussed initially on one of the eight Air Force specialties surveyed-- Security Police (AFSC 811X0), with some comparative preliminary data from five other specialties. This Final Report includes full parallel analyses on all the career fields where adequate data were available.

The Final Report is divided into five sections. The first is a brief introduction to the project. The second presents the rationale for this study by detailing the context against which a need for the study was recognized. The third delineates the methodology used in collecting the expectations and realities data, including questionnaire development and administration,

selection of Air Force specialties, selection of survey participants, and data analysis procedures. The fourth section provides detailed analyses of the major findings for six of the specialties plus partial analyses for the remaining two. The final section presents some proposals for management and future needed research.

II. RATIONALE

The basic premise underlying the TWEIS Survey was "met expectations" (Porter & Steers, 1973). This has been defined as the discrepancy between what a person encounters on the job and expects. Porter and Steers further hypothesized that unless the worker perceives substantial agreement the individual is not likely to remain with the organization. Included as a critical variable within any decision to remain is job satisfaction, and the individual's belief that future change is possible, leading to a reduction of internal dissonance (Langer, 1985). While it is almost intuitive to expect a significant relationship between expectations and job satisfaction, the relationship is certainly a complex one (Iaffaldano & Mischinsky, 1985; Horner, Mobley, & Meglino, 1979). Although the TWEIS project was initially based on some generalized premises regarding expectations and satisfaction (Langer, 1985), a model proposed by Horner, Mobley, and Meglino (1979, p. 20) accurately reflects our thinking. The model is presented in Figure 1.

During training the trainee develops an anticipatory set of expectations. Once on-site the individual matches expectations against reality. The smaller the discrepancy, the greater the likelihood that the individual can move along successfully. If the discrepancy is really severe, several options are available to the individual. The person could leave the organization as soon as possible, carry out daily tasks with minimal commitment, try to rearrange the working environment (Homans, 1950) or change their perception of the discrepancy and the values attached to the expected outcomes (Festinger, 1957). Expectations are the key explanatory variable of attitudes and behavior in both the organizational entry and organizational socialization literature (Horner, Mobley, & Meglino, 1979).

The discrepancy between trainees and workers is designated in this model as "congruence discrepancy comparison." This corresponds to our expectation-realities comparison. Ideally this should be an intraindividual comparison, and we will address this issue later. Nevertheless it is clear from this model that the magnitude of the discrepancy has very significant organizational implications. It is also clear that significant personal and task gaps must be addressed by the worker (Langer, 1985; Horner, Mobley, & Meglino, 1979).

In no sense are we advocating a simplistic relationship between the worker-trainee discrepancy and job satisfaction, turnover, etc. Such relationships are best considered complex multivariate phenomenon (Schneider, 1976; Watson, 1985). However it is equally true that the met expectations construct does bear some explanatory potential, and in the case of marked discrepancies raises serious problems regarding the validity of the training processes and/or knowledge about the on-site realities of the tasks (Langer, 1985). The TWEIS Survey was designed to initiate an investigation into the nature and magnitude of the issues within and across specialties. Regardless of what contributing factors emerged, it was also assumed they were modifiable by their very nature.

Expectancy Theory

The utilization of expectancies has had a long history in organizational behavior (Schneider, 1985; Vroom, 1964). After an initial outburst of research and subsequent decline, expectancy theory (Vroom, 1964) is once again

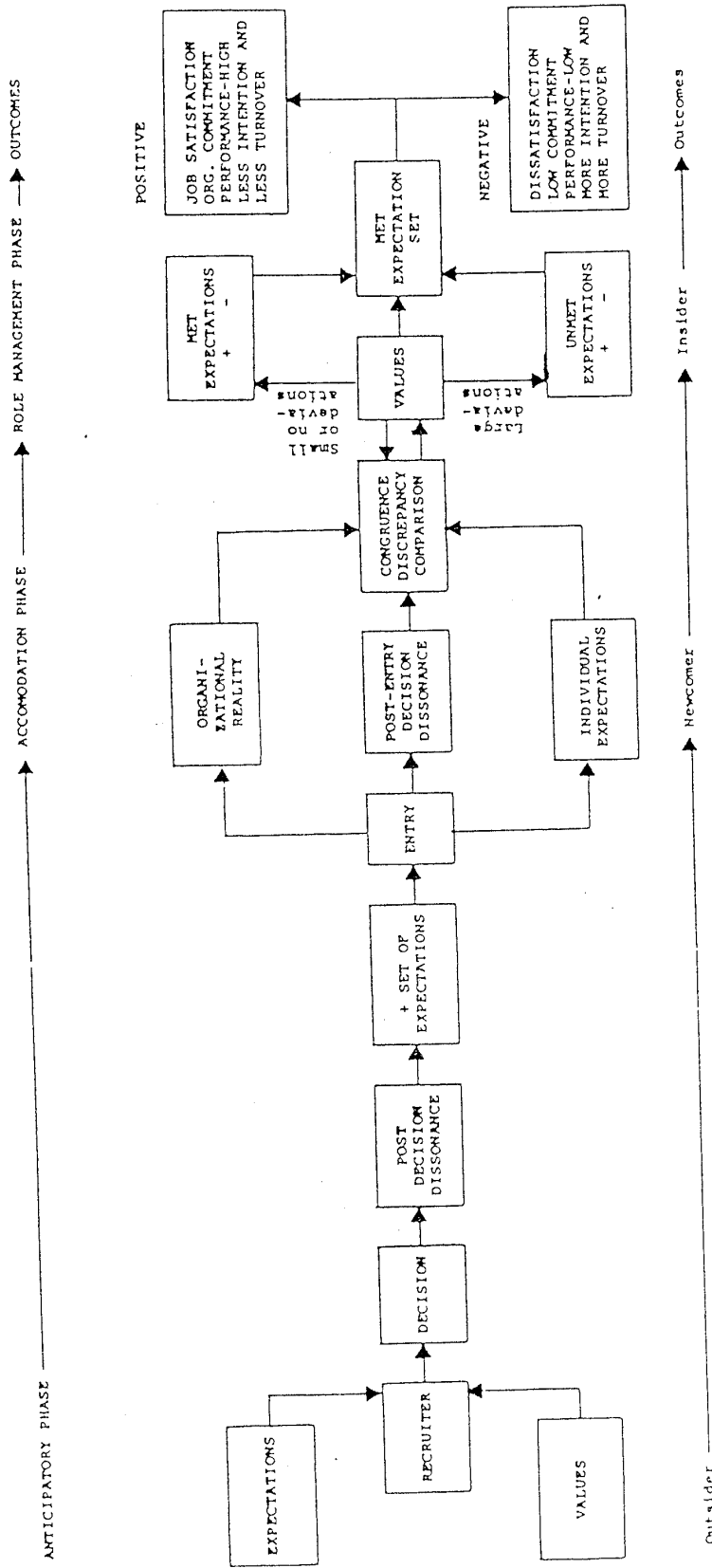


Figure 1. Model of the process of expectations and their influence on various outcomes. (Reprinted from Horner, Mobley, & Meglino (1979), p. 20.)

receiving strong attention (Schneider, 1985). Most important to our thesis is that expectancy theory has been empirically linked to job satisfaction (Locke, 1976; Mitchell, 1974; Pulakos & Schmitt, 1983).

Vroom developed expectancy theory as a way of moving away from earlier organizational and theoretical emphases on obtaining a fit between individual abilities and task demands (e.g., Strong, 1958). Vroom defined an expectancy as a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome. Expectancy theory therefore can be considered a derivative of instrumentality theory in psychology (Mitchell & Biglan, 1971).

Expectancy theory follows many of the Lewinian assumptions regarding movement and direction, which are directly tied to the valence of a given goal region. Estimation of probabilities of a specific act-outcome sequence are both subjectively and objectively determined. The subjective valence component reflects anticipated satisfaction as in the Lewinian model (Mitchell, 1974).

More specifically, Vroom developed two basic postulates:

Proposition 1. The valence of an outcome to a person is a monotonically increasing function of the algebraic sum of the products of the valences of all other outcomes and his conceptions of its instrumentality for the attainment of these other outcomes. (p. 17).

It is interesting to observe that Vroom distinguished between first and second level outcomes (Mitchell & Biglan, 1971). Mitchell (1974) called this the job satisfaction model, and argued that it is supported by the research evidence.

Vroom's second proposition was as follows:

Proposition 2. The force on a person to perform an act is a monotonically increasing function of the algebraic sum of the products of the valences of all outcomes and the strength of his expectancies that the act will be followed by the attainment of these outcomes. (p. 17).

A typical study involving the relationship between satisfaction and expectancy theory is one by Pulakos and Schmitt (1983). Using high school students they found a modest relationship between expectancies and job satisfaction, suggesting that expectancies might prove a more valuable selection device than ability or aptitude. In general, there is strong support for expectancy theory, particularly in relation to elements associated with job satisfaction (Mitchell, 1979). Significant discrepancies between expectations and reality may lead the worker to leave the organization, stay but remain uncommitted, or change perceptions and associated values and/or the organizational climate (Horner, Mobley & Meglino, 1979).

The major problem is that at any given moment a worker may not be provided with enough information to do more than hazard a guess as to outcome values and probabilities. An interesting speculation is that expectancies as

predictors of satisfaction might be improved by using shorter lists that are self-generated (Mitchell, 1979).

Job Satisfaction

Job satisfaction is generally classified as an attitude (Schneider, 1985). Undoubtedly it is the most heavily researched attitude in organizational behavior, and has been tied to such performance indices as turnover, absenteeism, etc. (Vroom, 1964; Porter & Steers, 1973; Hoiberg & Berry, 1978; Locke, 1976; Iaffaldano & Mischinsky, 1985). It is a significant interindividual variable (Green, Blank, & Luden, 1983), suggesting that like expectancies, satisfaction needs to be assessed more intensively as a complex, highly internalized variable.

Job satisfaction has been defined as a pleasurable or positive emotional state resulting from one's job experiences. Morale, which is sometimes used synonymously with satisfaction, is generally assumed to include job satisfaction as well as identifying with organizational goals. Unlike morale, job satisfaction has a futuristic orientation (Locke, 1976). Typically, job satisfaction elements are embedded in most sets of job dimensions (Patchen, 1970; Locke, 1976).

Other definitions have stressed the relationship between satisfaction and expectancies. Locke (1969) suggested that satisfaction is a function of the degree to which one's performance achieves one's goals or is discrepant from one's value standard. This is similar to Homans' (1974) definition which ties satisfaction to the discrepancy between reward received and reward expected. Although derived from operant psychology, there is definitely an expectancy standard implied. Both definitions are clearly in line with Vroom's theory of expectations described earlier. Katz and Kahn (1978) argue that job satisfaction is critical to maintaining the integrity of the organizational system. Their use of the term rewards is consistent with Homans' definition.

Nord (1977) addressed the issue of satisfaction at some length. He argued that the following assumptions underlie current research and thinking on satisfaction: (1) desirability of economic competition, competition and utilitarianism; (2) work as a central interest in life, (3) human nature as individualistic, (4) shared subordinate goals, (5) maintenance of the existing distribution of power, and (6) ideological conservation. He argued further that corporations often have no incentives for experimenting with ways of increasing job satisfaction. In fact, maintaining status quo is the preferred mode. He concluded that all proposed change should focus on the individual, and the social, cultural, and organizational milieus within which work took place.

Current emphasis on job satisfaction focuses on the individual, with the task a means of expressing or fulfilling needs. Job satisfaction, as a construct, has moved away from supervisory practices and the work group to the job itself (Locke, 1976; Schneider, 1985). To some extent this has led to a school of thought which stresses job enrichment, the modification of the task itself to meet more of the worker needs (Lawler, 1969; Alderfer, 1976).

Vroom (1964) addressed the role of training in the issues of motivation and satisfaction. Training and orientation is more than a skill acquisition process; in an equally critical sense it begins a socialization process for

assuming a given role. It is the period when the worker assesses the possibilities of a successful match between expectations and the realities of the assigned role, and should be a major organizational concern (Horner, Mobley, & Meglino, 1979). Regression from expected performance at the end of the socialization process (training) is a common finding (Boss, 1983). While such devices as Realistic Job Previews may serve to cushion the shock, still the issues may be too complex for rather simple modifications in the training process (Horner, Mobley, & Meglino, 1979).

Transition from Training to Site

At the outset of the first job assignment in the Air Force, airmen consistently demonstrate a genuine desire to become experts in their specialties. An important question for the manpower, personnel, and training communities, then, is why so many airmen never attain their own level of predicted expertise. One hypothesis (and the one on which this project is based) is that discrepancies between job expectations and realities take their toll during the initial job site socialization processes. For example, research has consistently revealed a substantial lowering of reenlistment intentions during the first year (or less) on the first Air Force job. Several studies (Schneider, 1972; Wanous, 1976; Ward & Athos, 1972) outside the Air Force have found that information received prior to organizational entry often results in unrealistically high expectations; the failure to realize these expectancies has been found to relate to job turnover (Hoiberg & Berry, 1978; Katzell, 1968) and to other measures of socialization success. Still other researchers have speculated that many alternatives are available to alleviate the psychological distress caused by the discrepancies between work requirements and self image or expectations. In addition to turnover and absenteeism, then, it may be that possibilities for other escape behaviors such as drug and alcohol use, are also increased (Langer, 1985).

The transition from the role of new Air Force member in initial skills training to apprentice worker in a new job environment is a complex one; that is, the number of elements in the new environment to which the graduate must adjust is much higher than in most other transfers. Louis (1980) reported that coping is a direct function of the difference in number of elements between the new and old situation. Brett and Werber (1980) found that transfers characterized as being only moderate changes in level or function were less likely to cause psychological or psychomotor distress than transfers which had greater changes in level or function.

The evolution of expectations is an iterative process which starts, in the case of military services, with hearsay about the military careers and with the services promotional materials on the military life (see Figure 1). This study assessed the size of the discrepancies between job expectations and realities among workers in six Air Force specialties. Career fields and details of the procedures used are presented in the following section.

III. METHODOLOGY

Initially, this project was designed to test the expectations-realities discrepancy model, and to collect some baseline information for subsequent research. A survey methodology was chosen over other alternatives for several reasons. First, it allowed for a broader coverage of the desired population than other available techniques. Surveys permitted the collection of data from airmen in eight diverse specialties located at bases around the world. Second, Air Force installations have a structured, in-place capability for controlling and administering authorized surveys. Finally, the survey methodology is relatively inexpensive and can collect data from thousands of subjects without inordinate expenditures of time or money.

Two survey instruments were developed to collect the required data on expectations and job perceptions (Summers & Griffith, 1985). The two were essentially parallel forms of the same basic questionnaire. Form A: Survey of Job Expectations (Griffith & Summers, 1985a), was designed for airmen not yet on the job, and was worded in the future tense to elicit expectations (see Appendix A). Form B: Survey of Job Realities (Griffith & Summers, 1985b), was designed for airmen already on the job, and was written in the present tense to gather information about perceptions of the current job situation (see Appendix B). The surveys were constructed to elicit responses relative to such task variables as mental and physical effort, task complexity, variability, time to finish, and responsibility; co-worker and supervisor characteristics such as feedback, competency, and assistance; environmental/contextual variables such as geographic location, physical work conditions, and organizational climate; and job satisfaction variables such as importance, enthusiasm, and reenlistment. A higher item score on the surveys reflects more of the attribute; and with the exception of two items, little or no work and delay in beginning job, the higher score is assumed to reflect a more positive attitude.

While many of the items in the survey questionnaires addressed questions not heretofore addressed in survey instruments used on military populations, some were derived from items found in previously used instruments. For example, the job satisfaction and task difficulty items were patterned on items routinely used in occupational surveys developed and administered by the USAF Occupational Measurement Center. Others were patterned on items which appeared in the Organizational Assessment Package (Hendrix, 1979) and still others in an instrument developed to measure situational constraints in the Air force (O'Connor, Eulberg, Peters, & Watson, 1984).

Criteria for Selection of Specialties

Five criteria were used to select the eight Air Force specialties. The first criterion was that the specialties were to represent the various major functional areas existing in the Air Force. The target specialties spanned the primary career fields of communication-electronics, aircraft maintenance, civil engineering, services, supply, security police, and medical support. Represented are all technical specialties (aircraft maintenance and communications - electronics) and non-technical specialties (management and food services) and a hybrid specialty (medical services), possessing both technical and non-technical aspects. Several major career areas, e.g.,

missile maintenance, munitions maintenance, and administration/personnel were not included in the sample, but were judged to overlap significantly with specialties from career fields that were selected.

The second criterion was that the specialties selected would be representative of the enlisted force with respect to major command (MAJCOM) assignment and duty location. It is possible, for example, to select specialties wherein the incumbents are located disproportionately at overseas bases or are assigned primarily to one or two MAJCOMs. Seven of the specialties in this study are distributed proportionately over all MAJCOMs and are balanced between overseas and stateside bases. The sole exception in the sample is the Communications specialty, in which members are assigned almost exclusively to the Air Force Communications Command (AFCC). Table 1 depicts the distribution of survey participants by Air force specialty and MAJCOM.

The third criterion concerned the measured aptitude levels required by the Air Force. A mix of higher-aptitude and lower-aptitude specialties was selected to ensure that no bias was introduced by a possible relationship between aptitude levels and job expectations.

The fourth criterion was job complexity. Several specialties wherein the jobs tend to be less complex and more routine (e.g., Food Service and Security Police) were chosen to complement those specialties in which the jobs are more complex and less routine.

Finally expectations concerning attitudinal variables such as job interest, motivation, sense of accomplishment, and reenlistment intentions were used to select the specialties. Review of recent occupational survey reports and preliminary discussions with career field managers indicated that incumbents in some career areas (notably in Security Police and Food Services) express chronic dissatisfaction with aspects of their jobs and job environments. In other career fields workers tend to express relatively higher levels of satisfaction (Summers & Griffith, 1985).

Selection of Survey Participants

After choosing the eight Air Force specialties to be surveyed, the criteria for selecting respondents were established. Measuring both expectations and realities would require either a longitudinal study of the target group(s), or cross-sectional analyses. Because the longitudinal study would take perhaps two years or more to complete, the decision was made to simultaneously assess and compare the expectations of training groups and the perceptions of job realities of those already in the field. This decision necessitated an assumption of some homogeneity between the two groups, which was not an unreasonable hypothesis (Summers & Griffith, 1985).

The first (expectations) group were students ready to graduate from the initial skills training at Air Training Command resident schools. Since the survey spanned eight Air Force specialties, it involved students at all five of the Air Training Command resident technical training centers (Lowry, Keesler, Chanute, Sheppard, and Lackland). Rationale for administering the surveys to initial skills students just prior to graduation was that the training exposes them to some of the tasks in their career fields, thus furnishing a foundation for some realism without exposing them to the realities of the job environments. Surveying this group provided a

Table 1

Distribution of participants.

AFSC	BY AFSC			BY MAJCOM	
	REALITIES GROUP	EXPECTATIONS GROUP	ATC CENTER	MAJCOM	REALITIES GROUP
314X4	309	200	Keesler	SAC	646
426X2	306	275	Chanute	TAC	472
427X2	104	75	Chanute	MAC	277
566X1	306	200	Sheppard	COMM	249
622X0	325	250	Lowry	USAFE	235
645X0	301	300	Lowry	ATC	117
811X0	330	300	Lackland	AFSC	91
902X0	303	200	Sheppard	PACAF	71
				AFLC	68
				AAC	30
				ESC	21
				Other	8
TOTALS	2285	1800			2285

description of the expectations Air Force workers take to their first jobs. Blank questionnaires to be completed by the expectations group were sent to the Air Training Command center at which the appropriate initial skills training is given (for example, Nondestructive Inspection, training is given at Chanute AFB IL, so blank questionnaires intended to assess the job expectations of nondestructive inspection trainees were sent there). Because the expectations group were new Air Force members, they were predominantly in grades E-1 and E-2. A summary of the descriptive data on the participants appears in Table 2.

The second (realities) group was selected on the dimensions of Total Active Federal Military Service, rank, and Air Force base of assignment. Prior studies have indicated that the first year of employment is critical in the development of long-term feelings of job satisfaction or dissatisfaction. It is during this first year that expectations about the job and the job environment are tempered by work experiences, interactions with co-workers and supervisors, and feedback from family members and significant others. Research in organizational psychology suggests that the very early employment period (one year or less) is crucial to the development of a healthy individual-organization relationship (Porter, Lawler & Hackman, 1975). For this report, the first two years in the service were chosen as the time period for study of the nature and timing of changes in job satisfaction, motivation, and reenlistment intentions. Due to the close relationship between time spent in the military service and rank of the respondent, this selection factor was tantamount to selection by rank. In other words, airmen surveyed within their first two years of service would probably be within the range of E-1 (Airman Basic) to E-4 (Senior Airman). Selected descriptive data on survey respondents are furnished in Table 2.

The final criterion used to select the survey sample was Air Force base of assignment. At first, airmen were to be chosen only from bases in the continental United States (CONUS). This was seen as a way to keep postage costs and survey administration time to the minimum. However, to ensure this study would include job satisfaction/dissatisfaction measures that may vary as a function of CONUS vs overseas location, it was decided to encompass all 123 bases, regardless of location, at which enlisted Air Force personnel are assigned. The realities group was selected at random from current personnel listings, within the parameters described above, and computer-generated mailing labels were used to mail individually addressed questionnaires in groups to the servicing consolidated base personnel offices (Summers & Griffith, 1985).

Table 2

Selected data on survey participants.

Factor		Expectations Group	Realities Group
Military rank	E-1	66%	3%
	E-2	12%	27%
	E-3	22%	70%
Educ level	H.S. only	62%	70%
	Some college	38%	30%
Civilian job status	Full-time	63%	58%
	Part-time	34%	33%
	No job	3%	8%
Age		20.1 yrs	20.6 yrs
Dependents		.3	.6
MAJCOM	SAC	48%	68%
	MAC	7%	7%
	TAC	8%	7%
	USAFE	34%	7%
	Other	3%	11%
Months in Air Force		3.6	14.6
Parents' military status	Unknown	1%	2%
	No military	30%	34%
	Noncareer	54%	48%
	Career	15%	15%
1st choice career?	Yes	74%	58%
	No	24%	40%
	No preference	2%	2%

IV. DATA ANALYSES

In this section we will first present parallel data analyses for each of six Air Force Specialties. There are no complete analyses available for two specialties: (1) AFSC 314X4 (Communications) because only 29 Form As were returned, and (2) AFSC 427X2 (Nondestructive Inspection) since no Form As were available.

Within each specialty, the order of analysis is (1) Cronback alphas (reliability coefficients) for the 37 Form A and 44 Form B items; (2) a comparison of the mean differences across the common 37 Form A and Form B items; (3) factor analyses of the combined Form A and Form B common 37 items; (4) trend analyses for the 44 Form B items; and (5) management implications for the specialty.

AFSC 811X0

Initial data analyses for Security Police (AFSC 811X0) have been presented elsewhere (Langer, 1986; Summers & Griffith, 1985; Langer & Summers, 1986). This analysis goes considerably beyond these preliminary reports.

Appendix C-1 gives the Cronback alphas for Form A (expectations) respondents, based on an average of 185 usable forms. Appendix C-2 presents similar data for Form B (job realities), based on an average of 161 usable forms.

The mean standardized Cronback alpha for Form A is .86, with a means interitem correlation of .14. For Form B the mean standardized was .92, with a mean interitem correlation of .21. Both sets of reliabilities are well within the acceptable range for survey instruments. The difference between the two sets of coefficients is of no practical significance, and the data should be viewed as quite stable.

Appendices D-1 and D-2 present the means and standard deviations for the Form A and Form B items respectively. The next question is how significant are the differences between expectations and realities.

Table 3 compares the mean item differences between the Form A and Form B respondents across the 37 common items. In addition, as will be the case throughout this report, effect sizes were calculated where the differences were statistically significant.

First of all, of the 37 comparisons, 33 (89.2 percent) were statistically significant. The trainee expectations were more positive in 32 of 33 (97.0 percent) comparisons; time to finish work was the single exception. (It should be noted that for item B, little or no work, a higher score represents a more negative attitude.) The probability of only a single finding favoring Form B respondents is one in several million.

Where the differences were statistically significant, the effect size (in standard deviation units) has been included. This represents the practical significance of the difference. For example, one standard deviation between groups represents a difference of 34 percent; this means that an average score (50th percentile) in the higher group would be located at the 84th percentile of the lower group. Thus, scores in the upper half of the higher group exceed

Table 3

811X0: Comparison of common Form A and Form B items.

Item	Form A	Form B	t	Effect Size
	X	X		
1. mental effort	3.99	3.26	6.07*	.64
2. physical effort	3.65	2.61	10.12*	1.09
3. responsibility	4.52	4.38	1.59	
4. freedom and independence	2.83	2.15	7.21*	.78
5. major decisions	2.71	1.99	6.70*	.72
6. how difficult task will be	2.96	2.22	8.95*	.77
7. task variability	2.84	2.25	4.98*	.54
8. little or no work	2.26	3.34	-9.50*	1.02
9. perform entire unit of work	3.09	2.79	2.12***	.24
10. satisfied with geographic location	4.02	3.88	.80	
11. physical conditions do not affect work	3.14	2.26	8.30*	.56
12. time to finish work	4.01	4.24	-2.46***	.26
13. use what learned in tech school	4.36	3.27	9.41*	1.00
14. satisfied with tech school preparation	5.77	4.50	8.09*	.86
15. delay in beginning job trained for	1.98	2.20	-2.42***	.26
16. work enthusiasm	3.76	2.85	7.56*	.81
17. interested in learning more about job	4.48	3.38	10.77*	1.15
18. availability of tools or equipment	3.36	1.99	6.58*	.72
19. helpfulness of co-workers	4.42	4.17	2.68**	.29
20. satisfactory relationships with co-workers	4.26	4.14	1.76	
21. instruction from co-worker vs. resident training	3.65	3.77	-1.35	
22. co-workers motivated	4.07	3.35	6.87*	.80
23. training level of co-workers	4.38	4.00	6.34*	.70
24. helpfulness of supervisors on job performance	4.54	3.81	7.29*	.78
25. feedback consistency of supervisor	3.99	3.65	3.51*	.38
26. instruction from supervisor vs. tech school	3.75	3.55	1.97***	.22
27. supervisor lets new people try challenging jobs	3.44	3.22	2.04***	.22
28. job interest	5.02	3.14	13.87*	1.49
29. sense of accomplishment from job	4.49	2.87	13.26*	1.41
30. reenlisting	4.52	3.31	7.27*	.78
31. feel about career field today	4.66	2.57	12.26*	1.31
32. importance of job to unit	4.47	4.21	2.35***	.25
33. importance of job to AF	4.63	4.37	2.40***	.25
34. advice to friend about AF	4.18	3.49	6.40*	.68
35. advice to friend about career field	4.02	2.50	12.15*	1.31
36. other military view your job	3.92	2.67	9.31*	1.00
37. civilians view your job	4.26	3.42	7.06*	.76

84 percent of the lower group. Putting it another way, 58.9 percent of the two populations do not overlap (Cohen, 1977). Even a half a standard deviation represents a difference of 19 percent; the upper half of the higher group exceeds 69 percent of the lower group respondents. In addition, 33 percent of the two populations do not overlap. Basically, the greater the effect size the less the overlap in distributions between the two groups.

In any analysis of survey data the tendency sometimes is to deal with individual items, a practice which ignores colinearity. Although there will be references to specific items, we will consider item significance as a function of cluster location. In a previous report Summers and Griffith (1985) derived a four-factor structure from the combined Form A and Form B data for the Security Police. Table 4 presents these factors.

The four factors were labelled job satisfiers, job importance, job characteristics, and co-workers. In a subsequent analysis we converted these four factors into three clusters, based on findings across all six specialties (Langer & Summers, 1986). The three groupings were as follows: task satisfaction (TSAT), task characteristics (TCHAR), and personnel interactions (PINT). The specific items within each cluster are given in Table 5.

It is possible using these clusters to compare the mean effect sizes associated within each specialty, as well as across specialties. In this instance, the mean effect size was calculated by averaging item effect sizes across the statistically significant differences, and dividing by the number of statistically significant comparisons within each cluster.

For TSAT, 17 out of 18 (94.4 percent) of the items were significantly different, with 11 out of 12 (91.7 percent) for TCHAR, and 5 out of 7 (71.4 percent) for PINT. The mean effect sizes were as follows: TSAT - .84 standard deviations, TCHAR - .57, and PINT - .63. A size effect of .80 is considered large, while .50 is considered medium (Cohen, 1977). The results are shown graphically in Figure 2.

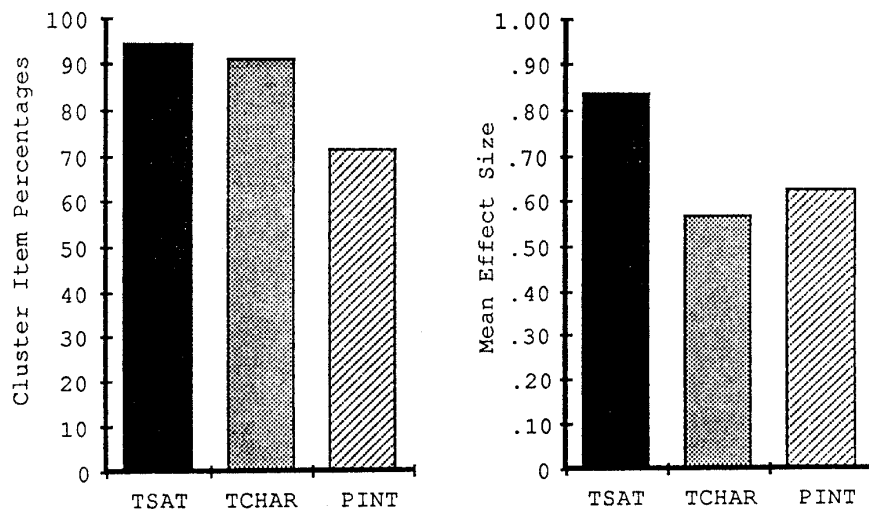


Figure 2. 811X0: Cluster item percentages and mean effect sizes.

Table 4

811X0: Four-factor structure (Summers & Griffith, 1985).

Job Satisfiers

1. independence
2. physical conditions do not effect work
3. use of tech school preparations
4. satisfied with tech school
6. interest to learn
7. co-worker motivation
8. job interest
10. reenlistment intentions
11. career field
12. career field advice
13. AF enlistment advice
14. job importance to military
15. job importance to civilians

Job Importance

1. to organization
2. to Air Force

Job Characteristics

1. mental effort
2. physical effort
3. decision making
4. task difficulty
6. little or no work
7. time to finish

Co-workers

1. co-worker helpfulness
2. personal relationships with co-workers
3. supervisory helpfulness
4. supervisory feedback
5. supervisory instruction
6. new and challenging jobs

Table 5

Three-factor structure (Langer & Summers, 1986)

Item Task Satisfaction (TSAT) (N=18)

10. geographic location
13. use what learned in tech school
14. satisfied with tech school
15. delay in beginning job
16. work enthusiasm
17. interested in learning more
22. co-worker motivated
27. new and challenging jobs
28. job interest
29. sense of accomplishment
30. reenlisting
31. feel about career field
32. importance of job to unit
33. importance of job to AF
34. advice to friend about AF
35. advice to friend about career
36. other military view job
37. other civilians view job

Item Task Characteristics (TCHAR) (N=12)

1. mental effort
2. physical effort
3. responsibility
4. freedom and independence
5. major decision
6. task difficulty
7. task variability
8. little or no work
9. perform entire unit of work
11. physical conditions
12. time to finish work
18. availability of tools

Item Personnel Interactions (PINT) (N=7)

19. helpfulness of co-workers
20. satisfactory relationship with co-workers
21. instruction from co-workers
23. training levels of co-workers
24. helpfulness of supervisors
25. consistency of supervisory feedback
26. instruction from supervisor

If mean effect size is of any psychological significance, then the TSAT items are of primary importance. These are basically personal-motivational in nature. It should also be noted that there is no simple relationship between item percentages and effect size. While TSAT had the highest percentage of items showing significant differences (94.4), TCHAR (91.7 percent) followed closely with PINT (71.4 percent) least. But in terms of average effect size TSAT (.84) was significantly larger than PINT (.63) and TCHAR (.57). The latter only differ by .06 of a standard deviation.

This issue of job satisfaction was an early concern in our analyses (Langer, 1986). While satisfaction can initially be considered an effect, certainly it becomes a major motivator over time. That is, causally satisfaction modifies attitudes (Caldwell & O'Reilly, 1982). Variables 28-35, which were initially grouped ad hoc as the job satisfaction cluster for Form A (Summers & Griffith, 1985) were examined in more detail in a previous report (Langer, 1986). We refer the reader to this paper for this preliminary analysis.

In order to examine the colinearity issue more closely, we decided on a factorial solution to the Form A and Form B common 37 item matrices. However, the sample sizes within each specialty for the individual Form A and Form B data were only marginal at best in some instances. Upon examination of the data, though, we found that within each specialty a principal Form A and Form B factor which were quite comparable.

Equivalency was established on the basis of the following criteria. First, we determined if the A and B factors accounted for similar proportions of the variance. Second, within each specialty we examined the internal structure of this principal factor. This was accomplished by determining the percentage of items and mean loadings for each of the three clusters. This yielded six comparisons within each specialty. For Factor 1, which is the focus of discussion within each specialty, only the percentage of TCHAR items loading for AFSC 566X1 (Environment) was significantly different between forms, although the mean item loadings were identical.

We therefore decided to combine the Form A and Form B data, giving us within each specialty a sample size adequate to insure stability. Since the result is a combined solution, it can be considered an estimate of the situation between transition from trainee to a worker one year or less on-site. In short the data provides an estimate of the attitudinal commonalities between the end of training and early on-site activities.

Additionally, we used both orthogonal and oblique solutions. The two yielded almost identical structures, which was true in every specialty. In this situation the conservative decision is to use the orthogonal results, since these represent less error fitting. Again, while discussions of factors other than Factor 1 are included, the explanatory significance of Factor 1 is of greatest significance.

A nine factor solution was derived for AFSC 811X0, yielding 51 percent of the variance. Of these nine factors, four had eigenvalues greater than 1.00. In reporting and discussing the factor structures, we decided on the following criteria. First, no factor yielding less than four percent of the variance would be analyzed. Second, item loadings less than .35 would not be shown.

The imposition of these limits helped clarify our arguments considerably. Table 6 presents the three factors derived from the orthogonal solution meeting our criteria.

The results are somewhat startling, and at variance with the four-factor structure (Summers & Griffith, 1985). Factor 1 has an eigenvalue of 10.60 and yields 28.7 percent of the variance. This is more than that accounted for by the remaining eight factors (22.3 percent). This factor, which we have labelled job satisfaction, loads 30 of the 37 (81.1 percent) common Form A and Form B items.

This is a global satisfaction factor in every sense of the word, undifferentiated by specificity of dimensions. The factor loadings reinforce our earlier belief that the job may be either poorly defined by the training system and/or redefined by on-site Security Police personnel through complex social and motivational processes.

Sixteen of the 18 (88.9 percent) TSAT variables load on Factor 1, with 9 out of 12 (75.0 percent) from TCHAR and 5 out of 7 (71.4 percent) from PINT. The average item loading for TSAT (Table 5, items 10, 13-17, 22, 27-37) is .63, for TCHAR (items 109, 11, 12, 18) is .47, and PINT (items 19-21, 23-16) is .48. The mean is based on the items significantly loading on the factor. The pattern is almost identical to what we observed earlier (Langer, 1986; Langer & Summers, 1986). Figure 3 presents in graphic form the percentages of cluster items for Factor 1 as well as the mean cluster loadings. As can be observed, the highest percentage of items came from TSAT, followed by PINT and TCHAR. The highest mean loadings came from TSAT, with TCHAR and PINT about equal. Again, there is no simple relationship between number of items loading per cluster and the magnitude of the item loadings.

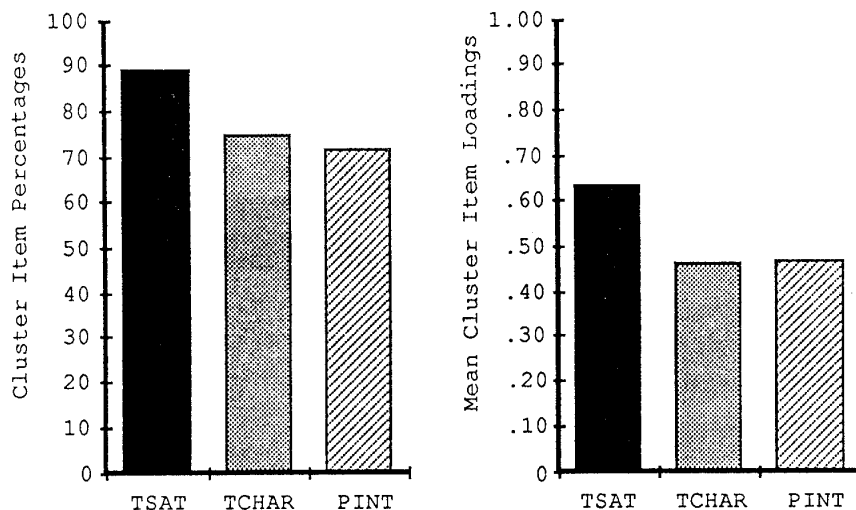


Figure 3. 811X0: Factor 1 cluster item percentages and mean cluster item loadings.

Table 6

811X0: Factor analysis.

<u>Item</u>	<u>FACTORS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
1. mental effort	.52		
2. physical effort	.59		
3. responsibility	.39		
4. freedom and independence	.50		
5. major decisions	.51		
6. how difficult task will be	.57		-.37
7. task variability	.49		
8. little or no work	.45*		
9. perform entire unit of work			
10. satisfied with geographic location			
11. physical conditions do not affect work	.50		
12. time to finish work			.36
13. use what learned in tech school	.60		
14. satisfied with tech school preparation	.57		
15. delay in beginning job trained for			
16. work enthusiasm	.55		
17. interested in learning more about job	.71		
18. availability of tools or equipment			
19. helpfulness of co-workers	.51		.43
20. satisfactory relationships with co-workers	.39		.36
21. instruction from co-worker vs. resident training		.38	.39
22. co-workers motivated	.66		
23. training level of co-workers	.46		
24. helpfulness of supervisors on job performance	.54	.42	
25. feedback consistency of supervisor	.49		
26. instruction from supervisor vs. tech school		.65	
27. supervisor lets new people try challenging jobs	.38		
28. job interest	.87		
29. sense of accomplishment from job	.87		
30. reenlisting	.68		
31. feel about career field today	.78		
32. importance of job to unit	.44		
33. importance of job to AF	.40		
34. advice to friend about AF	.64		
35. advice to friend about career field	.83		
36. other military view your job	.61		
37. civilians view your job	.49		

Eigenvalue	10.60	1.90	1.55
Percentage variance accounted for	28.7	5.1	4.2

*Item has been reflected due to scaling

Factor 2, which accounts for 5.1 percent of the variance, is labelled task assistance. This factor loads instruction from co-workers (.38), supervisory helpfulness (.42), and instruction from supervisor (.65). It is interesting to observe that two of the items (instruction from co-workers and instruction from supervisors) did not load on Factor 1. Again this suggests that the lack of clear-cut criteria, and the necessity of determining the nature of the task through significant others. Factor 3 which accounts for 4.2 percent of the variance is bipolar. This factor loads negatively on task difficulty (-.37), with positive loadings for time to finish work (.36), helpfulness of co-workers (.43), satisfactory relation with co-workers (.36), and instruction from co-workers (.39). We have labelled this job climate, suggesting the items contributing to making daily routine more pleasant.

Incidentally, the fourth factor is identical to Summers & Griffiths (1985) job importance (i.e., loading importance to unit and importance to AF). This is given in Appendix E1.

Trend analyses of the Form B data were used to determine if worker attitudes were modified as a function of time in the field. Such changes are generally assumed to take place (Katz, 1978) and may influence job satisfaction. The Form B respondents were divided into three experiential categories: 0-12 months, 13-18 months, and 19+ months. This differs from the earlier category analyses (Langer & Summers, 1986); for a number of specialties there were only one or two respondents in the 0-6 months category. Table 7 presents the findings for AFSC 811X0. The specific item cell means, standard deviations, and frequencies are found in Appendix F-1.

In Table 7 we have shown only the statistically significant trends, as either linear (L), quadratic (Q), or both (L,Q). A linear trend reflects a relatively straight line change across categories of experience. As an example, consider the following item means taken from some previous data (Langer & Summers, 1986). The category cell means were: 0-6 months - 3.83, 7-12 months - 2.64, 13-18 months - 1.68, and 19+ months - 1.43. In this example the trend is negative (-), since there is a consistent decrease. A positive trend would show an opposite effect. We have labelled the linear trends as either positive (+) or negative (-).

A quadratic trend reflects a statistically significant shift in slope. In a quadratic-only solution this is basically a change in direction. For example, the 811X0 item physical effort has the following cell means: 0-12 months - 1.91, 13-18 months - 1.80, 19+ months - 2.53. In this instance the negative trend culminates at 13-18 months, showing a significant upswing in the 19+ months category. In a three category analysis, the change in direction is always between the 13-18 months category and the 19+ months category. A third possibility is a solution where both the linear and quadratic trend are significant. In Table 7 these are indicated as L,Q, with the respective F-ratio following. There are several interpretations possible.

Pedhazur (1982) considers trend analysis solutions in terms of a hierarchical model. Where the linear and quadratic trends are statistically significant, the solution is considered quadratic (i.e., the highest-order statistically significant polynomial). On the other hand, from a practical point of view the linear trend should not be ignored. One possibility is to consider the relative contributions of each, using the F ratio as a guide. A typical L-Q trend is as follows: 0-12 months - 1.62, 13-18 months - 2.35, and

Table 7

811X0: Trend analysis.

Item	L or Q	F
1. mental effort		
2. satisfied mental effort		
3. physical effort		
4. satisfied physical effort		
5. responsibility		
6. satisfied responsibility		
7. freedom and independence		
8. major decisions		
9. how difficult task will be	L, Q	3.94**, 3.95**
10. satisfied difficulty	Q	5.43**
11. task variability	Q	3.93**
12. satisfied task variability	Q	6.74**
13. little or no work		
14. perform entire unit of work		
15. satisfied with geographical location		
16. physical conditions do not effect work		
17. time to finish		
18. use what learned in tech school		
19. satisfied with tech school preparation		
20. delay in beginning job trained for		
21. work enthusiasm		
22. interested in learning more about job	L, Q	4.71**, 7.18**
23. availability of tools and equipment	L, Q	4.97**, 9.08*
24. helpfulness of co-workers		
25. satisfied with helpfulness		
26. satisfactory relationships with co-workers		
27. quality of co-workers instruction		
28. instruction from co-workers vs. resident training		
29. co-workers motivated	Q	5.29**
30. training level of co-worker		
31. helpfulness of supervisors on job performance		
32. consistency of feedback from supervisors		
33. instruction from supervisor vs. tech school	Q	5.98**
34. supervisor lets new people try challenging tasks		
35. job interest		
36. sense of accomplishment from job	Q	8.78*
37. reenlisting	Q	6.90
38. feel about career field today		
39. importance of job to unit		
40. importance of job to AF		
41. advice to friend about AF		
42. advice to friend about career field		
43. other military view job		
44. civilians view job	Q	7.13*

* p<.01, ** p<.05

19+ months - 2.83. The quadratic shift is from 0-12 to 13-18 months, while the linear trend is seen between the last two categories. Another possibility would be a linear trend between the first two categories, and a shift in slope for the third. We will indicate in the text the direction of the linear trend. The resemblance to a quadratic or linear trend is a function of the amount of variance ascribed to either the linear or quadratic component.

Several very interesting trends emerge from the data. Of the 44 items, 11 (25.0 percent) show statistically significant change. The changes are either quadratic (7) or linear-quadratic (4). In all instances, negative feelings peak at about 13-18 months, with a positive shift thereafter. Six out of 18 (33.3 percent) changes are from the TSAT cluster, 3 (25.0 percent) from TCHAR, and 1 (13.7 percent) from PINT. (One trend is not a common Form A - Form B item.)

While the number of item trends is small, clearly they are of some import such as learning more, enthusiasm, reenlisting, etc. Evidently at about mid-point in the first tour of duty, there is a sense of some accommodation and adaptation. Unfortunately, one can also assume that this may be too late for many of the personnel, considering the psychological scars acquired in the process.

Of the 11 trend changes, the greatest number came from the TSAT cluster. This cluster as we have shown produced the largest effect sizes. One possible explanation of these findings is to consider a phenomenon from attitude measurement called the "boomerang" effect. Basically, it is a version of the assimilation-contrast process (McGuire, 1968). Each individual's position on an attitude scale has surrounding it a range (i.e., latitude) of acceptance (i.e., assimilation). Given a point of view within this latitude of range, the individual will treat the new position as approximately their own and assimilate it. Beyond the latitude of acceptance is a zone of indifference, followed by a latitude of rejection.

If a newly presented attitude falls within this latitude or rejection, respondents will treat this in such sharp contrast to their previously held position that the result is to increase the distance between the old position and the new one. That is, the supposition was that with very large differences between expectations and realities, the boomerang effect would be more likely to occur. If reality was too different, then increased negativism would result. The trend analysis data lends support to this speculation.

AFSC 811X0: Management Implications

Even if one accepts the premise that the data represent responses to very specific questions, it is hard to ignore the consistency of the finding. Basically, Security Police trainees leave with high hopes that are soon crushed by the realities of their duties. The initial expectations of the Security Police trainees are not only very high, but range over the total job environment. In fact, the data clearly support the destructive effects of a significant expectations - job realities discrepancy.

Currently, evaluation procedures are generally designed to determine and implement specific task-related elements, but not necessarily the motivational, social, and environmental pressures. The most obvious concern for management is that the application of standard task-analysis procedures

may tell only part of the story; that there may be specialties which require extensive analyses into the social ambience which defines the criteria for the worker once on the job.

From a management point, there are two issues which must be addressed immediately. First, the job criteria are poorly defined; the trainees and beginning workers seek confirmation in many diverse areas. In a previous report (Langer, 1986) we found that among trainees job satisfaction was not tied to specific task elements in any discernible pattern. It should be emphasized again that separate estimates were carried out within all specialties for Form A and Form B respondents, and the results for the principal factor were equivalent.

Nevertheless, the lack of objective criteria can only be ascribed to failures in the training component. Training would benefit immediately from an investigation into this problem. The question is when and where objective criteria are supposed to be emerging, and if indeed this is the case. These might be assessed at several points in time during training. Training materials and processes might have to be modified to ensure specific and objective criteria are being demonstrated and learned. Survey instruments and trainee diaries are possible research tools.

In addition, if unrealistic expectations are being created, then something equivalent to a Realistic Job Preview (RJP) (Horner, Mobley, & Meglino, 1979) might prove helpful. It is likely that the expectations in different areas develop at differential rates, so a number of measurement points are needed.

The second critical issue is the fact that once on-site the trainee enters a social grouping that seems to prey upon and encourage dissatisfaction. It is true that there is later adaptation in some areas but this is limited and certainly at considerable psychological cost to the individual and perhaps functional cost to the organization.

Traditional surveys and interviews will not suffice here, for two reasons: (1) no one knows what the critical questions are, and (2) respondents are not likely to reveal very much of the truth. Field studies in the ethnographic tradition are needed to eventually prepare objective instrumentation. The reader is referred to a previous report (Langer, 1985) for a complete discussion of the rationale.

The problems are not insurmountable, nor even inherent in the specialty. What may be needed is a significant modification in data gathering, and more particularly in the research needed to pinpoint the problems. In terms of the specialties covered in this report, Security Police would be in need of the most immediate help.

AFSC 645X0

The next specialty is AFSC 645X0, Supply. The Cronback alphas for Form A based on an average of 270 usable forms are given in Appendix C-3. Appendix C-4 presents the Form B data based on an average of 198 usable forms.

The mean standardized alpha for Form A was .84, with an average interitem correlation of .12. The mean standardized alpha for Form B was .91, with a mean interitem correlation of .18. Both sets of data are internally consistent.

The 37 item Form A mean and standard deviations are given appendix D-3 while Appendix D-4 presents the 44 item Form B data. A comparison of the common 37 items yielded 27 (73.0 percent) statistically significant differences; only three (11.1 percent) represented more favorable attitudes for the Form B group. These were: freedom and independence (TCHAR), major decisions (TCHAR), and geographic location (TSAT). That is, 88.9 percent of the statistically significant comparisons favored the trainee group. The data is given in Table 8.

For TSAT, 15 out of 18 (83.3 percent) differed significantly, with 9 out of 12 (75.0 percent) for TCHAR, and 4 out of 7 (57.1 percent) for PINT. Again, the largest number of significant differences is in the personal-motivation (TSAT) cluster. The mean effect size for TSAT was .68 standard deviations, compared to .34 for TCHAR and .34 for PINT. The effect size for TSAT would be considered medium, while the others are small (Cohen, 1977). Still, it should be remembered that the differences between TSAT and the others is .30 standard deviations, similar to AFSC 811X0. The data are presented graphically in Figure 4. Again we have a major effect size difference between TSAT and the TCHAR and PINT clusters, with practically no difference between the latter two.

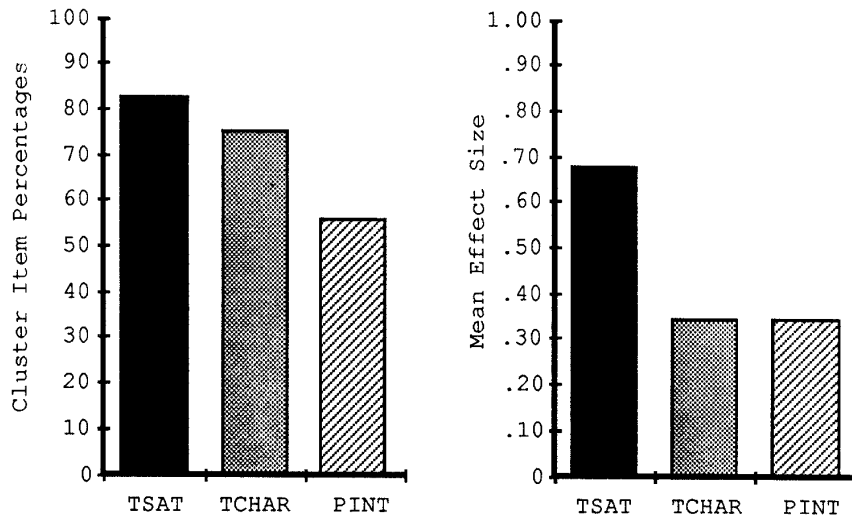


Figure 4. 645X0: Cluster item percentages and mean effect sizes.

An orthogonal solution to the combined Form A and Form B data yielded 11 factors, representing 46.1 percent of the variance. Five factors had an eigenvalue greater than 1.0, and three factors yielded variances greater than 4.0 percent. The data is presented in Table 9.

Again, we have one major factor. Factor 1 we have labelled job satisfaction, since the TSAT items predominate. This factor has an eigenvalue of 7.22, and accounts of 20.9 percent of the variance. Twenty-four of the 37

Table 8

645X0: Comparison of common Form A and Form B items.

Item	Form A	Form B	t	Effect Size
	X	X		
1. mental effort	3.53	3.41	1.43	
2. physical effort	2.48	2.38	.95	
3. responsibility	3.88	3.69	1.96***	.18
4. freedom and independence	2.96	3.21	-3.17*	.25
5. major decisions	2.40	2.74	-3.79*	.35
6. how difficult task will be	2.86	2.58	4.94*	.39
7. task variability	2.67	2.33	3.57*	.33
8. little or no work	2.15	2.43	-3.64*	.33
9. perform entire unit of work	2.93	3.03	-.93	
10. satisfied with geographic location	3.88	4.35	-3.01**	.27
11. physical conditions do not affect work	3.46	3.16	3.96**	.32
12. time to finish work	3.73	3.37	4.45*	.40
13. use what learned in tech school	3.50	2.66	8.19*	.76
14. satisfied with tech school preparation	5.38	3.61	13.68*	1.25
15. delay in beginning job trained for	1.85	1.76	1.06	
16. work enthusiasm	3.83	3.04	8.08*	.75
17. interested in learning more about job	4.34	3.57	8.03*	.73
18. availability of tools or equipment	2.34	1.45	4.90*	.47
19. helpfulness of co-workers	4.18	3.92	2.86**	.32
20. satisfactory relationships with co-workers	4.17	4.19	.24	
21. instruction from co-worker vs. resident training	3.76	3.80	-.53	
22. co-workers motivated	3.98	3.72	3.25*	.29
23. training level of co-workers	4.18	3.92	4.53*	.35
24. helpfulness of supervisors on job performance	4.33	3.95	4.25*	.39
25. feedback consistency of supervisor	3.93	3.65	3.42*	.30
26. instruction from supervisor vs. tech school	3.84	3.83	.03	
27. supervisor lets new people try challenging jobs	3.52	3.68	-1.94	
28. job interest	4.79	3.52	11.42*	1.05
29. sense of accomplishment from job	4.36	3.37	10.45*	.93
30. reenlisting	4.59	3.82	5.65*	.52
31. feel about career field today	4.02	2.92	7.43*	.69
32. importance of job to unit	4.17	4.16	.19	
33. importance of job to AF	4.35	4.08	3.04**	.28
34. advice to friend about AF	4.05	3.66	4.37*	.40
35. advice to friend about career field	3.79	2.90	9.28*	.85
36. other military view your job	3.56	2.84	8.60*	.79
37. civilians view your job	3.66	3.05	7.38	.70

* p<.001, ** p<.01, *** p<.05

Table 9

645X0: Factor analysis.

<u>Item</u>	<u>FACTORS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
1. mental effort			.35
2. physical effort			
3. responsibility	.44		
4. freedom and independence			
5. major decisions			
6. how difficult task will be			
7. task variability	.38		
8. little or no work			
9. perform entire unit of work			
10. satisfied with geographic location			
11. physical conditions do not affect work			-.37
12. time to finish work	.35		
13. use what learned in tech school	.49		
14. satisfied with tech school preparation	.55		-.35
15. delay in beginning job trained for			
16. work enthusiasm	.54		
17. interested in learning more about job	.60		
18. availability of tools or equipment			
19. helpfulness of co-workers	.42	.35	
20. satisfactory relationships with co-workers	.34	.38	
21. instruction from co-worker vs. resident training			
22. co-workers motivated	.54		
23. training level of co-workers	.42		
24. helpfulness of supervisors on job performance	.55	.42	
25. feedback consistency of supervisor	.52	.37	
26. instruction from supervisor vs. tech school	.35	.46	
27. supervisor lets new people try challenging jobs			
28. job interest	.79		
29. sense of accomplishment from job	.80		
30. reenlisting	.54		
31. feel about career field today	.65		
32. importance of job to unit	.35		.51
33. importance of job to AF	.47		.55
34. advice to friend about AF	.53		
35. advice to friend about career field	.69		
36. other military view your job	.60		
37. civilians view your job	.59		

Eigenvalue	7.72	1.78	1.54
Percentage variance accounted for	20.9	4.8	4.1

*Loadings below .35 not shown

items (64.9 percent) load on this factor. Using Table 5 again as a guide, 15 of the 18 (83.3 percent) TSAT item load compared to 3 out of 12 (25.0 percent) for TCHAR, and 6 out of 7 (85.7 percent) for PINT. Unlike Security Police, job satisfaction seems to be associated more with personnel interactions; it is not as global.

The average loading for the TSAT cluster was .58, with .39 for TCHAR and .43 for PINT. In the case of Supply, TSAT was highest, followed by PINT. The factor loadings imply that the technical aspects of the job are less critical than the personnel interactions. Figure 5 presents the data graphically.

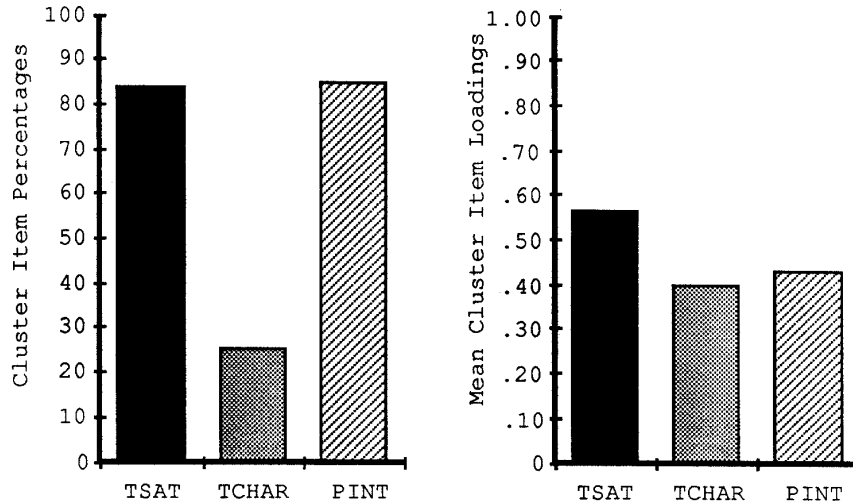


Figure 5. 645X0: Factor 1 cluster item percentages and mean cluster item loadings.

It is interesting to note that TSAT has the highest mean loadings, with PINT having the highest percentage of item loadings.

The second factor has an eigenvalue of 1.78, and contributes 4.8 percent of the variance. This factor loads completely from PINT: helpfulness of co-workers (.35), co-worker instruction (.38), supervisory helpfulness (.42), supervisory feedback (.37), and supervisory instruction (.46). The factor has been labelled routine assistance, reflecting more of the daily needs for information. It should be remembered that this data includes trainee awareness of needs.

The third factor is bipolar, with an eigenvalue of 1.54 yielding 4.1 percent of the variance. Positive loadings include mental health (.35), importance of job to AF (.51), and importance of job to Air Force (.55). Negative loadings include time to finish work (-.37) and delay in beginning job (-.35). Since the highest loadings are in attitudes relating to status, we have labelled the factor self-esteem, including items which suggest the importance of the task both in relation to others as well as the conditions under which the task is executed.

Factors 4 and 5 are listed in Appendix E-2 without discussion. These are the remaining factors with eigenvalues greater than 1.0. Factor 4 reflects task freedom, while Factor 5 suggests some very serious reservations about the career field and its importance.

A trend analysis for the Form B items yielded no significant trends. The cell means, standard deviations, and item frequencies are given in Appendix F-2. Unlike Security Police, Supply personnel show no systematic developments over time. This follows our previous speculation that for Supply job criteria are more clearly defined, and while the expectations - realities gap is statistically significant it does not mandate any need for major modifications.

645X0: Management Implications

While the drop in expectations is widespread, it is not nearly as severe as the case of Security Police. From a management point of view it appears that personnel interactions play a key role. The fact that there was more freedom and responsibility for decisions than expected must be a pleasant phenomenon once on the job. Conceivably the task elements are simple enough so that workers can assume a more mature professional role earlier than anticipated. In addition, the personnel interactions component might be analyzed and given a more prominent role in training, since it certainly is an area of awareness for both trainees and workers.

AFSC 622X0

AFSC 622X0, Food Services, is another specialty presumed to have morale problems as serious as those of Security Police. There were 150 usable Form A surveys, and 236 for Form B. Appendices C-5 and C-6 present the Cronback alphas for Forms A and B respectively.

The mean standardized alpha for Form A was .86, with a mean interitem correlation of .14. For Form B the mean alpha was .92, with an average interitem correlation of .20.

The means and standard deviations for Form A and B are given in Appendices D-5 and D-6 respectively. The comparisons between means and effect sizes are given in Table 10. Of the 31 (83.8 percent) statistically significant differences, all (100.0 percent) favored the trainee (Form A) group. (Item 8 is scaled so a higher score is less favorable.) The relationship to Security Police data is obvious. For TSAT 16 out of 18 (88.9 percent) items were significantly different compared to 10 out of 12 (83.3 percent) for TCHAR and 5 out of 7 (71.4 percent) for PINT. Obviously the differences are widespread, affecting all areas.

The mean effect sizes were as follows: TSAT - .80, TCHAR - .51, and PINT - .46. The TSAT effect size is considered large, the others are medium (Cohen, 1977). The TSAT effect size is about .30 standard deviations above the other two which is somewhat similar to AFSC 811X0. Figure 6 displays this graphically.

Table 10

622X0: Comparison of common Form A and Form B items.

<u>Item</u>	<u>Form A</u> <u>X</u>	<u>Form B</u> <u>X</u>	<u>t</u>	<u>Effect</u> <u>Size</u>
1. mental effort	3.41	3.00	3.88*	.41
2. physical effort	3.33	2.99	3.51*	.37
3. responsibility	3.91	3.52	3.76*	.40
4. freedom and independence	3.09	2.91	1.95	
5. major decisions	2.67	2.34	3.30*	.36
6. how difficult task will be	2.71	2.33	4.49*	.49
7. task variability	2.73	1.98	7.27*	.77
8. little or no work	2.27	2.54	-3.09**	.33
9. perform entire unit of work	3.13	3.14	-.12	
10. satisfied with geographic location	3.92	3.70	1.12	
11. physical conditions do not affect work	3.39	2.88	5.16*	.55
12. time to finish work	3.65	3.39	2.46***	.27
13. use what learned in tech school	4.07	2.66	10.56*	1.22
14. satisfied with tech school preparation	5.38	4.13	6.93*	.80
15. delay in beginning job trained for	1.48	1.55	-.72	
16. work enthusiasm	3.85	2.70	10.76*	1.15
17. interested in learning more about job	4.10	3.15	7.96*	.87
18. availability of tools or equipment	3.53	2.75	6.52*	.63
19. helpfulness of co-workers	4.01	3.59	3.90*	.42
20. satisfactory relationships with co-workers	4.03	3.91	1.43	
21. instruction from co-worker vs. resident training	3.28	3.20	.82	
22. co-workers motivate	3.83	3.08	7.46*	.82
23. training level of co-workers	4.09	3.63	6.83*	.75
24. helpfulness of supervisors on job performance	3.91	3.53	3.23*	.36
25. feedback consistency of supervisor	3.77	3.31	4.28*	.46
26. instruction from supervisor vs. tech school	3.40	3.14	2.45***	.29
27. supervisor lets new people try challenging jobs	3.54	3.04	4.74*	.52
28. job interest	4.75	3.10	11.84*	1.27
29. sense of accomplishment from job	4.29	2.96	10.37*	1.14
30. reenlisting	4.35	3.30	6.15*	.66
31. feel about career field today	3.62	2.27	7.67*	.80
32. importance of job to unit	4.31	3.95	2.96**	.32
33. importance of job to AF	4.30	4.02	2.34**	.24
34. advice to friend about AF	4.11	3.46	5.46*	.59
35. advice to friend about career field	3.63	2.23	11.41*	1.23
36. other military view your job	2.49	1.67	7.58*	.78
37. civilians view your job	2.66	2.32	3.02**	.31

* p<.001, ** p<.01, *** p<.05

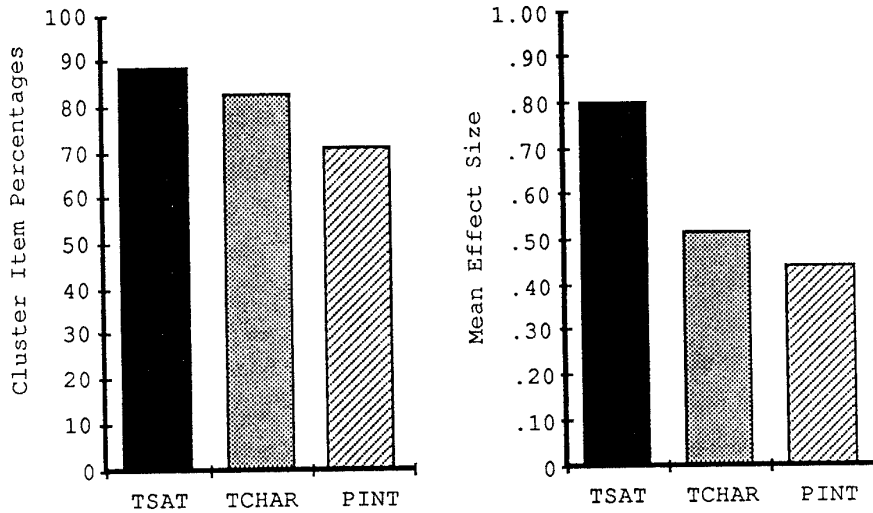


Figure 6. 622X0: Cluster item percentages and mean effect sizes.

This similarity to Security Police is established even further by the factorial solution of the combined Form A and Form B data. Nine factors accounted for 50.7 percent of the variance. Six had eigenvalues greater than 1.0, and three of these contributed to more than four percent of the variance. Table 11 presents the data.

Factor 1 is almost an exact duplicate of Security Police; this factor has an eigenvalue of 9.41 and contributes 25.4 percent of the variance. Thirty-one of the 37 (83.8 percent) items load on this factor, distributed as follows: 17 out of 18 (94.4 percent) from TSAT, 9 out of 12 (75.0 percent) from TCHAR, and 6 out of 7 (85.7 percent) from PINT. Again we have an undifferentiated job satisfaction factor. As in the case of Security Police one gathers that the contributions to satisfaction are diverse, probably reflecting a poorly defined set of criteria. The mean loadings are as follows: TSAT - .59, TCHAR - .41, and PINT - .49. While TSAT has the highest loadings, the differences are not all that large. Figure 7 displays the data graphically. The differences between TSAT and the other clusters are much smaller than in the case of the Security Police.

Factor 2 has an eigenvalue of 1.97, contributing 5.3 percent of the variance. This factor loads on availability of tools (.36), helpfulness of co-workers (.47), helpfulness of supervisors (.44), instruction from supervisors (.49). The magnitude of the loadings is rather low, and we have labelled this factor routine assistance. The loading of tools supports the idea that this is not a job instruction factor, per se, but the interactions impacting the execution of daily tasks. Although the loadings are somewhat different for AFSC 645X0, we believe that psychologically the factors are similar.

Table 11

622X0: Factor analysis.

<u>Item</u>	<u>FACTORS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
1. mental effort	.40		.51
2. physical effort	.40		
3. responsibility	.39		
4. freedom and independence	.40		
5. major decisions	.42		.35
6. how difficult task will be	.51		
7. task variability			
8. little or no work			
9. perform entire unit of work			
10. satisfied with geographic location	.36		
11. physical conditions do not affect work	.41		
12. time to finish work	.41		
13. use what learned in tech school	.49		
14. satisfied with tech school preparation	.40		
15. delay in beginning job trained for			
16. work enthusiasm	.73		
17. interested in learning more about job	.72	.36	
18. availability of tools or equipment	.35		
19. helpfulness of co-workers	.47	.47	
20. satisfactory relationships with co-workers	.36		
21. instruction from co-worker vs. resident training			
22. co-workers motivated	.65		
23. training level of co-workers	.54		
24. helpfulness of supervisors on job performance	.54	.44	
25. feedback consistency of supervisor	.57		
26. instruction from supervisor vs. tech school	.43	.49	
27. supervisor lets new people try challenging jobs	.54		
28. job interest	.86		
29. sense of accomplishment from job	.83		
30. reenlisting	.58		
31. feel about career field today	.65		.47
32. importance of job to unit	.42		.50
33. importance of job to AF	.42		.50
34. advice to friend about AF	.60		
35. advice to friend about career field	.78		
36. other military view your job	.51		
37. civilians view your job	.47		

Eigenvalue	9.41	1.97	.172
Percentage variance accounted for	25.4	5.3	4.6

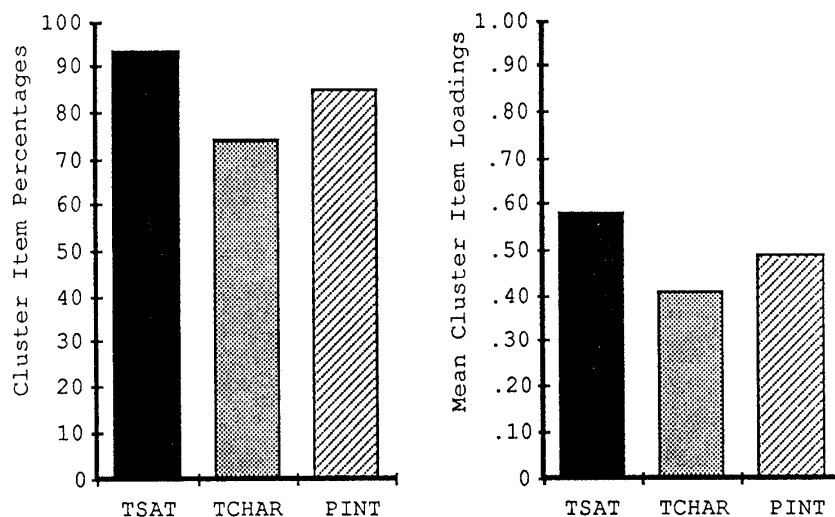


Figure 7. 622X0: Factor 1 cluster item percentages and mean cluster item loadings.

The third factor has an eigenvalue of 1.72 and contributes 4.6 percent of the variance. This factor loads mental effort (.51), task difficulty (.35), feelings about career field (.47), importance of job to unit (.50), and importance of job to AF (.42). The loadings suggest self-esteem rather than simply importance. The contributions of mental effort, task difficulty, and career field fit more closely with this label. Again, while we applied the same label to a somewhat different loading for AFSC 645X0, the correlation matrix would suggest that these are psychologically equivalent.

Factors 4, 5, and 6 are presented in Appendix E-3. While not discussed in detail, all reflect some sense of status or worth. Again, for the undifferentiated specialty, it is not surprising that one cannot objectively estimate easily one's value.

The trend analyses show some similarities with Security Police. There were 9 (20.5 percent) statistically significant changes. Over half of the trends were linear, which is unlike Security Police. The common 37 item changes were fairly well divided among the clusters: 4 out of 18 (22.2 percent) from TSAT, 3 out of 12 (25.0 percent) from TCHAR, and 1 out of 7 (14.3 percent) from PINT. The data is given in Table 12. The cell means, standard deviations, and frequencies are given in Appendix F-3.

All the linear trends were negative, except for perform entire unit of work. There is a drop in enthusiasm and co-worker motivation accompanied by a corresponding drop in how civilians view job and other military view job. Clearly there is an impression of increasing loss of personal esteem in a low status job. The quadratic shifts, with the exception of satisfactory relationships with co-workers, show a positive trend which reverses in the 19+

Table 12

622X0: Trend analysis.

Item	L or Q	F
1. mental effort		
2. satisfied mental effort		
3. physical effort		
4. satisfied physical effort		
5. responsibility		
6. satisfied responsibility		
7. freedom and independence		
8. major decisions	Q	4.58**
9. how difficult task will be		
10. satisfied difficulty		
11. task variability		
12. satisfied task variability	Q	4.10**
13. little or no work		
14. perform entire unit of work	L (+)	4.06**
15. satisfied with geographical location		
16. physical conditions do not effect work		
17. time to finish		
18. use what learned in tech school		
19. satisfied with tech school preparation		
20. delay in beginning job trained for		
21. work enthusiasm	L (-)	4.32**
22. interested in learning more about job		
23. availability of tools and equipment	Q	11.06*
24. helpfulness of co-workers		
25. satisfied with helpfulness		
26. satisfactory relationships with co-workers	Q	4.25**
27. quality of co-workers instruction		
28. instruction from co-workers vs. resident training		
29. co-workers motivated	L (-)	8.17
30. training level of co-worker		
31. helpfulness of supervisors on job performance		
32. consistency of feedback from supervisors		
33. instruction from supervisor vs. tech school		
34. supervisor lets new people try challenging tasks		
35. job interest		
36. sense of accomplishment from job		
37. reenlisting		
38. feel about career field today		
39. importance of job to unit		
40. importance of job to AF		
41. advice to friend about AF	L (-)	4.42**
42. advice to friend about career field		
43. other military view job		
44. civilians view job	L (-)	9.43*

* p<.01, ** p<.05

months category toward more negative feelings. There seems to be some temporary increase in attitudes for task-related activities, but no corresponding personal gains.

622X0: Management Implications

The data suggest again a rather poorly defined set of task criteria, as well as a low status job in the minds of the specialty personnel. Our suggestions concerning 811X0 apply here insofar as training is concerned, and will not be repeated. This includes both an analysis of criteria as perceived during training, as well as the on-site socialization processes.

The major difference between AFSC 622X0 and AFSC 811X0 is that in the case of 622X0 there is evidence of some positive accommodation professionally until about midway in the enlistment period, then a decrease in personal sense of esteem and status begins to take its toll. From a management point of view this dichotomy between doing one's task and what one considers the value of the task needs to be addressed. The fact that there is some increase in task value should be matched by the feeling that the effort and interest is all worth something. The lack of an internalized set of criteria certainly hinders the process. There is no doubt that a low status task forces the worker to eventually seek support within the group. The group may provide encouragement (e.g., AFSC 566X1) or continue the process of disillusionment (e.g., AFSC 811X0). Again, an ethnographic procedure should yield significant data.

AFSC 426X2

The next specialty, 426X2, Aircraft Mechanic, is one involving somewhat higher skill levels. Appendix C-7 lists the Form A Cronback alphas, based on an average of 298 usable forms. Appendix C-8 lists the Cronback alphas for the Form B data, based on an average of 240 usable forms.

The mean standardized alpha for Form A is .85, with a mean interitem correlation of .13. For Form B, the mean standardized alpha was .91 with a mean interitem correlation of .19.

Appendices D-7 and D-8 give the means and standard deviations for Forms A and B respectively. Table 13 presents the comparisons between Forms A and B with regard to the common 37 items. The findings for this specialty were somewhat different. There were 29 (78.4 percent) significant differences, six which reflected more favorable attitudes (including item 15). Hence, of the 29 significant comparisons, 23 (79.3 percent) favored the Form A respondents. (Item 15 is a function of the scoring procedure; Form B respondents indicate less delay.) The other more favorable Form B attitudes included geographic location (TSAT), physical conditions (TCHAR), co-worker instruction (PINT), new and challenging jobs (TSAT), and importance of job to unit (TSAT). Hence, four of the six Form B favorable attitudes were in the TSAT cluster.

The percentage of cluster item loadings were as follows: TSAT - 16 out of 18 (88.9 percent), TCHAR - 9 out of 12 (75.0 percent), and PINT - 5 out of 7 (71.4 percent). The mean effect sizes were as follows: TSAT - .47, TCHAR - .36, and PINT - .25. It should be noted that .47 is considered a medium difference, while .36 and .25 are considered small (Cohen, 1977). The effect sizes are not only smaller, but that for PINT is very small compared to the

Table 13

426X2: Comparison of common Form A and Form B items.

<u>Item</u>	<u>Form A</u> <u>X</u>	<u>Form B</u> <u>X</u>	<u>t</u>	<u>Effect</u> <u>Size</u>
1. mental effort	3.93	3.49	5.68*	.49
2. physical effort	3.53	3.67	-1.84	
3. responsibility	4.21	3.89	3.93*	.33
4. freedom and independence	2.72	2.52	2.45**	.22
5. major decisions	2.22	1.97	2.98***	.26
6. how difficult task will be	3.08	2.92	2.89**	.28
7. task variability	3.30	3.00	3.41*	.30
8. little or no work	2.22	2.35	1.95	
9. perform entire unit of work	3.11	3.61	-5.44*	.47
10. satisfied with geographic location	3.87	4.72	-5.91*	.50
11. physical conditions do not affect work	3.22	2.90	4.16*	.36
12. time to finish work	3.58	3.46	1.70	
13. use what learned in tech school	3.91	2.92	11.22*	.96
14. satisfied with tech school preparation	5.20	4.20	7.77*	.68
15. delay in beginning job trained for	2.16	1.61	6.58*	.57
16. work enthusiasm	3.86	3.29	6.31*	.55
17. interested in learning more about job	4.55	4.14	6.23*	.53
18. availability of tools or equipment	4.00	3.50	5.61*	.49
19. helpfulness of co-workers	4.16	4.17	-.18	
20. satisfactory relationships with co-workers	4.10	4.17	-1.16	
21. instruction from co-worker vs. resident training	3.63	3.87	-2.93**	.18
22. co-workers motivated	3.96	3.90	.90	
23. training level of co-workers	4.23	4.04	3.87*	.33
24. helpfulness of supervisors on job performance	4.25	3.89	4.37*	.44
25. feedback consistency of supervisor	3.86	3.58	3.48*	.29
26. instruction from supervisor vs. tech school	3.73	3.82	-.93	
27. supervisor lets new people try challenging jobs	3.36	3.69	-3.85*	.33
28. job interest	5.20	4.60	5.88*	.51
29. sense of accomplishment from job	4.63	3.91	8.92*	.77
30. reenlisting	4.16	3.66	3.79*	.33
31. feel about career field today	4.70	4.20	3.76*	.34
32. importance of job to unit	4.27	4.47	-2.28***	.20
33. importance of job to AF	4.47	4.56	.25	
34. advice to friend about AF	3.95	3.66	3.50*	.30
35. advice to friend about career field	4.13	3.72	5.11*	.44
36. other military view your job	3.75	3.46	3.55*	.32
37. civilians view your job	4.08	3.90	2.93	.20

* p<.001, ** p<.01, *** p<.05

other specialties. It appears that the personnel interactions elements of the task are clearly defined, and there are no unpleasant surprises. Indeed the specialty itself seems based on a much clearer perception of the job. Figure 8 presents the data graphically.

The orthogonal solution to the combined Form A and Form B data yielded 11 factors accounting for 45.1 percent of the variance. Five factors had eigenvalues greater than 1.0, but only three accounted individually for more than four percent of the variance. The data is given in Table 14.

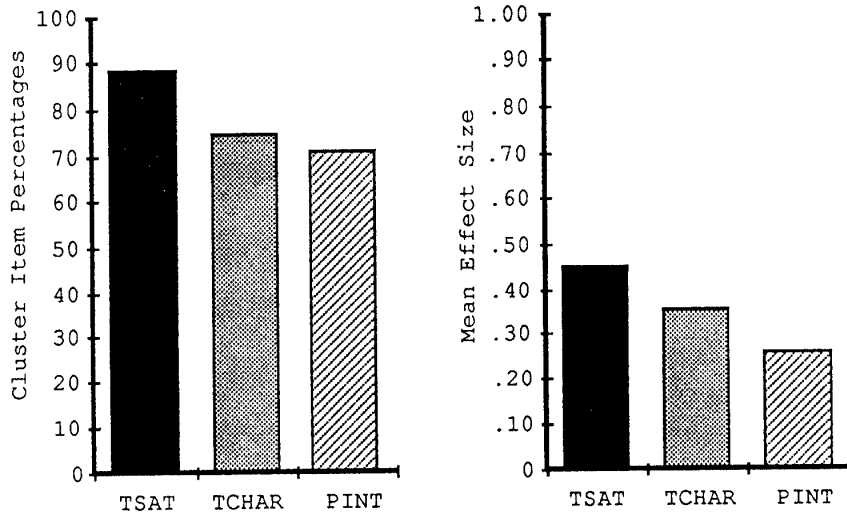


Figure 8. 426X2: Cluster item percentages and mean effect sizes.

Factor 1 had an eigenvalue of 6.93 and accounted for 18.7 percent of the variance. Twenty-four of the items (66.2 percent) loaded on this factor, which was the least of any specialty. The cluster loadings were as follows: 16 out of 18 (88.9 percent) from TSAT, 2 out of 12 (16.7 percent) from TCHAR, and 6 out of 7 (85.7 percent) from PINT. We have labelled this factor job satisfaction, but clearly it is associated with the PINT cluster. This association with PINT may be due in fact that job performance is a function of intensive cooperation, or that the job success in the field is tightly controlled by peers and supervisors, making these interactions critical.

The average loading for the TSAT items was .51, with .47 for TCHAR and .51 for PINT. This pattern is unique in that the average loading for TSAT and PINT were equal, with TCHAR nearly 50. There was little difference among the three groups. Figure 9 presents the data graphically.

Table 14

426X2: Factor analysis.

<u>Item</u>	<u>FACTORS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
1. mental effort	.43		
2. physical effort			
3. responsibility	.51		
4. freedom and independence			
5. major decisions			
6. how difficult task will be			
7. task variability			
8. little or no work			
9. perform entire unit of work			
10. satisfied with geographic location			
11. physical conditions do not affect work			
12. time to finish work			
13. use what learned in tech school	.42		
14. satisfied with tech school preparation	.45	-.38	
15. delay in beginning job trained for	.38		
16. work enthusiasm	.46		
17. interested in learning more about job			
18. availability of tools or equipment	.55		
19. helpfulness of co-workers	.54		
20. satisfactory relationships with co-workers		.37	
21. instruction from co-worker vs. resident training			
22. co-workers motivated	.52		
23. training level of co-workers	.49		
24. helpfulness of supervisors on job performance	.55	.41	
25. feedback consistency of supervisor	.53		
26. instruction from supervisor vs. tech school	.39	.60	
27. supervisor lets new people try challenging jobs	.46	.42	
28. job interest	.71		
29. sense of accomplishment from job	.70		
30. reenlisting	.36		
31. feel about career field today	.61		
32. importance of job to unit	.49		.69
33. importance of job to AF	.50		.55
34. advice to friend about AF	.44		
35. advice to friend about career field	.62		
36. other military view your job	.49		
37. civilians view your job	.47		

Eigenvalue	6.93	1.97	1.72
Percentage variance accounted for	18.7	5.3	4.6

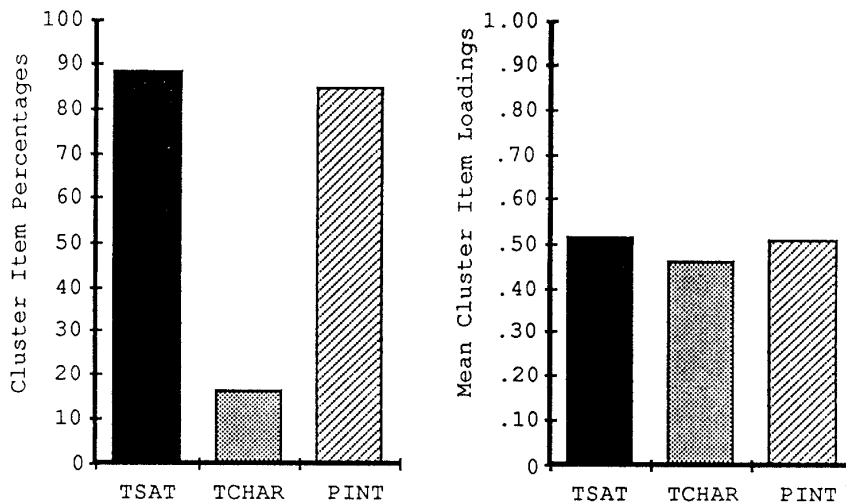


Figure 9. 426X2: Factor 1 cluster item percentages and mean cluster item loadings.

Factor 2 has an eigenvalue of 1.97, accounting for 5.3 percent of the variance. This factor is bipolar; satisfaction with tech school preparation loads negatively (-.38). The positive loadings include co-worker instruction, supervisory helpfulness (.41), supervisory instruction (.60), new and challenging jobs (.42). We have labelled this factor defining the job, suggesting that tasks assigned on-site early in one's career may be at some variance with expectations. This would also make personnel interactions critical.

Factor 3 which has an eigenvalue of 1.72 accounts for 4.6 percent of the variance. The factor loads importance of job to unit (.69) and importance of job to AF (.55). Not surprisingly we have labelled this factor job importance.

Factors 4 and 5 which had eigenvalues greater than 1.0 are given in Appendix E-4. Factor 4 seems to suggest task effort, while Factor 5 deals with job constraints.

There were 13 (29.5 percent) statistically significant trends. The data is presented in Table 15. The cell means, standard deviations, and frequencies are given in Appendix F-4.

Of the six linear trends, five (83.3 percent) were negative. The only exception was major decisions. The item availability of tools which had both a linear and quadratic trend, had a negative linear component. The quadratic-only trends were identical, in that they consisted of a negative trend peaking at 13-18 months, followed by a change to a more positive attitude in the 19+ months category.

Table 15

426X2: Trend analysis.

Item	L or Q	F
1. mental effort	Q	6.34**
2. satisfied mental effort	Q	6.54**
3. physical effort		
4. satisfied physical effort		
5. responsibility		
6. satisfied responsibility	Q	4.60**
7. freedom and independence		
8. major decisions	L (+)	7.32*
9. how difficult task will be	Q	6.05**
10. satisfied difficulty		
11. task variability		
12. satisfied task variability		
13. little or no work		
14. perform entire unit of work	Q	7.95*
15. satisfied with geographical location		
16. physical conditions do not effect work		
17. time to finish		
18. use what learned in tech school	L (-)	6.13**
19. satisfied with tech school preparation	L (-)	3.97**
20. delay in beginning job trained for		
21. work enthusiasm		
22. interested in learning more about job	L (-)	4.05**
23. availability of tools and equipment	L, Q	16.09*, 5.48*
24. helpfulness of co-workers		
25. satisfied with helpfulness		
26. satisfactory relationships with co-workers		
27. quality of co-workers instruction		
28. instruction from co-workers vs. resident training		
29. co-workers motivated		
30. training level of co-workers	L (-)	4.61*
31. helpfulness of supervisors on job performance		
32. consistency of feedback from supervisors		
33. instruction from supervisor vs. tech school		
34. supervisor lets new people try challenging tasks		
35. job interest		
36. sense of accomplishment from job		
37. reenlisting		
38. feel about career field today	Q	5.74*
39. importance of job to unit		
40. importance of job to AF		
41. advice to friend about AF	L (-)	7.89*
42. advice to friend about career field		
43. other military view job		
44. civilians view job		

* p<.01, ** p<.05

The distribution of the common 37 item trends was as follows: 5 out of 18 (27.5 percent) from TSAT, 5 out of 12 (41.7 percent) from TCHAR, and 1 out of 7 (14.3 percent) from PINT. It is clear that there is a general growing satisfaction with the task itself, a general dissatisfaction with tech school preparation, and a potentially growing disenchantment with the choice of career field. For example, the items learn more, advice to friend about AF, etc., show a decrease in positive attitudes. It is clear that this situation is not the same as 622X0. Here there is a growing sense of satisfaction with the task, but feelings of inadequacy regarding preparation. The similarity to 622X0 is a psychological split between task and personal feelings of satisfaction.

426X2 Management Implications

The one overriding finding is dissatisfaction with the tech school preparation, making on-site supervisory and co-worker assistance critical. Whether the preparation was inadequate, per se, or the initial tasks assigned were not covered in training, or both, cannot be determined. But clearly it is an area of managerial concern. Equally important, there is the implication that the procedures used to establish training standards based on job performance appear to have serious deficiencies. The worker soon establishes an attitude of unpreparedness, although as in the case of other specialties there is some eventual accommodation and adaptation to the task. This would mean, of course, a loss in effectiveness for some period of time. While this specialty has no concerns with status, it is also true that there appear to be no real personal incentives for reenlisting.

AFSC 566X1

The data for the specialty AFSC 566X1, Environment (Appendix C-9) represents a different pattern. The Form A Cronback alphas are based on an average of 143 usable responses. Appendix C-10 presents the Form B data based on an average of 254 usable returns. The mean standardized alpha for Form A was .85, with an interitem correlation of .14. For Form B, the data are .90 and .17 respectively.

The means and standard deviations for Form A are presented in Appendix D-9 while Appendix D-10 presents the Form B data. The comparisons between Form A and Form B are given in Table 16.

Of the 37 item comparisons, 24 (64.9 percent) were statistically significant. This was the least number of significant differences for any group. However, only three variables favored the job realities group: delay in beginning job (TSAT) time to finish work (TCHAR), and geographic location (TSAT). Hence, of the 24 significant interactions, 87.5 percent favored the Form A (trainee) group. The cluster percentages were as follows: TSAT yielded 14 out of 18 (77.8 percent), TCHAR 8 out of 12 (66.7 percent) for TCHAR, and 2 out of 7 (28.6 percent) for PINT.

The mean effect sizes were as follows: TSAT - .62 standard deviations, TCHAR - .41, and PINT - .33. The TSAT figure would be considered medium, while the other two are small (Cohen, 1974). The data are presented graphically in Figure 10. The data suggests that job realities are much more clearly in line with expectations.

Table 16

566X1: Comparison of common Form A and Form B items.

<u>Item</u>	<u>Form A</u> <u>X</u>	<u>Form B</u> <u>X</u>	<u>t</u>	<u>Effect</u> <u>Size</u>
1. mental effort	3.46	3.02	5.17*	.54
2. physical effort	3.28	3.09	2.28***	.24
3. responsibility	3.75	3.59	1.60	
4. freedom and independence	3.00	3.05	-.64	
5. major decisions	2.20	2.29	-.86	
6. how difficult task will be	2.81	2.51	4.03*	.43
7. task variability	2.68	2.25	3.97*	.42
8. little or no work	2.31	3.04	-7.83*	.84
9. perform entire unit of work	2.92	3.04	-1.18	
10. satisfied with geographic location	3.57	4.29	-3.80*	.42
11. physical conditions do not affect work	3.15	2.83	3.25*	.33
12. time to finish work	3.82	4.01	-2.89**	.29
13. use what learned in tech school	3.92	3.09	7.35*	.80
14. satisfied with tech school preparation	5.78	4.90	4.19*	.59
15. delay in beginning job trained for	2.22	1.88	3.75*	.34
16. work enthusiasm	3.75	3.07	7.21*	.76
17. interested in learning more about job	4.17	3.69	4.43*	.45
18. availability of tools or equipment	3.70	3.43	2.05***	.22
19. helpfulness of co-workers	3.92	4.09	-1.78	
20. satisfactory relationships with co-workers	3.96	4.09	-1.71	
21. instruction from co-worker vs. resident training	3.57	3.42	1.12	
22. co-workers motivated	3.78	3.57	2.12***	.25
23. training level of co-workers	4.02	4.07	-.77	
24. helpfulness of supervisors on job performance	3.98	3.80	1.57	
25. feedback consistency of supervisor	3.72	3.48	2.25**	.25
26. instruction from supervisor vs. tech school	3.72	3.33	3.64*	.41
27. supervisor lets new people try challenging jobs	3.35	3.32	.34	
28. job interest	4.82	3.85	7.13*	.80
29. sense of accomplishment from job	4.28	3.35	8.23*	.93
30. reenlisting	4.06	3.62	2.62**	.28
31. feel about career field today	4.23	3.40	4.39*	.48
32. importance of job to unit	4.13	4.10	.25	
33. importance of job to AF	4.28	4.22	.55	
34. advice to friend about AF	3.91	3.75	1.56	
35. advice to friend about career field	3.67	3.11	4.54*	.49
36. other military view your job	2.86	2.31	5.04*	.52
37. civilians view your job	3.18	2.95	2.06***	.22

* p<.001, ** p<.01, *** p<.05

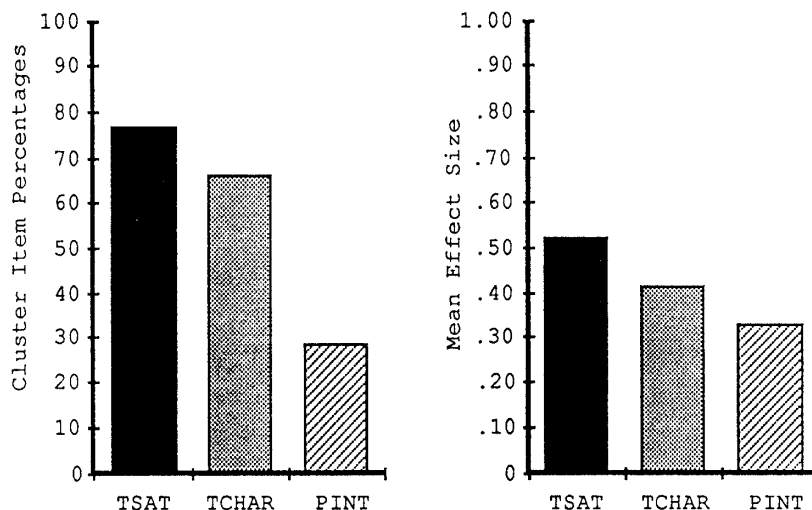


Figure 10. 566X1: Cluster item percentages and mean effect sizes.

An orthogonal solution to the combined Form A and Form B data yielded 11 factors totalling 50.4 percent of the variance. Five factors had eigenvalues greater than one, and three of these contributed to more than four percent of the variance. Table 17 presents the data.

Factor 1, with an eigenvalue of 7.54 yielded 20.7 percent of the variance. Twenty-seven (73.0 percent) of the survey items loaded on this factor, as follows: 15 out of 18 (83.3 percent) from TSAT, 5 out of 12 (41.7 percent) from TCHAR, and 7 out of 7 (100.0 percent) for PINT.

The mean item loading for TSAT was .53, with .41 for TCHAR, and .46 for PINT. Figure 11 presents the data graphically.

Again, we have labelled this factor job satisfaction, and both from the number of cluster items loaded and the average magnitude of the loading satisfaction appears to be associated more with the PINT items. It is interesting to note the TCHAR items loading on this factor reflect worker concern with mental effort, responsibility, task difficulty, and little or no work. One might assume that the job is quite routine, and that there is an in-group social structure which emerges as the result of a rather invariant assignment.

Factor 2 has an eigenvalue of 2.17 yielding 5.9 percent of the variance. This factor loads completely on PINT: helpfulness of co-workers (.42), satisfactory relationships with co-workers (.44), training levels of co-workers (.47), supervisory helpfulness (.44), and supervisory instruction (.36). The range of loadings is rather small (.36 - .47), and we have

Table 17

566X1: Factor analysis.

<u>Item</u>	<u>FACTORS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
1. mental effort	.41		
2. physical effort			
3. responsibility	.42		
4. freedom and independence			
5. major decisions			
6. how difficult task will be	.40		
7. task variability	.39		
8. little or no work	.53		
9. perform entire unit of work			
10. satisfied with geographic location			
11. physical conditions do not affect work			
12. time to finish work			
13. use what learned in tech school	.56		
14. satisfied with tech school preparation	.41		
15. delay in beginning job trained for			
16. work enthusiasm	.50		
17. interested in learning more about job	.55		
18. availability of tools or equipment			
19. helpfulness of co-workers	.44	.42	
20. satisfactory relationships with co-workers	.36	.44	
21. instruction from co-worker vs. resident training	.42		
22. co-workers motivated	.44		
23. training level of co-workers	.41	.47	
24. helpfulness of supervisors on job performance	.57	.44	
25. feedback consistency of supervisor	.5		
26. instruction from supervisor vs. tech school	.53	.36	
27. supervisor lets new people try challenging jobs	.44		
28. job interest	.81		
29. sense of accomplishment from job	.81		
30. reenlisting	.45		.35
31. feel about career field today	.64		
32. importance of job to unit			
33. importance of job to AF	.35		
34. advice to friend about AF	.36		.42
35. advice to friend about career field	.67		
36. other military view your job	.44		
37. civilians view your job	.49		

Eigenvalue	7.54	2.17	1.66
Percentage variance accounted for	20.4	5.90	4.5

*Item has been reflected due to scaling

labelled this job interaction. This reflects the social interactions occurring on the job rather than task assistance.

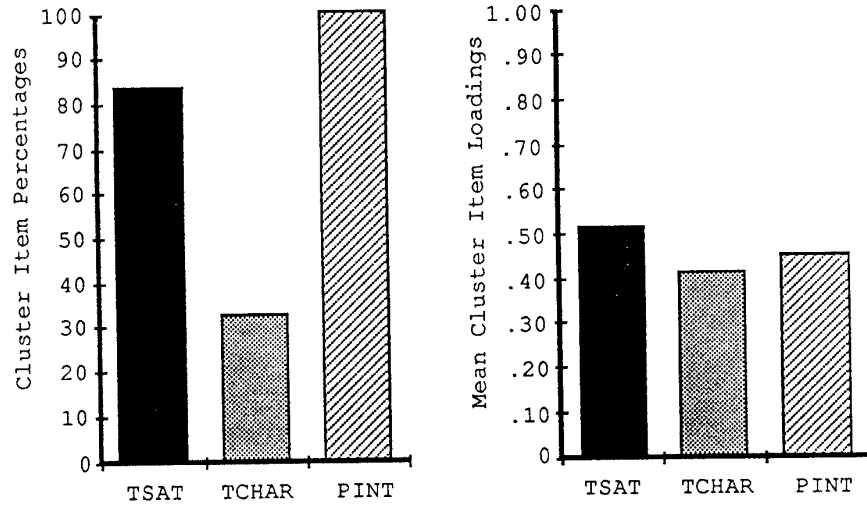


Figure 11. 566X1: Factor 1 cluster item percentages and mean cluster item loadings.

Factor 3, which has an eigenvalue of 1.66 yields 4.5 percent of the variance. We have labelled this factor job importance loading positively on reenlisting (.35), and advice to friend (.42).

Factors 4 and 5 are found in Appendix E-5. they are difficult to interpret, other than to suggest a marked dissatisfaction with the career field in terms of importance.

The trend analysis data is given in Table 18. The item cell means, standard deviations, and frequencies are given in Appendix C-5. The changes were relatively few; 4 (9.1 percent) of the 44 items. The two quadratic shifts (task variability and sense of accomplishment) were both toward a more negative position. In terms of the clusters, the changes were rather evenly distributed: 1 out of 18 (5.6 percent) from TSAT, 2 out of 12 (16.7 percent) from TCHAR, and 1 out of 7 (14.3 percent) from PINT. In general, the attitudes in this specialty how no significantly discernible patterns of changes over time.

566X1: Management Implications

Although the job is quite routine, there appears to be a critical social grouping which assists the worker. While the preponderance of survey attitudes favored the trainees, the number of statistically significant differences was the lowest. It would appear that the training is quite

Table 18

566X1: Trend analysis.

Item	L or Q	F
1. mental effort		
2. satisfied mental effort		
3. physical effort		
4. satisfied physical effort		
5. responsibility		
6. satisfied responsibility		
7. freedom and independence		
8. major decisions		
9. how difficult task will be		
10. satisfied difficulty		
11. task variability	Q	4.26**
12. satisfied task variability		
13. little or no work		
14. perform entire unit of work		
15. satisfied with geographical location		
16. physical conditions do not effect work		
17. time to finish		
18. use what learned in tech school		
19. satisfied with tech school preparation		
20. delay in beginning job trained for		
21. work enthusiasm		
22. interested in learning more about job		
23. availability of tools and equipment	L (-)	4.69**
24. helpfulness of co-workers		
25. satisfied with helpfulness		
26. satisfactory relationships with co-workers		
27. quality of co-workers instruction		
28. instruction from co-workers vs. resident training	L (-)	3.92**
29. co-workers motivated		
30. training level of co-worker		
31. helpfulness of supervisors on job performance		
32. consistency of feedback from supervisors		
33. instruction from supervisor vs. tech school		
34. supervisor lets new people try challenging tasks		
35. job interest		
36. sense of accomplishment from job	Q	4.10**
37. reenlisting		
38. feel about career field today		
39. importance of job to unit		
40. importance of job to AF		
41. advice to friend about AF		
42. advice to friend about career field		
43. other military view job		
44. civilians view job		

* p<.01, ** p<.05

realistic, and the on-site incorporation of the trainee into the work forces provides for a smooth transition. In fact, how it is done in this specialty might provide assistance elsewhere.

AFSC 902X0

The final specialty to be analyzed in terms of Forms A and B is AFSC 902X0 (Medical Services).

The Cronback alphas for Form A, based on an average of 186 usable forms is presented in Appendix C-11. Appendix C-12 presents the Form B alphas, based on 208 usable forms. The Form A mean standardized alpha is .83, with a mean interitem correlation of .11. The Form B mean standardized alpha is .92, with a mean interitem correlation of .20.

The means and standard deviations for Forms A and B are presented in Appendices D-11 and D-12 respectively. The comparisons between Forms A and B are given in Table 19. Of the common 37 item comparisons, 26 (70.2 percent) were statistically significant. Twenty-five (96.1 percent) of the comparisons favored the Form a respondents; only one time to perform (TCHAR) favored the Form B respondents.

The cluster item differences were as follows: 15 out of 18 (83.3 percent) for TSAT, 8 out of 12 (66.7 percent) for TCHAR, and 3 out of 7 (42.9 percent) for PINT. The mean effect sizes were as follows: TSAT - .44, TCHAR - .35, and PINT - .45. These are medium to small effect sizes (Cohen, 1977), with little difference between them. Figure 12 presents the data graphically. While trainee expectations were lowered, there were apparently no major discrepancies once on-site.

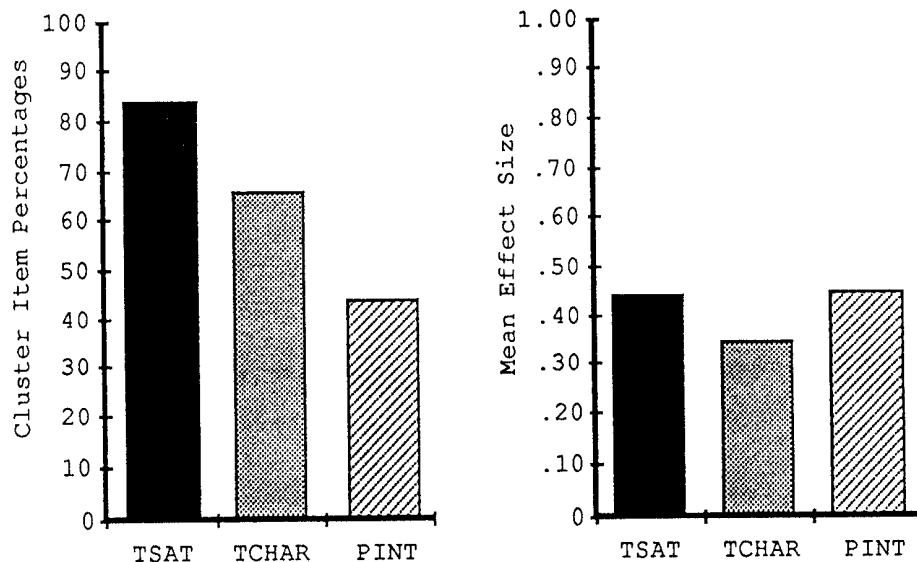


Figure 12. 902X0: Cluster item percentages and mean effect sizes.

Table 19

902X0: Comparison of common Form A and Form B items.

Item	Form A	Form B	t	Effect Size
	X	X		
1. mental effort	4.03	3.84	1.99***	.20
2. physical effort	3.35	3.11	2.61**	.27
3. responsibility	4.10	4.03	.64	
4. freedom and independence	2.84	2.74	1.32	
5. major decisions	2.05	2.06	-.10	
6. how difficult task will be	2.83	2.66	2.33***	.24
7. task variability	3.11	2.60	4.59*	.46
8. little or no work	2.24	2.60	-4.91*	.50
9. perform entire unit of work	2.92	3.38	-4.11*	.42
10. satisfied with geographic location	3.84	4.15	-1.71*	
11. physical conditions do not affect work	3.48	2.29	1.97***	.20
12. time to finish work	3.58	3.55	.44	
13. use what learned in tech school	4.12	3.38	7.20*	.73
14. satisfied with tech school preparation	5.12	4.36	4.72*	.48
15. delay in beginning job trained for	1.94	1.61	3.72*	.38
16. work enthusiasm	3.75	3.30	4.35*	.44
17. interested in learning more about job	4.37	3.91	4.77*	.49
18. availability of tools or equipment	3.64	2.88	5.00*	.51
19. helpfulness of co-workers	4.31	4.15	1.89	
20. satisfactory relationships with co-workers	4.21	4.23	-.28	
21. instruction from co-worker vs. resident training	3.73	3.57	1.88	
22. co-workers motivated	3.96	3.54	4.65*	.48
23. training level of co-workers	4.12	4.02	1.47	
24. helpfulness of supervisors on job performance	4.20	3.75	4.15*	.42
25. feedback consistency of supervisor	3.95	3.43	5.34*	.55
26. instruction from supervisor vs. tech school	3.79	3.42	3.82*	.37
27. supervisor lets new people try challenging jobs	3.61	3.74	-1.38	
28. job interest	5.08	4.47	4.75*	.60
29. sense of accomplishment from job	4.54	3.87	6.65*	.68
30. reenlisting	4.54	3.79	4.91*	.51
31. feel about career field today	4.33	3.45	4.74*	.49
32. importance of job to unit	4.23	4.10	1.32	
33. importance of job to AF	4.33	4.04	2.61**	.27
34. advice to friend about AF	4.12	3.60	5.01*	.52
35. advice to friend about career field	3.88	3.25	5.23*	.55
36. other military view your job	3.65	3.26	3.54*	.37
37. civilians view your job	3.87	3.50	3.42*	.36

* p<.001, ** p<.01, *** p<.05

The factorial solution derived 11 factors yielding 48.7 percent of the variance. Four factors had eigenvalues greater than 1.0, three of which contributed to more than 4.0 percent of the variance. Table 20 presents the data.

The first factor has an eigenvalue of 8.09, yielding 21.9 percent of the variance. Twenty-five (67.6 percent) of the survey items loaded on this factor. In terms of our clusters, TSAT loaded 16 out of 18 items (88.9 percent), with 4 out of 12 (33.3 percent) for TCHAR, and 5 out of 7 (71.4 percent) for PINT. The mean loadings are .58 for TSAT, .40 for TCHAR, and .49 PINT. While TSAT was highest, the differences are not large. Based on the number and magnitude of the loadings, we have again labelled this factor job satisfaction. As in the case of other specialties where there are specific associations within Factor 1 it is with PINT items. Figure 13 presents this data graphically.

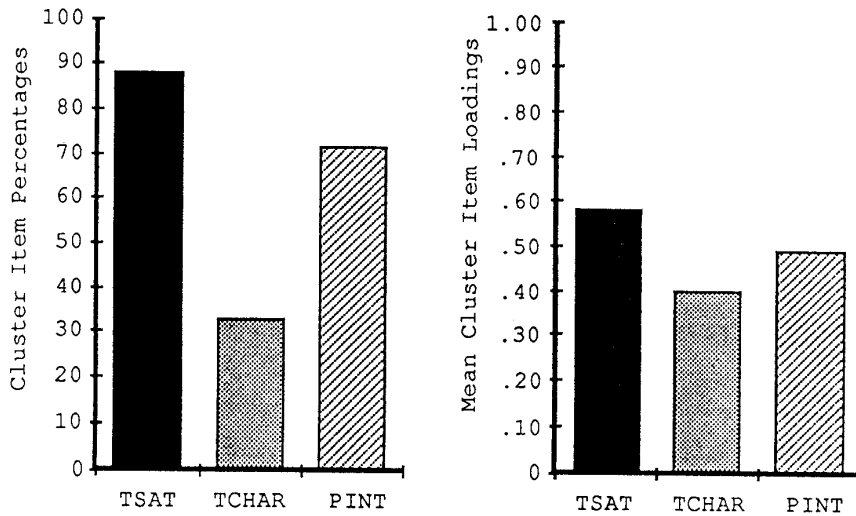


Figure 13. 902X0: Factor 1 cluster item percentages and mean cluster item loadings.

Factor 2, which has an eigenvalue of 2.10 yields 5.7 percent of the variance. This is a rather unusual bi-polar factor loading positively on mental effort (.59), physical effort (.58), responsibility (.44), task difficulty (.52), and negatively on time to finish (-.50). We have labelled this factor job pressure, implying a certain importance to being able to avoid being rushed to perform a demanding task.

Factor 3 which has an eigenvalue of 1.70, yields 4.6 percent of the variance. This factor is also bipolar, loading positively on co-workers helpfulness (.37), helpfulness of supervisors (.54), supervisory feedback (.43), and supervisory instruction (.52). The negative loading is importance to unit (-.37). We have labelled this factor group status, and the negative loading of importance implies a process of identification within the unit to maintain one's integrity in the face of an environment which does not attach

Table 20

902X0: Factor Analysis.

<u>Item</u>	<u>FACTORS</u>		
	<u>1</u>	<u>2</u>	<u>3</u>
1. mental effort	.41	.59*	
2. physical effort		.58*	
3. responsibility	.43	.44*	
4. freedom and independence			
5. major decisions			
6. how difficult task will be		.53*	
7. task variability	.36		
8. little or no work			
9. perform entire unit of work			
10. satisfied with geographic location			
11. physical conditions do not affect work			
12. time to finish work		-.50	
13. use what learned in tech school	.51		
14. satisfied with tech school preparation	.41		
15. delay in beginning job trained for			
16. work enthusiasm	.52		
17. interested in learning more about job	.60		
18. availability of tools or equipment			
19. helpfulness of co-workers	.51		
20. satisfactory relationships with co-workers			.37
21. instruction from co-worker vs. resident training			
22. co-workers motivated	.58		
23. training level of co-workers	.39		.54
24. helpfulness of supervisors on job performance	.52		.43
25. feedback consistency of supervisor	.56		.52
26. instruction from supervisor vs. tech school	.46		
27. supervisor lets new people try challenging jobs	.44		
28. job interest	.77		
29. sense of accomplishment from job	.73		
30. reenlisting	.47		
31. feel about career field today	.66		
32. importance of job to unit	.46		-.37
33. importance of job to AF	.50		
34. advice to friend about AF	.53		
35. advice to friend about career field	.77		
36. other military view your job	.66		
37. civilians view your job	.59		

Eigenvalue	8.09	2.10	1.70
Percentage variance accounted for	21.9	5.7	4.6

*Item has been reflected

importance to the job. While it could be argued that this is more of an on-site problem, it is also true that trainees do not live in an isolated situation, and attitudes and feelings of other Air Force personnel are perceived during schooling.

Factor 4 loads positively on satisfaction with tech preparation (.48), importance to unit (.44), and importance to AF (.36). Again there is a concern with felt importance which is contrasted with expectations in tech school. The data are given in Appendix E-6.

The trend analysis data is given in Table 21. The cell means, standard deviations, and frequencies are in Appendix F-6. Five of the 44 items (11.34 percent) showed a trend, distributed as follows: 1 out of 18 (5.6 percent) from TSAT, 3 out of 12 (25.0 percent) from TCHAR, and 1 out of 7 (14.3 percent) from PINT. Two linear trends (responsibility and advice to friend about AF) were negative, while major decisions was positive. The quadratic shift in freedom and independence was from positive to negative, while the opposite was true for co-worker instruction.

While the number of shift was small, the TCHAR trends suggest that there is a growing frustration on the job. That is, the personnel see themselves as performing a critical series of tasks, but that they are not being accorded the appropriate responsibilities and are being handled as lesser-skilled workers. This supports some of our earlier comments regarding the factorial solutions derived from the data.

902X0: Management Implications

From a management perspective, the morale problem appears to be related to the discrepancy between how the workers perceive their tasks, and the attitudes of others around them. Not unlike some other specialties, the workers like to perceive themselves as professionally competent. All the data suggest that the trainees and workers view the job as important, and indeed seem well trained in terms of the task. But once on-site they find that their perceptions of the task importance and their own skill levels are not reciprocated. This leads to the formation of strong in-group ties to provide reassurance. It may very well be the Rodney Dangerfield syndrome, without the corresponding release of humor.

AFSC 314X4

Since only 29 Form As were received, no comparisons between the Form A and Form B respondents were made. The Form B alphas, based on an average of 212 usable forms, is given in Appendix C-13. The mean standardized alpha was .92, with a mean interaction correlation of .20.

The Form A means and standard deviations are given in Appendix D-13, while those for Form B are given in Appendix D-14. No factorial solution for the combined samples was possible. However, the trend analysis for the Form B items is given in Table 22.

The cell means, standard deviations, and frequencies are given in Appendix F-7. There were 17 (38.6 percent) statistically significant shifts, distributed as follows: 3 out of 18 (16.7 percent) from TSAT, 6 out of 12 (50 percent) from TCHAR, and 3 out of 7 (42.9 percent) from PINT. (Five items

Table 21

902X0: Trend analysis.

Item	L or Q	F
1. mental effort		
2. satisfied mental effort		
3. physical effort		
4. satisfied physical effort		
5. responsibility	L (-)	6.35**
6. satisfied responsibility		
7. freedom and independence	Q	4.16**
8. major decisions	L (+)	6.54**
9. how difficult task will be		
10. satisfied difficulty		
11. task variability		
12. satisfied task variability		
13. little or no work		
14. perform entire unit of work		
15. satisfied with geographical location		
16. physical conditions do not effect work		
17. time to finish		
18. use what learned in tech school		
19. satisfied with tech school preparation		
20. delay in beginning job trained for		
21. work enthusiasm		
22. interested in learning more about job		
23. availability of tools and equipment		
24. helpfulness of co-workers		
25. satisfied with helpfulness		
26. satisfactory relationships with co-workers		
27. quality of co-workers instruction		
28. instruction from co-workers vs. resident training	Q	4.89**
29. co-workers motivated		
30. training level of co-worker		
31. helpfulness of supervisors on job performance		
32. consistency of feedback from supervisors		
33. instruction from supervisor vs. tech school		
34. supervisor lets new people try challenging tasks		
35. job interest		
36. sense of accomplishment from job		
37. reenlisting		
38. feel about career field today		
39. importance of job to unit		
40. importance of job to AF		
41. advice to friend about AF	L (-)	4.42**
42. advice to friend about career field		
43. other military view job		
44. civilians view job		

* p<.01, ** p<.05

Table 22

314X4: Trend analysis.

Item	L or Q	F
1. mental effort		
2. satisfied mental effort	Q	18.27*
3. physical effort		
4. satisfied physical effort	L (-)	7.51*
5. responsibility	L, Q	4.15**, 4.39**
6. satisfied responsibility	Q	11.46*
7. freedom and independence	Q	4.02**
8. major decisions	L, Q	7.00*, 6.31**
9. how difficult task will be	Q	7.75*
10. satisfied difficulty	Q	7.33*
11. task variability		
12. satisfied task variability	Q	6.58**
13. little or no work		
14. perform entire unit of work	L, Q	4.43**, 5.10**
15. satisfied with geographical location		
16. physical conditions do not effect work		
17. time to finish		
18. use what learned in tech school		
19. satisfied with tech school preparation		
20. delay in beginning job trained for	L (+)	7.70*
21. work enthusiasm		
22. interested in learning more about job		
23. availability of tools and equipment	L (-)	4.05**
24. helpfulness of co-workers		
25. satisfied with helpfulness	L (-)	4.11**
26. satisfactory relationships with co-workers		
27. quality of co-workers instruction		
28. instruction from co-workers vs. resident training		
29. co-workers motivated		
30. training level of co-worker	L (-)	5.62**
31. helpfulness of supervisors on job performance		
32. consistency of feedback from supervisors		
33. instruction from supervisor vs. tech school		
34. supervisor lets new people try challenging tasks	Q	12.38*
35. job interest	Q	8.65*
36. sense of accomplishment from job		
37. reenlisting		
38. feel about career field today		
39. importance of job to unit		
40. importance of job to AF		
41. advice to friend about AF	L (-)	9.55*
42. advice to friend about career field		
43. other military view job		
44. civilians view job	Q	5.00**

* p<.01, ** p<.05

were not common to Form A and Form B.) Considering the remaining non-common items, the preponderance of changes are with the task, and they are not favorable.

All five of the linear trends were negative, while the 10 quadratic shifts were from positive to negative. In the two instances of significant linear and quadratic trends, the linear trend for responsibility was positive, while satisfaction with responsibility showed a negative shift. While no specific management implications are given, clearly the more generally negative attitudes, especially with respect to task, should be an issue of concern.

AFSC 427X2

There were no Form As returned for AFSC 427X2, Nondestructive Inspection. There were only 75 Form Bs returned, and the Cronback alphas are given in Appendix C-13. The mean standardized alpha was .90, with a mean interitem correlation of .17. The means and standard deviations for Form B are given in Appendix D-15.

A trend analysis was made of the Form B data. The data is presented in Table 23. We would treat these findings with some caution given the smaller sample size. The cell means, standard deviations, and frequencies are given in Appendix F-8.

There were 6 (13.6 percent) statistically significant changes, all quadratic and all from positive to negative as time in the field increased. What is most unusual is that five of the shifts deal with critical areas in morale and status (feel about career field, importance to unit, importance to AF, advice to friend, and other military view job). All the shifts are from the TSAT cluster, and suggest there are critical periods regarding these variables. If these findings hold up with increased sample size, then further analyses into the specialty are warranted.

Table 23

427X2: Trend analysis.

Item	L or Q	F
1. mental effort		
2. satisfied mental effort		
3. physical effort		
4. satisfied physical effort		
5. responsibility		
6. satisfied responsibility		
7. freedom and independence		
8. major decisions		
9. how difficult task will be		
10. satisfied difficulty		
11. task variability		
12. satisfied task variability		
13. little or no work		
14. perform entire unit of work		
15. satisfied with geographical location	Q	7.63*
16. physical conditions do not effect work		
17. time to finish		
18. use what learned in tech school		
19. satisfied with tech school preparation		
20. delay in beginning job trained for		
21. work enthusiasm		
22. interested in learning more about job		
23. availability of tools and equipment		
24. helpfulness of co-workers		
25. satisfied with helpfulness		
26. satisfactory relationships with co-workers		
27. quality of co-workers instruction		
28. instruction from co-workers vs. resident training		
29. co-workers motivated		
30. training level of co-worker		
31. helpfulness of supervisors on job performance		
32. consistency of feedback from supervisors		
33. instruction from supervisor vs. tech school		
34. supervisor lets new people try challenging tasks		
35. job interest		
36. sense of accomplishment from job		
37. reenlisting		
38. feel about career field today	Q	4.77**
39. importance of job to unit	Q	4.03**
40. importance of job to AF	Q	6.29**
41. advice to friend about AF		
42. advice to friend about career field	Q	7.23*
43. other military view job	Q	5.98**
44. civilians view job		

* p<.01, ** p<.05

V. Conclusions

Perhaps the most obvious conclusion that can be drawn from the data is that there are marked differences between the specialties. No simple set of universalistic conclusions or recommendations can be made; indeed the situation from a management point of view is perhaps the need for differential sets of strategies. While most large organizations do strive to determine commonalities among tasks, the TWEIS data suggests that the differences are pervasive, necessitating new or different modes of organizational analysis sensitive to the issues within each specialty. In the following sections we shall return to this concern.

Summary of Expectations-Realities Differences

The model we used suggested that there are often critical differences between trainee and on-site worker attitudes. Table 24 summarizes these differences across six specialties.

Table 24

Summary of differences between Forms A and B.

Specialty	% Sig. Difference	% favoring trainee	New Effect Sizes		
			TSAT	TCHAR	PINT
811X0	89.2	97.0	.84	.57	.63
645X0	73.0	88.9	.68	.34	.34
622X0	83.8	100.0	.80	.51	.54
426X2	78.4	79.3	.47	.36	.25
566X1	64.9	87.5	.62	.41	.33
902X0	70.2	96.1	.44	.35	.45
Mean	76.6	91.5	.64	.42	.42

While the preponderance of statistically significant differences favored the trainee group, in at least two specialties (AFSC 426X2 and AFSX 902X0) the effect size differences were not large. The two specialties with the most serious morale problems (AFSC 811X0 and AFSC 622X0) had large effect sizes for TSAT (.84 and .80 respectively), with medium effects sizes for TCHAR and PINT. Still, an average effect size of .64 across all specialties for TSAT means that 73 percent of the job realities group was exceeded on the average by the mean (or upper half) of the trainee group.

Effect sizes can also be viewed in a correlational sense. The point biserial correlation can be derived from effect sizes as follows (Cohen, 1977):

$$r_{pb} = d/(d^2+4)^{1/2}$$

This yields a point biserial coefficient for TSAT of .30, which is considered medium sized. In addition r_{pb}^2 is the percent of variance in the cluster score associated with the level of the independent variables. For TSAT this yields 9.0 percent of the variance which is not inconsequential for

training purposes. It should be noted that for AFSC 811X0 and AFSC 622X0, an effect size of .80 or better yields a r_{pb} of .37, which accounts for 13.7 percent of the variance. Again, the saliency and pervasiveness of the TSAT cluster is demonstrated.

Summary of Factor Analyses

The factors derived from the combined Form A and Form B data probably reflect attitudes during the transition point between the end of training and first-year on-site activities. Our major concern was with Factor 1, the principal factor in each specialty. Table 25 summarizes the data.

Among the six specialties considered the average number of times an item from the TSAT cluster loaded on Factor 1 was 5.11, 2.91 for TCHAR, and 5.00 for PINT. The evidence supports the assumption that the TCHAR elements, per se, are not critically related to satisfaction.

We labelled Factor 1 as job satisfaction across all specialties. Given the fact that the highest percentage of loadings and the largest mean loadings were from TSAT, that is not an unreasonable inference. However, for AFSC 811X0 and AFSX 622X0 we described the factor as less differentiated, while the others showed somewhat stronger ties to the PINT cluster.

Table 25

Summary of Factor 1.

Specialty	% of Variance	% Loadings			Mean Loadings		
		TSAT	TCHAR	PINT	TSAT	TCHAR	PINT
811X0	28.7	88.9	75.0	71.4	.63	.47	.48
645X0	20.9	83.3	25.0	85.7	.58	.39	.43
622X0	25.4	94.4	75.0	85.7	.59	.41	.49
426X2	18.7	88.9	16.7	85.7	.51	.47	.51
566X1	20.7	83.3	33.3	100.0	.53	.41	.46
<u>902X0</u>	<u>21.9</u>	<u>88.9</u>	<u>33.3</u>	<u>71.4</u>	<u>.58</u>	<u>.40</u>	<u>.49</u>
Mean	22.72	88.0	43.1	83.3	.57	.43	.48

As added evidence of the similarity of Factor 1, we combined the Form A and Form B data across the six specialties, yielding a generalized Factor 1. The factor structure is given in Table 26. Again, only items loading .35 or above are shown.

Factor 1 had an eigenvalue of 8.23, yielding 22.3 percent of the variance. Twenty-six (70.3 percent) of the items are included, distributed as follows: 16 out of 18 (88.9 percent) for TSAT, 4 out of 12 (33.0 percent) for TCHAR, and 6 out of 7 (85.7 percent) for PINT. The mean loadings are as follows: TSAT - .59, TCHAR - .44, and PINT - .49.

Table 26

Factor 1: All specialties combined.

<u>Item</u>	<u>Factor 1</u>
1. mental effort	.45
2. physical effort	
3. responsibility	.45
4. freedom and independence	
5. major decisions	
6. how difficult task will be	.41
7. task variability	.45
8. little or no work	
9. perform entire unit of work	
10. satisfied with geographic location	
11. physical conditions do not effect work	
12. time to finish work	
13. use what learned in tech school	.50
14. satisfied with tech school preparation	.43
15. delay in beginning job trained for	
16. work enthusiasm	.54
17. interested in learning more about job	.62
18. availability of tools and equipment	
19. helpfulness of co-workers	.49
20. satisfactory relationships with co-workers	.39
21. instruction from co-worker vs. resident training	
22. co-workers motivated	.57
23. training level of co-workers	.45
24. helpfulness of supervisors on job performance	.54
25. consistency of feedback from supervisor	.52
26. instruction from supervisor vs. tech school	.42
27. supervisor lets new people try challenging jobs	.43
28. job interest	.81
29. sense of accomplishment from job	.80
30. reenlisting	.51
31. feel about career field today	.68
32. importance of job to unit	.42
33. importance of job to AF	.44
34. advice to friend about AF	.51
35. advice to friend about career field	.74
36. other military view your job	.60
37. civilians view of your job	.56

eigenvalue	8.23
Percent variance accounted for	22.3

We then derived a mean Factor 1 score based on the item loadings within each specialty. This was accomplished by averaging the actual values for the items designated as significant on the generalized factor (i.e., loading .35 or above). Hence for AFSC 811X0, mental effort on Factor 1 loads .52, while for AFSC 645X0 the mental effort item has a value of .33.

This yielded a Factor 1 mean score within each specialty based on the average of 26 common items. The specific factor scores were as follows: general Factor 1 - .53, AFSC 811X0 - .57, AFSC 645X0 - .51, AFSC 622X0 - .55, AFSC 426X2 - .48, AFSC 566X1 - .49, and AFSC 902X0 - .52. Multiple comparisons between means yielded no statistically significant differences, reaffirming our common label of job satisfaction.

Summary of Trend Analyses

If the factor analyses revolved around at or near the transition period, then the trend analyses determined what happened subsequently. The summary data are given in Table 26.

While less than a fourth of the items (21.3 percent) showed a change, it is interesting to note that TCHAR yields the largest percentage (30.0), followed by TSAT (27.8 percent) and PINT (21.4 percent). The nature, magnitude, and direction of the trends varied from specialty to specialty and have been discussed previously. Nevertheless there is little in the data to characterize any specialty as "pride in one's work". There is evidence, however, that coming to grips with the task itself is a delayed phenomenon. Indeed, measures of job performance may be highly dependent upon timing. Certainly our evidence suggests that early in the tour (0-2 years) the trainee is more concerned with establishing social and emotional support than with the task itself. This means the earliest concerns may be personal-social, rather than task elements.

Table 27

Summary of trend analyses.

Specialty	% Changes	% TSAT	% TCHAR	% PINT
811X0	25.0	33.3	25.0	14.3
645X0	0.0	0.0	0.0	0.0
622X0	20.5	22.2	25.0	14.3
426X2	29.5	27.5	38.5	14.3
566X1	9.1	5.6	16.7	14.3
902X0	11.4	5.6	25.0	14.3
314X4	18.6	16.7	50.0	42.9
427X2	13.6	83.3	0.0	14.3
Mean	21.3	27.8	30.0	21.4

Some General Recommendations

If there is any single commonality in the data, it is that each of the specialties has some unique pattern of findings. The decision may be to

capitalize on these differences and modify training and subsequent job performance, or attempt to minimize or eliminate the idiosyncracies. It is obvious the concerns of field managers in Security Police and Food Services are well founded. Both AFSC 811X0 and AFSC 622X0 are facing some rather severe internal problems which may require draconian measures. We believe that there are at least several common measures which might be taken:

1. More attention must be paid in training to the personal-motivational factors which influence job performance. Simply put, they are a very salient dimension of job satisfaction. Equally important, these attitudes are modifiable. If turnover is critical (Watson, 1985) then the conditions leading to a decision regarding reenlistment must be made positive during the first year.

2. During training repeated observations must be made of developing task criteria and general perceptions of the job itself. While the task elements may be clearly defined in the minds of the training staff, in at least several specialties the data would suggest that criteria for self-evaluation are not being communicated. Knowledge of the domain (i.e., content) does not necessarily imply an equivalent understanding of criteria for success. Given the functional cost of the expectations-realities discrepancy to the gaining organization, it would appear that changes in training which reduce the gap would be cost-effective. These would be essentially preventive in nature.

3. The socialization processes on-site must be explored more fully, possibly through extended field studies. The implication of our findings is that this is not being done successfully; perhaps the rewards for supervisory personnel or others are not sufficient, or they lack training or a perception of the critical issues. Findings which demonstrate eventual worker accommodation and adaptation (or equally important, a growing disenchantment) are indicative of social factors playing a greater role than training and formal organizational supervision. The trend analyses data indicate that the first two years are not homogeneous across specialties with respect to critical periods as well as the nature, direction, and magnitude of the changes.

In brief, some of the problems have been explored; the precise research questions await further effort. That is the ultimate key organizational decision.

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Appendix A

Instructions for Form A

The Air Force Human Resources Laboratory is asking you to take part in a survey of selected airmen to find out what your expectations are concerning your upcoming job. We are very interested in what you expect in terms of your co-workers, your supervisor, your job, and the organizational climate of your new unit. We realize that you have not yet been to your new unit and have not met your new supervisor or your co-workers, but we are interested in what you think you will find when you get to your new job.

We are asking you to provide your name and social security number on this booklet. Please be assured that your responses will be kept strictly confidential and that no supervisors will have access to them. Please answer the questions as truthfully as possible and rest assured that no action will be taken against you regardless of how you answer. We are interested in your truthful feelings.

You may use either pencil or pen to fill out this survey, but please mark your responses neatly so we can know what you are telling us. Please read each question carefully and try to answer all questions. When you have completed both the background section (Section I) and survey section (Section II), you are through and may return the questionnaire to your survey monitor.

Thank you very much for taking time to help the Air Force in this important research effort.

I. Background and Demographic Data

Booklet Number _____

Name _____
(last name) (first name) (MI)

Social Security Number _____ - _____ - _____

1. To which Major Command or Operating Agency will you be assigned?

- ATC AFSC AFLC AAC ESC MAC PACAF
- SPACECM SAC TAC USAFA USAFE OTHER

2. What is your current rank?

- E-1 (Amn Basic)
- E-2 (Amn)
- E-3 (AIC)
- E-4 (SRA)
- E-4 (Sgt)

3. How long have you been in the Air Force?

_____ Years _____ Months

4. To what base will you be assigned? (If you don't know, leave blank)

5. To what unit will you be assigned? (If you don't know, leave blank)

6. What is the highest level of education you have completed?

- Some high school
- High school graduate
- G.E.D.
- technical, vocational, or business school
- Some college
- Bachelor's degree
- Graduate work, but no graduate degree
- Graduate degree

7. What is your primary AFSC? (Ignore prefixes and suffixes)

_____ A F S C _____

8. What is your sex?

- Female
- Male

9. Which best describes your last job before you joined the Air Force?

- Full-time job
- Part-time job
- No job

10. Which statement best describes your parent(s)/guardian(s) military background?

- At least one parent/guardian career military
- At least one parent/guardian served in military (not career)
- No parent(s)/guardian(s) served in military
- Do not know if parent(s)/guardian(s) had any military service

11. What is your age?

_____ Years

12. How many persons-- not including yourself-- are dependent upon you for most or all of their financial support?

13. Were you assigned to your first choice of career fields?

- Yes
- No
- I did not express a preference

14. Were you assigned to your first choice of bases?

- Yes
- No
- I did not express a preference

15. Were you assigned to the geographical area that was your first choice?

- Yes
- No
- I did not express a preference

16. What planes, missiles, or equipment (if any) will you maintain or work with on your new job?

- I do not expect to maintain any planes, missiles, or equipment on my new job
- I do not know whether I will maintain any planes, missiles, or equipment on my new job

PLANES:

- Tankers
- Bombers
- Cargo/utility
- Reconnaissance
- Trainers
- Helicopters
- Fighters

MISSILES:

- Minuteman
- Titan
- Ground Launched Cruise
- Air Launched Cruise
- Air-to-air
- Air-to-ground
- MX

EQUIPMENT:

- AGE
- Motor vehicle
- Communications
- Radar
- Computer
- Other (describe general type of equipment) _____

REMEMBER: We realize that you have not yet been to your new unit and have not met your supervisor or your co-workers; however, we are interested in what you think you will find when you get to your new job.

II. Questionnaire Items

1. How much mental effort will your job require?

- 1. It will require almost no mental effort
- 2. It will require little mental effort
- 3. It will require moderate mental effort
- 4. It will require much mental effort
- 5. It will require a great deal of mental effort

2. How much physical effort will your job require?

- 1. It will require almost no physical effort
- 2. It will require little physical effort
- 3. It will require moderate physical effort
- 4. It will require much physical effort
- 5. It will require a great deal of physical effort

3. How much responsibility will your job allow?

- 1. It will offer almost no opportunity to demonstrate responsibility
- 2. It will offer limited opportunity to demonstrate responsibility
- 3. It will offer moderate opportunity to demonstrate responsibility
- 4. It will offer much opportunity to demonstrate responsibility
- 5. It will offer a great deal opportunity to demonstrate responsibility

4. To what extent will your job provide freedom and independence to do your work as you see fit?

- 1. Will provide virtually no freedom or independence
- 2. Will provide little freedom or independence
- 3. Will provide moderate freedom or independence
- 4. Will provide a large amount of freedom or independence
- 5. Will provide virtually unlimited freedom or independence

5. To what extent will you be allowed to make the major decisions required to perform your job?

- 1. Will make virtually no major decisions
- 2. Will make very few major decisions
- 3. Will make some major decisions
- 4. Will make many major decisions
- 5. Will make virtually all the major decisions

6. How difficult will your daily tasks be?

- 1. They will be generally very easy
- 2. They will be generally easy
- 3. They will be generally average in difficulty
- 4. They will be generally difficult
- 5. They will be generally very difficult

7. How variable (or routine) will your daily tasks be?

- 1. They will be extremely routine
- 2. They will be routine
- 3. They will be neither particularly routine nor variable
- 4. They will be variable
- 5. They will be extremely variable

8. How often will you have little or no work to perform?

- 1. Never; I will always be busy
- 2. Rarely; most of the time I will be busy
- 3. Occasionally; sometimes I will have little to do
- 4. Frequently; many times I will have little to do
- 5. Very often; I'll spend much of my job time with little to do

9. To what extent will your job allow you to perform an entire unit of work?

- 1. Never; I'll work only on isolated parts of entire unit
- 2. Rarely will I perform an entire unit of work
- 3. Sometimes I'll perform an entire unit of work
- 4. Usually I'll perform an entire unit of work
- 5. I'll regularly perform an entire unit of work

10. How satisfied (or dissatisfied) will you be with the geographic location of your new assignment?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Neither satisfied nor dissatisfied
- 4. Satisfied
- 5. Very satisfied

11. How do you expect physical conditions such as heat, cold, noise, lighting, humidity, etc., to affect your work?

- 1. Major effect; physical conditions will be harmful to job effectiveness
- 2. Physical conditions will be uncomfortable
- 3. Physical conditions will be slightly uncomfortable
- 4. Physical conditions will not impact job effectiveness

12. Do you expect to have time to finish your work without rushing?

- 1. No; I will always be rushed and out of time
- 2. Seldom; there won't seem to be enough time
- 3. Sometimes rushing and lack of time will cause problems
- 4. Usually I will have enough time to finish my work
- 5. Always; rushing and lack of time will never be a problem

13. How much will your new assignment use what you learned in tech school?

- 1. I will use almost nothing of what I learned in tech school
- 2. I will use very little of what I learned in tech school
- 3. I will use some of what I learned in tech school
- 4. I will use quite a bit of what I learned in tech school
- 5. I will use most of what I learned in tech school

14. How satisfied (or dissatisfied) are you with the way tech school prepared you for your upcoming job?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

15. When do you expect to begin performing the job for which you have been trained?

- 1. Immediately after arrival at my new unit
- 2. Not immediately, but within one month after arrival at my new unit
- 3. After one to three months at my new unit
- 4. After three months or more at my new unit

16. In your new job, how enthusiastic will you be about going to work each day?

- 1. Very unenthusiastic
- 2. Unenthusiastic
- 3. Neither enthusiastic nor unenthusiastic
- 4. Enthusiastic
- 5. Very enthusiastic

17. How interested will you be to learn more about your new job?

- 1. I will have little or no interest in learning more about my job
- 2. I will be mildly interested in learning more about my job
- 3. I will be moderately interested in learning more about my job
- 4. I will be very interested in learning more about my job
- 5. I will be extremely interested in learning more about my job

18. Will lack, or inadequacy, of tools or equipment affect your job performance?

- 0. I will not work with tools or equipment
- 1. Yes; tools/equipment will almost always be broken or unavailable
- 2. Yes; tools/equipment will often be broken or unavailable
- 3. Tools/equipment will sometimes be broken or unavailable
- 4. No; tools/equipment will usually be available and working
- 5. No; tools/equipment will almost always be available and working

19. How helpful will your co-workers be in helping you understand your job and perform well on the job?

- 1. They will help me very little
- 2. They will help me a little
- 3. They will be moderately helpful
- 4. They will help me quite a bit
- 5. They will be very helpful

20. How will personal relationships with your co-workers be in your new job?

- 1. Very unpleasant
- 2. Unpleasant
- 3. Not particularly pleasant or unpleasant
- 4. Pleasant
- 5. Very pleasant

21. How will the job-related instruction you get FROM CO-WORKERS on your new job compare with the instruction received in tech school?

- 1. Much poorer than I received in tech school
- 2. Somewhat poorer than I received in tech school
- 3. About the same as I received in tech school
- 4. Somewhat better than I received in tech school
- 5. Much better than I received in tech school

22. How motivated to do a good job will the co-workers in your unit be?

- 1. Very unmotivated
- 2. Unmotivated
- 3. Neither particularly motivated nor unmotivated
- 4. Motivated
- 5. Very motivated

23. How well trained do you expect your co-workers to be?

- 1. Almost all my co-workers will be poorly trained
- 2. Many of my co-workers will be poorly trained
- 3. Some of my co-workers will be poorly trained
- 4. Most of my co-workers will be well trained
- 5. All of my co-workers will be well trained

24. How helpful will your immediate supervisor be in assisting you to understand your job and perform well?

- 1. Supervisor will help me very little
- 2. Supervisor will help me a little
- 3. Supervisor will be moderately helpful
- 4. Supervisor will help me quite a bit
- 5. Supervisor will be very helpful

25. How consistent (or inconsistent) will the feedback from your supervisor be on your job performance?

- 1. Very inconsistent
- 2. Inconsistent
- 3. Neither particularly consistent nor inconsistent
- 4. Consistent
- 5. Very consistent

26. How will the job-related instruction you get FROM YOUR SUPERVISOR on your new job compare with instruction you received in tech school?

- 1. Much poorer than I received in tech school
- 2. Somewhat poorer than I received in tech school
- 3. About the same as I received in tech school
- 4. Somewhat better than I received in tech school
- 5. Much better than I received in tech school

27. How will your immediate supervisor feel about letting new people try challenging work assignments?

- 1. They'll never get to try the challenging assignments
- 2. They'll seldom get to try the challenging assignments
- 3. They'll now and then get to try the challenging assignments
- 4. They'll frequently get to try the challenging assignments
- 5. They'll routinely get to try the challenging assignments

28. How interesting will your new job be?

- 1. Very uninteresting
- 2. Dull
- 3. So-so
- 4. Somewhat interesting
- 5. Interesting
- 6. Very interesting

29. What sense of accomplishment will you receive from your new job?

- 1. Very little sense of accomplishment
- 2. Little sense of accomplishment
- 3. Slight sense of accomplishment
- 4. Moderate sense of accomplishment
- 5. Great sense of accomplishment

30. If you had to choose today, how would you feel about reenlisting in the Air Force?

- 1. Would definitely not reenlist in the Air Force
- 2. Would most likely not reenlist in the Air Force
- 3. Unsure, but would lean toward not reenlisting in the Air Force
- 4. Unsure, but would probably reenlist in the Air Force
- 5. Would most likely reenlist in the Air Force
- 6. Would definitely reenlist in the Air Force

31. If you had to choose today, how would you feel about remaining in your current career field?

- 1. Would definitely cross-train out of my career field
- 2. Would most likely cross-train out of my career field
- 3. Unsure, but would probably cross-train out of my career field
- 4. Unsure, but would probably remain in my career field
- 5. Would most likely remain in my career field
- 6. Would definitely remain in my career field

32. How important (or unimportant) to your unit will your new job be?

- 1. Very unimportant
- 2. Unimportant
- 3. Neither particularly important nor unimportant
- 4. Important
- 5. Very important

33. How important (or unimportant) to the Air Force will your new job be?

- 1. Very unimportant
- 2. Unimportant
- 3. Neither particularly important nor unimportant
- 4. Important
- 5. Very important

34. What would you advise a friend considering joining the Air Force?

- 1. Would strongly recommend my friend NOT join
- 2. Would recommend my friend NOT join
- 3. Would offer no advice/ would not care
- 4. Would recommend my friend join
- 5. Would strongly recommend my friend join

35. What would you advise a friend considering entering your career field?

- 1. Would strongly recommend AGAINST entering my career field
- 2. Would recommend AGAINST entering my career field
- 3. Would offer no advice/ would not care
- 4. Would recommend entering my career field
- 5. Would strongly recommend entering my career field

36. How will military people IN OTHER CAREER FIELDS view the status of your job?

- 1. They will view my job status as very low
- 2. They will view my job status as below average
- 3. They will view my job status as average
- 4. They will view my job status as above average
- 5. They will view my job status as very high

37. How will civilian peers view the status of your new job?

- 1. They will view my job status as very low
- 2. They will view my job status as below average
- 3. They will view my job status as average
- 4. They will view my job status as above average
- 5. They will view my job status as very high

Appendix B

INSTRUCTIONS FOR FORM B

The Air Force Human Resources Laboratory is asking you to take part in a survey of selected airmen to find out how you feel about certain aspects of your present job. We are very interested in what your feelings are about your co-workers, your supervisor, your job, and the organizational climate of your unit. This information is not requested just to satisfy the curiosity of a bunch of scientists, but is needed to help Air Force managers bridge the gap between what new airmen expect to find on their jobs and what they actually do find. Your answers will help us.

We are asking you to provide your name and social security number on this booklet. Please be assured that your responses will be kept strictly confidential and that no supervisors will have access to them. Please answer the questions as truthfully as possible and rest assured that no action will be taken against you regardless of how you answer. We are interested in your truthful feelings.

You may use either pencil or pen to fill out this survey, but please mark your responses neatly so we can know what you are telling us. Please read each question carefully and try to answer all questions. When you have completed both the background section (Section I) and survey section (Section II), you are through and may return the questionnaire to your survey monitor.

Thank you very much for taking time to help the Air Force in this important research effort.

I. Background Information Booklet Number _____

Name _____ (last) _____ (first) _____ (MI)

Social Security Number _____ - _____ - _____

1. To which Major Command or Operating Agency are you currently assigned?

- ___ ATC ___ AFSC ___ AFLC ___ AAC ___ ESC ___ MAC ___ PACAF
___ SPACECM ___ SAC ___ TAC ___ USAFA ___ USAFE ___ OTHER

2. What is your current rank?

- ___ E-1 (Amn Basic)
___ E-2 (Amn)
___ E-3 (A1C)
___ E-4 (SRA)
___ E-4 (Sgt)

3. How long have you been in the Air Force?

_____ Years _____ Months

4. To what base are you presently assigned? (Include the state or country your base is located in.)

5. How long have you been at your present base?

_____ Years _____ Months

6. To what unit are you presently assigned?

7. How long have you been in your present job?

_____ Years _____ Months

8. What is the highest level of education you have completed?

- Some high school
- High school
- G.E.D.
- Technical, vocational, or business school
- Some college
- Bachelor's degree
- Graduate work, but no graduate degree
- Graduate degree

9. What is your primary AFSC? (Ignore prefixes and suffixes)

_____ A F S C _____

10. What is your sex?

- Female
- Male

11. Which best describes your last job before you joined the Air Force?

- Full-time job
- Part-time job
- No job

12. Which statement best describes your parent(s)/guardian(s) military background?

- At least one parent/guardian career military
- At least one parent/guardian served in military (not career)
- No parent(s)/guardian(s) members served in military
- Do not know if parent(s)/guardian(s) had any military service

13. What is your age?

_____ Years

14. How many persons--not including yourself--are dependent upon you for most or all of their financial support?

15. Is your immediate supervisor military or civilian?

_____ Civilian
_____ Military

16. What rank or grade is your immediate supervisor?

MILITARY

CIVILIAN

_____ Amn, AlC, or SRA
_____ Sgt
_____ SSgt
_____ TSgt
_____ MSgt
_____ SMSgt
_____ CMSgt
_____ Officer

_____ GS-2 or GS-3
_____ GS-4 or GS-5
_____ GS-6 or GS-7
_____ GS-8, GS-9, or GS-10
_____ GS-11 or GS-12
_____ GS/GM-13 or higher

_____ Other (such as other branch of service, foreign nationals, etc.)

17. Is your immediate supervisor in the same career field you are in?

_____ Yes
_____ No
_____ I do not know

18. Is your immediate supervisor male or female?

_____ Male
_____ Female

19. Are you assigned to your first choice of career fields?

_____ Yes
_____ No
_____ I did not express a preference

20. Are you assigned to your first choice of bases?

_____ Yes
_____ No
_____ I did not express a preference

21. Are you assigned to the geographical area that was your first choice?

_____ Yes
_____ No
_____ I did not express a preference

22. If you are in maintenance, where do you perform your job?

- I am not in a maintenance job
- Flightline
- Base-level shop
- Intermediate shop
- Depot

23. Is your organization operating under the POMO, MEMO, or COMO maintenance concept?

- Not in maintenance organization
- Yes
- No
- I do not know

24. How stable are your work hours?

- Highly stable -- routine 8 hour days
- Very stable -- nearly routine 8 hour days
- Moderately stable -- shift work which periodically changes
- Slightly unstable -- irregular working hours
- Highly unstable -- frequently TDY, frequently on call, frequent shift changes

25. Which choice best describes your work schedule?

- Shift work, usually days
- Shift work, usually swing shift
- Shift work, usually nights
- Shift work, rotating
- Day work only
- Crew schedule
- Other

26. What planes, missiles, or equipment do you maintain or work with on your present job?

I do not maintain planes, missiles, or equipment on my present job.

- | PLANES: | MISSILES: | EQUIPMENT: |
|---|---|---|
| <input type="checkbox"/> Tankers | <input type="checkbox"/> Minuteman | <input type="checkbox"/> AGE |
| <input type="checkbox"/> Bombers | <input type="checkbox"/> Titan | <input type="checkbox"/> Motor vehicle |
| <input type="checkbox"/> Fighters | <input type="checkbox"/> Ground Launched Cruise | <input type="checkbox"/> Communications |
| <input type="checkbox"/> Cargo/utility | <input type="checkbox"/> Air Launched Cruise | <input type="checkbox"/> Radar |
| <input type="checkbox"/> Reconnaissance | <input type="checkbox"/> Air-to-air | <input type="checkbox"/> Computer |
| <input type="checkbox"/> Trainers | <input type="checkbox"/> Air-to-ground | <input type="checkbox"/> Other (Describe general type of equipment) _____ |
| <input type="checkbox"/> Helicopters | <input type="checkbox"/> MX | |

II. Questionnaire Items

1. How much mental effort does your job require?

- 1. Almost no mental effort
- 2. Little mental effort
- 3. Moderate mental effort
- 4. Much mental effort
- 5. A great deal of mental effort

2. How satisfied (or dissatisfied) are you with the mental effort required in your job?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

3. How much physical effort is required in your present job?

- 1. Almost no physical effort
- 2. Little physical effort
- 3. Moderate physical effort
- 4. Much physical effort
- 5. A great deal of physical effort

4. How satisfied (or dissatisfied) are you with the physical effort required in your job?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

5. How much responsibility does your job call for?

- 1. No responsibility
- 2. Limited responsibility
- 3. Moderate responsibility
- 4. Much responsibility
- 5. A great deal of responsibility

6. How satisfied (or dissatisfied) are you with the responsibility called for in your job?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

7. To what extent does your job provide freedom and independence to do your work as you see fit?

- 1. Virtually no freedom or independence
- 2. Little freedom or independence
- 3. Moderate freedom or independence
- 4. A large amount of freedom or independence
- 5. Virtually unlimited freedom or independence

8. To what extent are you allowed to make the major decisions required to perform your job?

- 1. Virtually no major decisions
- 2. Very few major decisions
- 3. Some major decisions
- 4. Many major decisions
- 5. Virtually all the major decisions

9. How difficult (or easy) are the tasks you perform in your job?

- 1. Generally very easy
- 2. Generally easy
- 3. Average in difficulty
- 4. Generally difficult
- 5. Generally very difficult

10. How satisfied (or dissatisfied) are you with the ease/difficulty of the daily tasks you perform?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

11. How routine (or variable) are your daily tasks?

- 1. Extremely routine
- 2. Routine
- 3. Neither particularly routine nor variable
- 4. Variable
- 5. Extremely variable

12. How satisfied (or dissatisfied) are you with the variability of the tasks you perform?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

13. How often do you experience times when you have little or no work to do?

- 1. Never; I am always busy on the job
- 2. Rarely; most of the time I am busy
- 3. Occasionally; sometimes I have little to do
- 4. Frequently; many times I have little to do
- 5. Very often; I spend much of my job time with little to do

14. To what extent does your job allow you to perform an entire unit of work?

- 1. Never; I work only on isolated parts of entire unit
- 2. Rarely perform an entire unit
- 3. Sometimes perform an entire unit
- 4. Usually perform an entire unit
- 5. Regularly perform an entire unit

15. How satisfied (or dissatisfied) are you with the geographic location to which you are assigned?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

16. How do physical conditions such as heat, cold, noise, humidity, lighting, etc., affect your work?

- 1. Major effect; physical conditions are harmful to job effectiveness
- 2. Physical conditions are uncomfortable
- 3. Physical conditions are slightly uncomfortable
- 4. Physical conditions do not impact job effectiveness

17. Do you have time to finish your work without rushing?

- 1. No; I am always rushed and out of time
- 2. Seldom; there doesn't seem to be enough time
- 3. Sometimes rushing and lack of time cause problems
- 4. Usually I have enough time to finish my work
- 5. Always; rushing and lack of time are never problems

18. How well does your present job use what you learned in tech school?

- 1. I use almost nothing of what I learned in tech school
- 2. I use very little of what I learned in tech school
- 3. I use some of what I learned in tech school
- 4. I use quite a bit of what I learned in tech school
- 5. I use most of what I learned in tech school

19. How satisfied (or dissatisfied) are you with how tech school prepared you for your present job?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

20. When did you begin performing the job for which you were trained?

- 1. Immediately after arrival at my new unit
- 2. Not immediately, but within one month after arrival
- 3. After one to three months at my new unit
- 4. After three months or more at my new unit
- 5. Have not yet begun performing job for which I was trained

21. How enthusiastic are you about going to work each day?

- 1. Very unenthusiastic
- 2. Unenthusiastic
- 3. Neither enthusiastic nor unenthusiastic
- 4. Enthusiastic
- 5. Very enthusiastic

22. How interested are you to learn more about your job?

- 1. Little or no interest in learning more
- 2. Mildly interested in learning more
- 3. Moderately interested in learning more
- 4. Very interested in learning more
- 5. Extremely interested in learning more

23. Does lack, or inadequacy, of tools or equipment affect your job performance?

- 0. Do not work with tools or equipment
- 1. Yes; tools/equipment are almost always broken or unavailable
- 2. Yes; tools/equipment are often broken or unavailable
- 3. Tools/equipment are sometimes broken or unavailable
- 4. No; tools/equipment are usually available and working
- 5. No; tools/equipment are almost always available and working

24. How helpful have your co-workers been in helping you understand your job and perform well on the job?

- 1. They have helped me very little
- 2. They have helped me a little
- 3. They have been moderately helpful
- 4. They have helped me quite a bit
- 5. They have been very helpful

25. How satisfied (or dissatisfied) are you with the helpfulness of your co-workers?

- 1. Very dissatisfied
- 2. Dissatisfied
- 3. Somewhat dissatisfied
- 4. Neither satisfied nor dissatisfied
- 5. Somewhat satisfied
- 6. Satisfied
- 7. Very satisfied

26. How are your personal relationships with co-workers on the job?

- 1. Very unpleasant
- 2. Unpleasant
- 3. Not particularly pleasant or unpleasant
- 4. Pleasant
- 5. Very pleasant

27. How would you rate the quality of job-related instruction you have received from your co-workers?

- 1. Very poor
- 2. Poor
- 3. Below average
- 4. Average
- 5. Above average
- 6. Good
- 7. Very good

28. How does the job-related instruction you get FROM CO-WORKERS compare to the instruction you received in resident training?

- 1. Much poorer than I received in resident training
- 2. Somewhat poorer than I received in resident training
- 3. About the same as I received in resident training
- 4. Somewhat better than I received in resident training
- 5. Much better than I received in resident training

29. How motivated are the co-workers in your unit toward doing a good job?
- 1. Very unmotivated
 - 2. Generally unmotivated
 - 3. Neither particularly motivated nor unmotivated
 - 4. Generally motivated
 - 5. Very motivated
30. Which describes the level of training of your co-workers?
- 1. Almost all my co-workers are poorly trained
 - 2. Many of my co-workers are poorly trained
 - 3. Some of my co-workers are poorly trained
 - 4. Most of my co-workers are well trained
 - 4. All of my co-workers are well trained
31. How helpful is your immediate supervisor in helping you understand your job and perform well?
- 1. Helps me very little
 - 2. Helps me little
 - 3. Moderately helpful
 - 4. Helps me quite a bit
 - 5. Very helpful
32. How consistent (or inconsistent) is the feedback from your supervisor on your job performance?
- 1. Very inconsistent
 - 2. Inconsistent
 - 3. Neither particularly consistent nor inconsistent
 - 4. Consistent
 - 5. Very consistent
33. How does the job-related instruction you receive FROM YOUR SUPERVISOR compare with instruction you received in tech school?
- 1. Much poorer than I received in tech school
 - 2. Somewhat poorer than I received in tech school
 - 3. About the same as I received in tech school
 - 4. Somewhat better than I received in tech school
 - 5. Much better than I received in tech school
34. How does your immediate supervisor feel about letting new people try challenging work assignments?
- 1. New people never get to try the challenging assignments
 - 2. New people seldom get to try the challenging assignments
 - 3. New people get to try challenging assignments now and then
 - 4. New people frequently get to try the challenging assignments
 - 5. New people routinely get to try the challenging assignments

35. How interesting is your present job?

- 1. Very uninteresting
- 2. Dull
- 3. So-So
- 4. Somewhat interesting
- 5. Interesting
- 6. Very interesting

36. What sense of accomplishment do you get from your job?

- 1. Very little sense of accomplishment
- 2. Little sense of accomplishment
- 3. Slight sense of accomplishment
- 4. Moderate sense of accomplishment
- 5. Great sense of accomplishment

37. If you had to choose today, how would you feel about reenlisting in the Air Force?

- 1. Would definitely not reenlist in the Air Force
- 2. Would most likely not reenlist in the Air Force
- 3. Unsure, but would lean toward not reenlisting in the Air Force
- 4. Unsure, but would probably reenlist in the Air Force
- 5. Would most likely reenlist in the Air Force
- 6. Would definitely reenlist in the Air Force

38. If you had to choose today, how would you feel about remaining in your present career field?

- 1. Would definitely cross-train out of my career field
- 2. Would most likely cross-train out of my career field
- 3. Unsure, but would probably cross-train out of my career field
- 4. Unsure, but would probably remain in my career field
- 5. Would most likely remain in my career field
- 6. Would definitely remain in my career field

39. How important (or unimportant) to your unit is your job?

- 1. Very unimportant
- 2. Unimportant
- 3. Neither particularly important nor unimportant
- 4. Important
- 5. Very important

40. How important (or unimportant) to the Air Force is your job?

- 1. Very unimportant
- 2. Unimportant
- 3. Neither particularly important nor unimportant
- 4. Important
- 5. Very important

41. What advice would you give a friend who is considering joining the Air Force?

- 1. Would strongly recommend my friend NOT join
- 2. Would recommend my friend NOT join
- 3. Would offer no advice/would not care
- 4. Would recommend my friend join
- 5. Would strongly recommend my friend join

42. What advice would you give a friend who is considering entering your career field?

- 1. Would strongly recommend AGAINST entering my career field
- 2. Would recommend AGAINST entering my career field
- 3. Would offer no advice/ would not care
- 4. Would recommend entering my career field
- 5. Would strongly recommend entering my career field

43. How do military people IN OTHER CAREER FIELDS view the status of your job?

- 1. They view my job status as very low
- 2. They view my job status as below average
- 3. They view my job status as average
- 4. They view my job status as above average
- 5. They view my job status as very high

44. How do civilian peers view the status of your job?

- 1. They view my job status as very low
- 2. They view my job status as below average
- 3. They view my job status as average
- 4. They view my job status as above average
- 5. They view my job status as very high

Appendix C-1

811X0: Form A alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.84
2. physical effort	.84
3. responsibility	.84
4. freedom and independence	.85
5. major decisions	.85
6. how difficult task will be	.84
7. task variability	.84
8. little or no work	.85
9. perform entire unit of work	.85
10. satisfied with geographic location	.84
11. physical conditions do not effect work	.84
12. time to finish work	.84
13. use what learned in tech school	.84
14. satisfied with tech school preparation	.84
15. delay in beginning job trained for	.85
16. work enthusiasm	.85
17. interested in learning more about job	.84
18. availability of tools and equipment	.86
19. helpfulness of co-workers	.84
20. satisfactory relationships with co-workers	.84
21. instruction from co-worker vs resident training	.85
22. co-workers motivated	.84
23. training level of co-workers	.84
24. helpfulness of supervisors on job performance	.84
25. consistency of feedback from supervisor	.84
26. instruction from supervisor vs tech school	.85
27. supervisor lets new people try challenging jobs	.84
28. job interest	.84
29. sense of accomplishment from job	.84
30. reenlisting	.84
31. feel about career field today	.84
32. importance of job to unit	.83
33. importance of job to AF	.84
34. advice to friend about AF	.84
35. advice to friend about career field	.84
36. other military view your job	.84
37. civilians view your job	.84

Appendix C-2

811X0: Form B alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.92
2. satisfied mental effort	.92
3. physical effort	.92
4. satisfied physical effort	.92
5. responsibility	.92
6. satisfied responsibility	.92
7. freedom and independence	.92
8. major decisions	.92
9. how difficult task will be	.92
10. satisfied difficulty	.92
11. task variability	.92
12. satisfied task variability	.92
13. little or no work	.93
14. perform entire unit of work	.92
15. satisfied with geographic location	.92
16. physical conditions do not effect work	.92
17. time to finish	.92
18. use what learned in tech school	.92
19. satisfied with tech school preparation	.92
20. delay in beginning job trained for	.92
21. work enthusiasm	.92
22. interested in learning more about job	.92
23. availability of tools and equipment	.92
24. helpfulness of co-workers	.92
25. satisfied with helpfulness	.92
26. satisfactory relationships with co-workers	.92
27. quality of co-worker instruction	.92
28. instruction from co-workers vs resident training	.92
29. co-workers motivated	.92
30. training level of co-workers	.92
31. helpfulness of supervisors on job performance	.92
32. consistency of feedback from supervisors	.92
33. instruction from supervisor vs tech school	.92
34. supervisor lets new people try challenging tasks	.92
35. job interest	.92
36. sense of accomplishment from job	.92
37. reenlisting	.92
38. feel about career field today	.92
39. importance of job to unit	.92
40. importance of job to AF	.92
41. advice to friend about AF	.92
42. advice to friend about career field	.92
43. other military view job	.92
44. civilians view job	.92

Appendix C-3

645X0: Form A alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.82
2. physical effort	.82
3. responsibility	.82
4. freedom and independence	.82
5. major decisions	.82
6. how difficult task will be	.82
7. task variability	.82
8. little or no work	.83
9. perform entire unit of work	.82
10. satisfied with geographic location	.82
11. physical conditions do not effect work	.82
12. time to finish work	.82
13. use what learned in tech school	.82
14. satisfied with tech school preparation	.82
15. delay in beginning job trained for	.83
16. work enthusiasm	.82
17. interested in learning more about job	.82
18. availability of tools and equipment	.84
19. helpfulness of co-workers	.82
20. satisfactory relationships with co-workers	.82
21. instruction from co-worker vs resident training	.82
22. co-workers motivated	.82
23. training level of co-workers	.82
24. helpfulness of supervisors on job performance	.82
25. consistency of feedback from supervisor	.82
26. instruction from supervisor vs tech school	.82
27. supervisor lets new people try challenging jobs	.82
28. job interest	.81
29. sense of accomplishment from job	.81
30. reenlisting	.82
31. feel about career field today	.81
32. importance of job to unit	.82
33. importance of job to AF	.81
34. advice to friend about AF	.82
35. advice to friend about career field	.81
36. other military view your job	.82
37. civilians view your job	.81

Appendix C-4

645X0: Form B alphas.

Item	Alpha
1. mental effort	.90
2. satisfied mental effort	.90
3. physical effort	.91
4. satisfied physical effort	.90
5. responsibility	.90
6. satisfied responsibility	.90
7. freedom and independence	.90
8. major decisions	.90
9. how difficult task will be	.90
10. satisfied difficulty	.90
11. task variability	.90
12. satisfied task variability	.90
13. little or no work	.91
14. perform entire unit of work	.90
15. satisfied with geographic location	.91
16. physical conditions do not effect work	.90
17. time to finish	.90
18. use what learned in tech school	.90
19. satisfied with tech school preparation	.91
20. delay in beginning job trained for	.90
21. work enthusiasm	.90
22. interested in learning more about job	.91
23. availability of tools and equipment	.90
24. helpfulness of co-workers	.90
25. satisfied with helpfulness	.90
26. satisfactory relationships with co-workers	.90
27. quality of co-worker instruction	.90
28. instruction from co-workers vs resident training	.90
29. co-workers motivated	.90
30. training level of co-workers	.90
31. helpfulness of supervisors on job performance	.90
32. consistency of feedback from supervisors	.90
33. instruction from supervisor vs tech school	.90
34. supervisor lets new people try challenging tasks	.90
35. job interest	.90
36. sense of accomplishment from job	.90
37. reenlisting	.90
38. feel about career field today	.90
39. importance of job to unit	.90
40. importance of job to AF	.90
41. advice to friend about AF	.90
42. advice to friend about career field	.90
43. other military view job	.90
44. civilians view job	.90

Appendix C-5

622X0: Form A alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.86
2. physical effort	.86
3. responsibility	.86
4. freedom and independence	.86
5. major decisions	.86
6. how difficult task will be	.86
7. task variability	.86
8. little or no work	.86
9. perform entire unit of work	.86
10. satisfied with geographic location	.85
11. physical conditions do not effect work	.86
12. time to finish work	.86
13. use what learned in tech school	.86
14. satisfied with tech school preparation	.86
15. delay in beginning job trained for	.86
16. work enthusiasm	.85
17. interested in learning more about job	.85
18. availability of tools and equipment	.86
19. helpfulness of co-workers	.85
20. satisfactory relationships with co-workers	.86
21. instruction from co-worker vs resident training	.86
22. co-workers motivated	.85
23. training level of co-workers	.86
24. helpfulness of supervisors on job performance	.85
25. consistency of feedback from supervisor	.86
26. instruction from supervisor vs tech school	.86
27. supervisor lets new people try challenging jobs	.86
28. job interest	.85
29. sense of accomplishment from job	.85
30. reenlisting	.85
31. feel about career field today	.85
32. importance of job to unit	.85
33. importance of job to AF	.85
34. advice to friend about AF	.85
35. advice to friend about career field	.85
36. other military view your job	.86
37. civilians view your job	.85

Appendix C-6

622X0: Form B alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.92
2. satisfied mental effort	.91
3. physical effort	.92
4. satisfied physical effort	.92
5. responsibility	.92
6. satisfied responsibility	.91
7. freedom and independence	.92
8. major decisions	.92
9. how difficult task will be	.92
10. satisfied difficulty	.91
11. task variability	.92
12. satisfied task variability	.91
13. little or no work	.92
14. perform entire unit of work	.92
15. satisfied with geographic location	.92
16. physical conditions do not effect work	.92
17. time to finish	.92
18. use what learned in tech school	.92
19. satisfied with tech school preparation	.92
20. delay in beginning job trained for	.92
21. work enthusiasm	.91
22. interested in learning more about job	.91
23. availability of tools and equipment	.92
24. helpfulness of co-workers	.92
25. satisfied with helpfulness	.92
26. satisfactory relationships with co-workers	.92
27. quality of co-worker instruction	.91
28. instruction from co-workers vs resident training	.92
29. co-workers motivated	.91
30. training level of co-workers	.92
31. helpfulness of supervisors on job performance	.92
32. consistency of feedback from supervisors	.92
33. instruction from supervisor vs tech school	.92
34. supervisor lets new people try challenging tasks	.92
35. job interest	.91
36. sense of accomplishment from job	.91
37. reenlisting	.92
38. feel about career field today	.91
39. importance of job to unit	.92
40. importance of job to AF	.92
41. advice to friend about AF	.91
42. advice to friend about career field	.91
43. other military view job	.92
44. civilians view job	.92

Appendix C-7

426X2: Form A alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.84
2. physical effort	.84
3. responsibility	.84
4. freedom and independence	.84
5. major decisions	.84
6. how difficult task will be	.84
7. task variability	.84
8. little or no work	.85
9. perform entire unit of work	.84
10. satisfied with geographic location	.84
11. physical conditions do not effect work	.84
12. time to finish work	.84
13. use what learned in tech school	.84
14. satisfied with tech school preparation	.83
15. delay in beginning job trained for	.85
16. work enthusiasm	.84
17. interested in learning more about job	.84
18. availability of tools and equipment	.84
19. helpfulness of co-workers	.84
20. satisfactory relationships with co-workers	.84
21. instruction from co-worker vs resident training	.84
22. co-workers motivated	.84
23. training level of co-workers	.84
24. helpfulness of supervisors on job performance	.84
25. consistency of feedback from supervisor	.84
26. instruction from supervisor vs tech school	.84
27. supervisor lets new people try challenging jobs	.83
28. job interest	.84
29. sense of accomplishment from job	.84
30. reenlisting	.83
31. feel about career field today	.83
32. importance of job to unit	.84
33. importance of job to AF	.84
34. advice to friend about AF	.84
35. advice to friend about career field	.84
36. other military view your job	.84
37. civilians view your job	.84

Appendix C-8

426X2: Form B alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.91
2. satisfied mental effort	.91
3. physical effort	.91
4. satisfied physical effort	.91
5. responsibility	.91
6. satisfied responsibility	.91
7. freedom and independence	.91
8. major decisions	.91
9. how difficult task will be	.91
10. satisfied difficulty	.91
11. task variability	.91
12. satisfied task variability	.91
13. little or no work	.91
14. perform entire unit of work	.91
15. satisfied with geographic location	.92
16. physical conditions do not effect work	.92
17. time to finish	.91
18. use what learned in tech school	.91
19. satisfied with tech school preparation	.91
20. delay in beginning job trained for	.91
21. work enthusiasm	.91
22. interested in learning more about job	.91
23. availability of tools and equipment	.91
24. helpfulness of co-workers	.91
25. satisfied with helpfulness	.91
26. satisfactory relationships with co-workers	.91
27. quality of co-worker instruction	.91
28. instruction from co-workers vs resident training	.91
29. co-workers motivated	.91
30. training level of co-workers	.91
31. helpfulness of supervisors on job performance	.91
32. consistency of feedback from supervisors	.91
33. instruction from supervisor vs tech school	.91
34. supervisor lets new people try challenging tasks	.91
35. job interest	.91
36. sense of accomplishment from job	.91
37. reenlisting	.91
38. feel about career field today	.91
39. importance of job to unit	.91
40. importance of job to AF	.91
41. advice to friend about AF	.91
42. advice to friend about career field	.91
43. other military view job	.91
44. civilians view job	.91

Appendix C-9

566X1: Form A alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.84
2. physical effort	.85
3. responsibility	.84
4. freedom and independence	.84
5. major decisions	.85
6. how difficult task will be	.85
7. task variability	.85
8. little or no work	.86
9. perform entire unit of work	.84
10. satisfied with geographic location	.84
11. physical conditions do not effect work	.84
12. time to finish work	.84
13. use what learned in tech school	.84
14. satisfied with tech school preparation	.84
15. delay in beginning job trained for	.85
16. work enthusiasm	.85
17. interested in learning more about job	.84
18. availability of tools and equipment	.84
19. helpfulness of co-workers	.84
20. satisfactory relationships with co-workers	.84
21. instruction from co-worker vs resident training	.84
22. co-workers motivated	.84
23. training level of co-workers	.84
24. helpfulness of supervisors on job performance	.84
25. consistency of feedback from supervisor	.84
26. instruction from supervisor vs tech school	.84
27. supervisor lets new people try challenging jobs	.84
28. job interest	.83
29. sense of accomplishment from job	.84
30. reenlisting	.84
31. feel about career field today	.84
32. importance of job to unit	.84
33. importance of job to AF	.84
34. advice to friend about AF	.84
35. advice to friend about career field	.84
36. other military view your job	.85
37. civilians view your job	.84

Appendix C-10

566X1: Form B alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.90
2. satisfied mental effort	.90
3. physical effort	.90
4. satisfied physical effort	.90
5. responsibility	.90
6. satisfied responsibility	.90
7. freedom and independence	.90
8. major decisions	.90
9. how difficult task will be	.90
10. satisfied difficulty	.90
11. task variability	.90
12. satisfied task variability	.90
13. little or no work	.91
14. perform entire unit of work	.90
15. satisfied with geographic location	.91
16. physical conditions do not effect work	.90
17. time to finish	.90
18. use what learned in tech school	.90
19. satisfied with tech school preparation	.90
20. delay in beginning job trained for	.91
21. work enthusiasm	.90
22. interested in learning more about job	.90
23. availability of tools and equipment	.90
24. helpfulness of co-workers	.90
25. satisfied with helpfulness	.90
26. satisfactory relationships with co-workers	.90
27. quality of co-worker instruction	.90
28. instruction from co-workers vs resident training	.90
29. co-workers motivated	.90
30. training level of co-workers	.90
31. helpfulness of supervisors on job performance	.90
32. consistency of feedback from supervisors	.90
33. instruction from supervisor vs tech school	.90
34. supervisor lets new people try challenging tasks	.90
35. job interest	.90
36. sense of accomplishment from job	.90
37. reenlisting	.90
38. feel about career field today	.90
39. importance of job to unit	.90
40. importance of job to AF	.90
41. advice to friend about AF	.90
42. advice to friend about career field	.90
43. other military view job	.90
44. civilians view job	.90

Appendix C-11

902X0: Form A alphas.

Item	Alpha
1. mental effort	.82
2. physical effort	.82
3. responsibility	.82
4. freedom and independence	.82
5. major decisions	.82
6. how difficult task will be	.82
7. task variability	.82
8. little or no work	.83
9. perform entire unit of work	.82
10. satisfied with geographic location	.82
11. physical conditions do not effect work	.82
12. time to finish work	.82
13. use what learned in tech school	.82
14. satisfied with tech school preparation	.82
15. delay in beginning job trained for	.83
16. work enthusiasm	.82
17. interested in learning more about job	.81
18. availability of tools and equipment	.83
19. helpfulness of co-workers	.82
20. satisfactory relationships with co-workers	.82
21. instruction from co-worker vs resident training	.82
22. co-workers motivated	.82
23. training level of co-workers	.82
24. helpfulness of supervisors on job performance	.82
25. consistency of feedback from supervisor	.82
26. instruction from supervisor vs tech school	.82
27. supervisor lets new people try challenging jobs	.82
28. job interest	.81
29. sense of accomplishment from job	.81
30. reenlisting	.82
31. feel about career field today	.80
32. importance of job to unit	.81
33. importance of job to AF	.81
34. advice to friend about AF	.81
35. advice to friend about career field	.81
36. other military view your job	.81
37. civilians view your job	.81

Appendix C-12

902X0: Form B alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.92
2. satisfied mental effort	.92
3. physical effort	.92
4. satisfied physical effort	.92
5. responsibility	.92
6. satisfied responsibility	.92
7. freedom and independence	.92
8. major decisions	.92
9. how difficult task will be	.92
10. satisfied difficulty	.92
11. task variability	.92
12. satisfied task variability	.92
13. little or no work	.92
14. perform entire unit of work	.92
15. satisfied with geographic location	.92
16. physical conditions do not effect work	.92
17. time to finish	.92
18. use what learned in tech school	.92
19. satisfied with tech school preparation	.92
20. delay in beginning job trained for	.92
21. work enthusiasm	.92
22. interested in learning more about job	.92
23. availability of tools and equipment	.92
24. helpfulness of co-workers	.92
25. satisfied with helpfulness	.92
26. satisfactory relationships with co-workers	.92
27. quality of co-worker instruction	.92
28. instruction from co-workers vs resident training	.92
29. co-workers motivated	.92
30. training level of co-workers	.92
31. helpfulness of supervisors on job performance	.92
32. consistency of feedback from supervisors	.92
33. instruction from supervisor vs tech school	.92
34. supervisor lets new people try challenging tasks	.92
35. job interest	.91
36. sense of accomplishment from job	.92
37. reenlisting	.92
38. feel about career field today	.92
39. importance of job to unit	.92
40. importance of job to AF	.92
41. advice to friend about AF	.92
42. advice to friend about career field	.92
43. other military view job	.92
44. civilians view job	.92

Appendix C-13

314X4: Form B alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.89
2. satisfied mental effort	.89
3. physical effort	.89
4. satisfied physical effort	.89
5. responsibility	.89
6. satisfied responsibility	.88
7. freedom and independence	.89
8. major decisions	.89
9. how difficult task will be	.89
10. satisfied difficulty	.88
11. task variability	.89
12. satisfied task variability	.88
13. little or no work	.90
14. perform entire unit of work	.89
15. satisfied with geographic location	.89
16. physical conditions do not effect work	.89
17. time to finish	.89
18. use what learned in tech school	.89
19. satisfied with tech school preparation	.89
20. delay in beginning job trained for	.90
21. work enthusiasm	.89
22. interested in learning more about job	.89
23. availability of tools and equipment	.89
24. helpfulness of co-workers	.89
25. satisfied with helpfulness	.89
26. satisfactory relationships with co-workers	.89
27. quality of co-worker instruction	.89
28. instruction from co-workers vs resident training	.89
29. co-workers motivated	.89
30. training level of co-workers	.89
31. helpfulness of supervisors on job performance	.89
32. consistency of feedback from supervisors	.89
33. instruction from supervisor vs tech school	.89
34. supervisor lets new people try challenging tasks	.89
35. job interest	.88
36. sense of accomplishment from job	.88
37. reenlisting	.89
38. feel about career field today	.89
39. importance of job to unit	.89
40. importance of job to AF	.89
41. advice to friend about AF	.89
42. advice to friend about career field	.89
43. other military view job	.89
44. civilians view job	.89

Appendix C-14

427X2: Form B alphas.

<u>Item</u>	<u>Alpha</u>
1. mental effort	.90
2. satisfied mental effort	.89
3. physical effort	.90
4. satisfied physical effort	.90
5. responsibility	.90
6. satisfied responsibility	.89
7. freedom and independence	.90
8. major decisions	.90
9. how difficult task will be	.90
10. satisfied difficulty	.89
11. task variability	.90
12. satisfied task variability	.89
13. little or no work	.91
14. perform entire unit of work	.90
15. satisfied with geographic location	.91
16. physical conditions do not effect work	.90
17. time to finish	.90
18. use what learned in tech school	.90
19. satisfied with tech school preparation	.90
20. delay in beginning job	.90
21. work enthusiasm	.90
22. interested in learning more about job	.90
23. availability of tools and equipment	.90
24. helpfulness of co-workers	.90
25. satisfied with helpfulness	.89
26. satisfactory relationships with co-workers	.90
27. quality of co-worker instruction	.89
28. instruction from co-workers vs resident training	.90
29. co-workers motivated	.90
30. training level of co-workers	.90
31. helpfulness of supervisors on job performance	.90
32. consistency of feedback from supervisors	.90
33. instruction from supervisor vs tech school	.90
34. supervisor lets new people try challenging tasks	.90
35. job interest	.89
36. sense of accomplishment from job	.89
37. reenlisting	.90
38. feel about career field today	.90
39. importance of job to unit	.90
40. importance of job to AF	.90
41. advice to friend about AF	.90
42. advice to friend about career field	.89
43. other military view job	.90
44. civilians view job	.90

Appendix D-1

811X0: Form A means and standard deviations.

<u>Item</u>	<u>X</u>	<u>S.D.</u>
1. mental effort	3.99	.86
2. physical effort	3.65	.86
3. responsibility	4.52	.68
4. freedom and independence	2.83	.72
5. major decisions	2.71	.98
6. how difficult task will be	2.96	.60
7. task variability	2.84	1.00
8. little or no work	2.26	.83
9. perform entire unit of work	3.09	1.16
10. satisfied with geographic location	4.02	1.13
11. physical conditions do not effect work	3.14	.90
12. time to finish work	4.01	.76
13. use what learned in tech school	4.36	.82
14. satisfied with tech school preparation	5.77	1.15
15. delay in beginning job trained for	1.98	.69
16. work enthusiasm	3.76	1.17
17. interested in learning more about job	4.48	.69
18. availability of tools and equipment	3.36	1.93
19. helpfulness of co-workers	4.42	.77
20. satisfactory relationships with co-workers	4.26	.59
21. instruction from co-worker vs resident training	3.65	.78
22. co-workers motivated	4.07	.67
23. training level of co-workers	4.38	.54
24. helpfulness of supervisors on job performance	4.54	.65
25. consistency of feedback from supervisor	3.99	.72
26. instruction from supervisor vs tech school	3.75	.56
27. supervisor lets new people try challenging jobs	3.44	.84
28. job interest	5.02	.92
29. sense of accomplishment from job	4.49	.77
30. reenlisting	4.52	1.35
31. feel about career field today	4.66	1.39
32. importance of job to unit	4.47	.84
33. importance of job to AF	4.63	.83
34. advice to friend about AF	4.18	.78
35. advice to friend about career field	4.02	.88
36. other military view your job	3.92	1.13
37. civilians view of your job	4.26	.90

Appendix D-2

811X0: Form B means and standard deviations.

Item	X	S.D.
1. mental effort	3.26	1.36
2. satisfied mental effort	3.91	1.85
3. physical effort	2.61	1.04
4. satisfied physical effort	3.76	1.77
5. responsibility	4.38	.92
6. satisfied responsibility	5.21	1.50
7. freedom and independence	2.15	.99
8. major decisions	1.99	1.01
9. how difficult task will be	2.22	.91
10. satisfied difficulty	4.04	1.53
11. task variability	2.25	1.20
12. satisfied task variability	3.67	1.67
13. little or no work	3.34	1.26
14. perform entire unit of work	2.79	1.39
15. satisfied with geographic location	3.88	2.13
16. physical conditions do not effect work	2.26	1.06
17. time to finish	4.24	.96
18. use what learned in tech school	3.27	1.30
19. satisfied with tech school preparation	4.50	1.73
20. delay in beginning job	2.20	.96
21. work enthusiasm	2.85	1.07
22. interested in learning more about job	3.38	1.17
23. availability of tools and equipment	1.99	1.88
24. helpfulness of co-workers	4.17	.95
25. satisfied with helpfulness	5.81	1.24
26. satisfactory relationships with co-workers	4.14	.69
27. quality of co-worker instruction	5.43	1.20
28. instruction from co-workers vs resident training	3.77	.83
29. co-workers motivated	3.35	1.08
30. training level of co-workers	4.00	.57
31. helpfulness of supervisors on job performance	3.81	1.14
32. consistency of feedback from supervisors	3.65	1.05
33. instruction from supervisor vs tech school	3.55	1.12
34. supervisor lets new people try challenging tasks	3.22	1.10
35. job interest	3.14	1.53
36. sense of accomplishment from job	2.87	1.43
37. reenlisting	3.31	1.73
38. feel about career field today	2.57	1.77
39. importance of job to unit	4.21	1.17
40. importance of job to AF	4.57	1.20
41. advice to friend about AF	3.49	1.19
42. advice to friend about career field	2.50	1.39
43. other military view job	2.67	1.35
44. civilians view job	3.42	1.28

Appendix D-3

645X0: Form A means and standard deviations.

Item	X	S.D.
1. mental effort	3.53	.81
2. physical effort	2.48	.86
3. responsibility	3.87	.87
4. freedom and independence	2.96	.64
5. major decisions	2.40	.82
6. how difficult task will be	2.86	.54
7. task variability	2.67	.87
8. little or no work	2.15	.74
9. perform entire unit of work	2.93	1.01
10. satisfied with geographic location	3.88	1.23
11. physical conditions do not effect work	3.46	.73
12. time to finish work	3.73	.71
13. use what learned in tech school	3.50	1.03
14. satisfied with tech school preparation	5.38	1.21
15. delay in beginning job trained for	1.85	.77
16. work enthusiasm	3.83	1.04
17. interested in learning more about job	4.34	.74
18. availability of tools and equipment	2.34	1.96
19. helpfulness of co-workers	4.18	.80
20. satisfactory relationships with co-workers	4.17	.60
21. instruction from co-worker vs resident training	3.76	.73
22. co-workers motivated	3.98	.69
23. training level of co-workers	4.18	.48
24. helpfulness of supervisors on job performance	4.33	.80
25. consistency of feedback from supervisor	3.93	.57
26. instruction from supervisor vs tech school	3.84	.73
27. supervisor lets new people try challenging jobs	3.52	.75
28. job interest	4.79	.99
29. sense of accomplishment from job	4.36	.75
30. reenlisting	4.59	1.19
31. feel about career field today	4.02	1.39
32. importance of job to unit	4.17	.96
33. importance of job to AF	4.35	.95
34. advice to friend about AF	4.05	.79
35. advice to friend about career field	3.79	.80
36. other military view your job	3.56	.76
37. civilians view of your job	3.66	.83

Appendix D-4

645X0: Form B means and standard deviations.

Item	X	S.D.
1. mental effort	3.41	1.11
2. satisfied mental effort	4.52	1.72
3. physical effort	2.38	1.32
4. satisfied physical effort	4.35	1.70
5. responsibility	3.69	1.01
6. satisfied responsibility	5.02	1.56
7. freedom and independence	3.21	1.05
8. major decisions	2.74	1.09
9. how difficult task will be	2.58	.72
10. satisfied difficulty	4.57	1.56
11. task variability	2.33	1.19
12. satisfied task variability	4.18	1.71
13. little or no work	2.43	.93
14. perform entire unit of work	3.03	1.24
15. satisfied with geographic location	4.35	1.12
16. physical conditions do not effect work	3.16	.94
17. time to finish	3.37	1.04
18. use what learned in tech school	2.66	1.18
19. satisfied with tech school preparation	3.61	1.60
20. delay in beginning job	1.76	1.18
21. work enthusiasm	3.04	1.06
22. interested in learning more about job	3.57	1.31
23. availability of tools and equipment	1.45	1.86
24. helpfulness of co-workers	3.92	1.19
25. satisfied with helpfulness	5.36	1.67
26. satisfactory relationships with co-workers	4.19	1.00
27. quality of co-worker instruction	5.13	1.53
28. instruction from co-workers vs resident training	3.80	1.10
29. co-workers motivated	3.72	1.06
30. training level of co-workers	3.93	.76
31. helpfulness of supervisors on job performance	3.96	1.13
32. consistency of feedback from supervisors	3.65	1.11
33. instruction from supervisor vs tech school	3.83	1.67
34. supervisor lets new people try challenging tasks	3.68	1.03
35. job interest	3.52	1.41
36. sense of accomplishment from job	3.66	1.30
37. reenlisting	3.82	1.70
38. feel about career field today	2.92	1.78
39. importance of job to unit	4.16	1.05
40. importance of job to AF	4.01	.97
41. advice to friend about AF	3.66	1.13
42. advice to friend about career field	2.90	1.25
43. other military view job	2.84	1.03
44. civilians view job	3.05	.91

Appendix D-5

622X0: Form A means and standard deviations.

<u>Item</u>	<u>X</u>	<u>S.D.</u>
1. mental effort	3.41	.91
2. physical effort	3.33	.83
3. responsibility	3.91	.93
4. freedom and independence	3.09	.61
5. major decisions	2.67	.76
6. how difficult task will be	2.71	.63
7. task variability	2.73	.96
8. little or no work	2.27	.76
9. perform entire unit of work	3.13	.96
10. satisfied with geographic location	3.92	1.13
11. physical conditions do not effect work	3.39	.77
12. time to finish work	3.65	.79
13. use what learned in tech school	4.07	.96
14. satisfied with tech school preparation	5.38	1.25
15. delay in beginning job trained for	1.48	.76
16. work enthusiasm	3.85	.91
17. interested in learning more about job	4.10	.85
18. availability of tools and equipment	3.53	.96
19. helpfulness of co-workers	4.01	.81
20. satisfactory relationships with co-workers	4.03	.68
21. instruction from co-worker vs resident training	3.28	.71
22. co-workers motivated	3.83	.68
23. training level of co-workers	4.09	.42
24. helpfulness of supervisors on job performance	3.91	.91
25. consistency of feedback from supervisor	3.77	.73
26. instruction from supervisor vs tech school	3.40	.65
27. supervisor lets new people try challenging jobs	3.54	.82
28. job interest	4.75	1.10
29. sense of accomplishment from job	4.29	.89
30. reenlisting	4.35	1.38
31. feel about career field today	3.62	1.69
32. importance of job to unit	4.31	1.05
33. importance of job to AF	4.30	1.12
34. advice to friend about AF	4.11	.96
35. advice to friend about career field	3.63	.97
36. other military view your job	2.49	1.13
37. civilians view of your job	2.66	1.15

Appendix D-6

622X0: Form B means and standard deviations.

Item	X	S.D.
1. mental effort	3.00	1.08
2. satisfied mental effort	3.68	1.89
3. physical effort	2.99	.99
4. satisfied physical effort	4.11	1.64
5. responsibility	3.52	1.03
6. satisfied responsibility	4.55	1.74
7. freedom and independence	2.91	.99
8. major decisions	2.34	1.06
9. how difficult task will be	2.33	.90
10. satisfied difficulty	4.00	1.58
11. task variability	1.98	1.00
12. satisfied task variability	3.65	1.72
13. little or no work	2.54	.90
14. perform entire unit of work	3.14	1.25
15. satisfied with geographic location	3.70	2.23
16. physical conditions do not effect work	2.88	1.04
17. time to finish	3.39	1.14
18. use what learned in tech school	2.67	1.33
19. satisfied with tech school preparation	4.14	1.83
20. delay in beginning job	1.55	.95
21. work enthusiasm	2.70	1.09
22. interested in learning more about job	3.15	1.29
23. availability of tools and equipment	2.75	1.48
24. helpfulness of co-workers	3.59	1.15
25. satisfied with helpfulness	5.09	1.62
26. satisfactory relationships with co-workers	3.91	.90
27. quality of co-worker instruction	4.72	1.38
28. instruction from co-workers vs resident training	3.20	.94
29. co-workers motivated	3.08	1.09
30. training level of co-workers	3.63	.76
31. helpfulness of supervisors on job performance	3.53	1.21
32. consistency of feedback from supervisors	3.31	1.20
33. instruction from supervisor vs tech school	3.14	1.16
34. supervisor lets new people try challenging tasks	3.04	1.09
35. job interest	3.10	1.47
36. sense of accomplishment from job	2.96	1.39
37. reenlisting	3.30	1.79
38. feel about career field today	3.27	1.68
39. importance of job to unit	3.95	1.20
40. importance of job to AF	4.02	1.89
41. advice to friend about AF	3.47	1.23
42. advice to friend about career field	2.23	1.28
43. other military view job	1.67	.95
44. civilians view job	2.32	1.05

Appendix D-7

426X2: Form A means and standard deviations.

Item	X	S.D.
1. mental effort	3.93	.87
2. physical effort	3.53	.84
3. responsibility	4.21	.91
4. freedom and independence	2.72	.89
5. major decisions	2.22	.98
6. how difficult task will be	3.08	.56
7. task variability	3.30	.85
8. little or no work	2.22	.74
9. perform entire unit of work	3.11	1.01
10. satisfied with geographic location	3.87	1.25
11. physical conditions do not effect work	3.22	.83
12. time to finish work	3.58	.77
13. use what learned in tech school	3.91	.93
14. satisfied with tech school preparation	5.20	1.32
15. delay in beginning job trained for	2.16	.96
16. work enthusiasm	3.86	1.14
17. interested in learning more about job	4.55	.61
18. availability of tools and equipment	4.00	.93
19. helpfulness of co-workers	4.16	.85
20. satisfactory relationships with co-workers	4.10	.63
21. instruction from co-worker vs resident training	3.63	.87
22. co-workers motivated	3.96	.73
23. training level of co-workers	4.23	.54
24. helpfulness of supervisors on job performance	4.25	.77
25. consistency of feedback from supervisor	3.86	.80
26. instruction from supervisor vs tech school	3.73	.85
27. supervisor lets new people try challenging jobs	3.36	.83
28. job interest	5.20	1.02
29. sense of accomplishment from job	4.63	.64
30. reenlisting	4.16	1.44
31. feel about career field today	4.70	1.36
32. importance of job to unit	4.27	.96
33. importance of job to AF	4.47	.90
34. advice to friend about AF	3.95	.90
35. advice to friend about career field	4.13	.80
36. other military view your job	3.75	.84
37. civilians view of your job	4.08	.89

Appendix D-8

426X2: From B means and standard deviations.

Item	X	S.D.
1. mental effort	3.49	.90
2. satisfied mental effort	5.12	1.51
3. physical effort	5.67	.85
4. satisfied physical effort	5.30	1.37
5. responsibility	3.89	.99
6. satisfied responsibility	5.32	1.45
7. freedom and independence	2.52	.95
8. major decisions	1.97	.94
9. how difficult task will be	2.92	.72
10. satisfied difficulty	5.05	1.41
11. task variability	3.00	1.13
12. satisfied task variability	4.86	1.57
13. little or no work	2.35	.77
14. perform entire unit of work	3.61	1.12
15. satisfied with geographic location	4.72	2.07
16. physical conditions do not effect work	2.90	.96
17. time to finish	3.46	.86
18. use what learned in tech school	2.92	1.12
19. satisfied with tech school preparation	4.20	1.64
20. delay in beginning job	1.61	.96
21. work enthusiasm	3.29	.92
22. interested in learning more about job	4.14	.92
23. availability of tools and equipment	3.50	1.12
24. helpfulness of co-workers	4.17	1.00
25. satisfied with helpfulness	5.95	1.31
26. satisfactory relationships with co-workers	4.17	.75
27. quality of co-worker instruction	5.59	1.39
28. instruction from co-workers vs resident training	3.87	1.00
29. co-workers motivated	3.90	.95
30. training level of co-workers	4.03	.59
31. helpfulness of supervisors on job performance	3.89	1.15
32. consistency of feedback from supervisors	3.58	1.10
33. instruction from supervisor vs tech school	3.82	1.17
34. supervisor lets new people try challenging tasks	3.69	1.12
35. job interest	4.60	1.31
36. sense of accomplishment from job	3.91	1.17
37. reenlisting	3.66	1.60
38. feel about career field today	4.20	1.66
39. importance of job to unit	4.63	1.02
40. importance of job to AF	4.51	1.04
41. advice to friend about AF	3.66	1.04
42. advice to friend about career field	3.72	1.05
43. other military view job	3.46	.98
44. civilians view job	3.90	.90

Appendix D-9

466X1: Form A means and standard deviations.

<u>Item</u>	<u>X</u>	<u>S.D.</u>
1. mental effort	3.46	.88
2. physical effort	3.28	.73
3. responsibility	3.75	.95
4. freedom and independence	3.00	.79
5. major decisions	2.20	.92
6. how difficult task will be	2.81	.62
7. task variability	2.68	.96
8. little or no work	2.31	.82
9. perform entire unit of work	2.92	.92
10. satisfied with geographic location	3.57	1.31
11. physical conditions do not effect work	3.15	.86
12. time to finish work	3.82	.73
13. use what learned in tech school	3.92	.91
14. satisfied with tech school preparation	5.78	1.30
15. delay in beginning job trained for	2.22	.97
16. work enthusiasm	3.75	.87
17. interested in learning more about job	4.17	.84
18. availability of tools and equipment	3.70	1.17
19. helpfulness of co-workers	3.92	.88
20. satisfactory relationships with co-workers	3.96	.67
21. instruction from co-worker vs resident training	3.57	.70
22. co-workers motivated	3.78	.66
23. training level of co-workers	4.02	.62
24. helpfulness of supervisors on job performance	3.98	.91
25. consistency of feedback from supervisor	3.72	.75
26. instruction from supervisor vs tech school	3.72	.68
27. supervisor lets new people try challenging jobs	3.35	.75
28. job interest	4.82	.93
29. sense of accomplishment from job	4.28	.71
30. reenlisting	4.06	1.45
31. feel about career field today	4.23	1.46
32. importance of job to unit	4.13	.91
33. importance of job to AF	4.28	.90
34. advice to friend about AF	3.91	.89
35. advice to friend about career field	3.67	.96
36. other military view your job	2.86	1.12
37. civilians view of your job	3.17	1.07

Appendix D-10

566X1: Form B means and standard deviations.

Item	X	S.D.
1. mental effort	3.02	.76
2. satisfied mental effort	4.36	1.65
3. physical effort	3.09	.85
4. satisfied physical effort	4.59	1.55
5. responsibility	3.59	.94
6. satisfied responsibility	4.92	1.53
7. freedom and independence	3.05	.81
8. major decisions	2.29	.96
9. how difficult task will be	2.51	.76
10. satisfied difficulty	4.42	1.57
11. task variability	2.25	1.07
12. satisfied task variability	4.27	1.67
13. little or no work	3.04	.92
14. perform entire unit of work	3.04	1.03
15. satisfied with geographic location	4.30	2.07
16. physical conditions do not effect work	2.83	1.00
17. time to finish	4.01	.59
18. use what learned in tech school	3.09	1.16
19. satisfied with tech school preparation	4.90	1.68
20. delay in beginning job	1.83	1.02
21. work enthusiasm	3.07	.92
22. interested in learning more about job	3.69	1.15
23. availability of tools and equipment	3.43	1.25
24. helpfulness of co-workers	4.09	.95
25. satisfied with helpfulness	5.64	1.40
26. satisfactory relationships with co-workers	4.09	.71
27. quality of co-worker instruction	5.28	1.34
28. instruction from co-workers vs resident training	3.47	.98
29. co-workers motivated	3.58	1.00
30. training level of co-workers	4.07	.59
31. helpfulness of supervisors on job performance	3.80	1.17
32. consistency of feedback from supervisors	3.48	1.15
33. instruction from supervisor vs tech school	3.33	1.15
34. supervisor lets new people try challenging tasks	3.32	1.05
35. job interest	3.85	1.46
36. sense of accomplishment from job	3.35	1.23
37. reenlisting	3.62	1.68
38. feel about career field today	3.40	1.95
39. importance of job to unit	4.10	1.23
40. importance of job to AF	4.22	1.11
41. advice to friend about AF	3.75	1.07
42. advice to friend about career field	3.11	1.31
43. other military view job	2.31	1.00
44. civilians view job	2.95	1.01

Appendix D-11

902X0: Form A means and standard deviations.

<u>Item</u>	<u>X</u>	<u>S.D.</u>
1. mental effort	4.03	.90
2. physical effort	3.35	.85
3. responsibility	4.10	.95
4. freedom and independence	2.84	.56
5. major decisions	2.05	.82
6. how difficult task will be	2.83	.59
7. task variability	3.11	.97
8. little or no work	2.24	.66
9. perform entire unit of work	2.92	.98
10. satisfied with geographic location	3.84	1.12
11. physical conditions do not effect work	3.48	.84
12. time to finish work	3.58	.70
13. use what learned in tech school	4.12	.87
14. satisfied with tech school preparation	5.12	1.36
15. delay in beginning job trained for	1.94	.86
16. work enthusiasm	3.75	1.10
17. interested in learning more about job	4.37	.76
18. availability of tools and equipment	3.64	1.43
19. helpfulness of co-workers	4.31	.73
20. satisfactory relationships with co-workers	4.21	.66
21. instruction from co-worker vs resident training	3.73	.77
22. co-workers motivated	3.96	.58
23. training level of co-workers	4.12	.61
24. helpfulness of supervisors on job performance	4.20	.78
25. consistency of feedback from supervisor	3.95	.68
26. instruction from supervisor vs tech school	3.79	.71
27. supervisor lets new people try challenging jobs	3.61	.79
28. job interest	5.08	1.07
29. sense of accomplishment from job	4.54	.76
30. reenlisting	4.54	1.33
31. feel about career field today	4.33	1.62
32. importance of job to unit	4.23	.86
33. importance of job to AF	4.33	.92
34. advice to friend about AF	4.12	.79
35. advice to friend about career field	3.88	.93
36. other military view your job	3.65	.92
37. civilians view of your job	3.87	.94

Appendix D-12

902X0: From B means and standard deviations.

Item	X	S.D.
1. mental effort	3.84	1.00
2. satisfied mental effort	4.71	1.74
3. physical effort	3.11	.98
4. satisfied physical effort	4.74	1.52
5. responsibility	4.04	1.00
6. satisfied responsibility	5.01	1.70
7. freedom and independence	2.74	.89
8. major decisions	2.06	.94
9. how difficult task will be	2.66	.82
10. satisfied difficulty	4.45	1.66
11. task variability	2.60	1.23
12. satisfied task variability	4.35	1.72
13. little or no work	2.60	.77
14. perform entire unit of work	3.38	1.19
15. satisfied with geographic location	4.15	2.20
16. physical conditions do not effect work	3.29	1.03
17. time to finish	3.55	.88
18. use what learned in tech school	3.38	1.14
19. satisfied with tech school preparation	3.36	1.75
20. delay in beginning job	1.61	.88
21. work enthusiasm	3.30	.96
22. interested in learning more about job	3.91	1.09
23. availability of tools and equipment	2.88	1.54
24. helpfulness of co-workers	4.15	.96
25. satisfied with helpfulness	5.74	1.42
26. satisfactory relationships with co-workers	4.23	.71
27. quality of co-worker instruction	5.59	1.25
28. instruction from co-workers vs resident training	5.57	.91
29. co-workers motivated	3.54	1.09
30. training level of co-workers	4.02	.65
31. helpfulness of supervisors on job performance	3.75	1.29
32. consistency of feedback from supervisors	3.43	1.15
33. instruction from supervisor vs tech school	3.42	1.14
34. supervisor lets new people try challenging tasks	3.74	1.02
35. job interest	4.47	1.43
36. sense of accomplishment from job	3.87	1.17
37. reenlisting	3.79	1.60
38. feel about career field today	3.45	1.95
39. importance of job to unit	4.10	1.14
40. importance of job to AF	4.04	1.19
41. advice to friend about AF	3.60	1.17
42. advice to friend about career field	3.25	1.31
43. other military view job	3.26	1.16
44. civilians view job	3.50	1.11

Appendix D-13

314X4: Form A means and standard deviations.

Item	X	S.D.
1. mental effort	3.59	.58
2. physical effort	2.79	.62
3. responsibility	3.76	.87
4. freedom and independence	2.83	.50
5. major decisions	2.10	.86
6. how difficult task will be	2.86	.44
7. task variability	3.28	.80
8. little or no work	2.55	.63
9. perform entire unit of work	3.21	.73
10. satisfied with geographic location	4.07	1.10
11. physical conditions do not effect work	3.55	.69
12. time to finish work	3.93	.37
13. use what learned in tech school	3.86	.95
14. satisfied with tech school preparation	5.25	1.01
15. delay in beginning job trained for	2.39	.80
16. work enthusiasm	3.71	.81
17. interested in learning more about job	4.43	.69
18. availability of tools and equipment	3.86	.80
19. helpfulness of co-workers	4.18	.72
20. satisfactory relationships with co-workers	4.25	.59
21. instruction from co-worker vs resident training	3.43	.88
22. co-workers motivated	3.86	.65
23. training level of co-workers	4.18	.48
24. helpfulness of supervisors on job performance	4.07	.72
25. consistency of feedback from supervisor	4.03	.50
26. instruction from supervisor vs tech school	3.48	.79
27. supervisor lets new people try challenging jobs	3.34	.77
28. job interest	5.21	.62
29. sense of accomplishment from job	4.59	.50
30. reenlisting	3.82	1.42
31. feel about career field today	4.90	.94
32. importance of job to unit	3.79	1.01
33. importance of job to AF	4.00	1.07
34. advice to friend about AF	3.96	.74
35. advice to friend about career field	4.28	.65
36. other military view your job	3.59	.50
37. civilians view of your job	4.07	.65

Appendix D-14

314X4: Form B means and standard deviations.

<u>Item</u>	<u>X</u>	<u>S.D.</u>
1. mental effort	3.82	.82
2. satisfied mental effort	3.31	1.48
3. physical effort	2.81	.81
4. satisfied physical effort	4.89	1.37
5. responsibility	3.58	.98
6. satisfied responsibility	5.09	1.43
7. freedom and independence	2.87	.83
8. major decisions	2.29	.91
9. how difficult task will be	3.14	.76
10. satisfied difficulty	4.92	1.33
11. task variability	3.23	1.13
12. satisfied task variability	4.92	1.42
13. little or no work	2.70	.89
14. perform entire unit of work	3.78	.93
15. satisfied with geographic location	4.68	2.07
16. physical conditions do not effect work	3.08	1.03
17. time to finish	3.82	.73
18. use what learned in tech school	3.30	1.17
19. satisfied with tech school preparation	4.12	1.68
20. delay in beginning job	2.21	1.16
21. work enthusiasm	3.22	.85
22. interested in learning more about job	4.15	.89
23. availability of tools and equipment	3.80	.96
24. helpfulness of co-workers	3.95	.98
25. satisfied with helpfulness	5.56	1.37
26. satisfactory relationships with co-workers	4.10	.77
27. quality of co-worker instruction	5.22	1.35
28. instruction from co-workers vs resident training	3.43	1.04
29. co-workers motivated	3.73	.89
30. training level of co-workers	3.79	.77
31. helpfulness of supervisors on job performance	3.59	1.13
32. consistency of feedback from supervisors	3.34	1.10
33. instruction from supervisor vs tech school	3.37	1.12
34. supervisor lets new people try challenging tasks	3.60	1.03
35. job interest	4.67	1.21
36. sense of accomplishment from job	3.83	1.14
37. reenlisting	3.38	1.54
38. feel about career field today	4.76	1.33
39. importance of job to unit	4.33	.86
40. importance of job to AF	4.35	.89
41. advice to friend about AF	3.65	1.07
42. advice to friend about career field	3.99	.91
43. other military view job	3.67	.81
44. civilians view job	3.67	.89

Appendix D-15

427X2: Form B means and standard deviations.

<u>Item</u>	<u>X</u>	<u>S.D.</u>
1. mental effort	3.66	.80
2. satisfied mental effort	5.27	1.48
3. physical effort	2.85	.49
4. satisfied physical effort	5.01	1.45
5. responsibility	4.01	.94
6. satisfied responsibility	5.41	1.35
7. freedom and independence	2.92	.91
8. major decisions	2.49	.95
9. how difficult task will be	2.84	.59
10. satisfied difficulty	4.91	1.36
11. task variability	2.68	1.02
12. satisfied task variability	4.45	1.61
13. little or no work	2.97	.92
14. perform entire unit of work	2.70	1.23
15. satisfied with geographic location	4.27	2.02
16. physical conditions do not effect work	2.45	1.08
17. time to finish	3.93	.72
18. use what learned in tech school	4.08	.89
19. satisfied with tech school preparation	5.27	1.40
20. delay in beginning job	1.57	.74
21. work enthusiasm	3.42	.76
22. interested in learning more about job	3.88	1.10
23. availability of tools and equipment	3.70	1.01
24. helpfulness of co-workers	4.01	.99
25. satisfied with helpfulness	5.59	1.38
26. satisfactory relationships with co-workers	3.96	.73
27. quality of co-worker instruction	5.28	1.35
28. instruction from co-workers vs resident training	3.51	.96
29. co-workers motivated	3.67	.89
30. training level of co-workers	3.77	.63
31. helpfulness of supervisors on job performance	3.77	1.05
32. consistency of feedback from supervisors	3.52	.96
33. instruction from supervisor vs tech school	3.60	1.01
34. supervisor lets new people try challenging tasks	3.43	1.02
35. job interest	4.74	1.21
36. sense of accomplishment from job	3.77	.99
37. reenlisting	2.95	1.63
38. feel about career field today	4.18	1.79
39. importance of job to unit	4.34	1.04
40. importance of job to AF	4.38	.90
41. advice to friend about AF	3.67	.87
42. advice to friend about career field	4.03	1.11
43. other military view job	3.50	.79
44. civilians view job	3.64	.89

Appendix E-1

811X0: Remaining factors.

Item	Factor 4
1. mental effort	
2. physical effort	
3. responsibility	
4. freedom and independence	
5. major decisions	
6. how difficult task will be	
7. task variability	
8. little or no work	
9. perform entire unit of work	
10. satisfied with geographic location	
11. physical conditions do not effect work	
12. time to finish work	
13. use what learned in tech school	
14. satisfied with tech school preparation	
15. delay in beginning job trained for	
16. work enthusiasm	
17. interested in learning more about job	
18. availability of tools and equipment	
19. helpfulness of co-workers	
20. satisfactory relationships with co-workers	
21. instruction from co-worker vs resident training	
22. co-workers motivated	
23. training level of co-workers	
24. helpfulness of supervisors on job performance	
25. consistency of feedback from supervisor	
26. instruction from supervisor vs tech school	
27. supervisor lets new people try challenging jobs	
28. job interest	
29. sense of accomplishment from job	
30. reenlisting	
31. feel about career field today	
32. importance of job to unit	.84
33. importance of job to AF	.71
34. advice to friend about AF	
35. advice to friend about career field	
36. other military view your job	
37. civilians view of your job	

Eigenvalue	1.40
Percent variance accounted for	3.8

Appendix E-2

645X0: Remaining factors.

Item	Factors	
	4	5
1. mental effort		
2. physical effort		
3. responsibility		
4. freedom and independence	.44	
5. major decisions		
6. how difficult task will be		
7. task variability		
8. little or no work		
9. perform entire unit of work		
10. satisfied with geographic location		
11. physical conditions do not effect work		
12. time to finish work		
13. use what learned in tech school		
14. satisfied with tech school preparation		
15. delay in beginning job trained for		
16. work enthusiasm		
17. interested in learning more about job		
18. availability of tools and equipment		
19. helpfulness of co-workers		
20. satisfactory relationships with co-workers		
21. instruction from co-worker vs resident training		
22. co-workers motivated		
23. training level of co-workers		
24. helpfulness of supervisors on job performance		
25. consistency of feedback from supervisor		
26. instruction from supervisor vs tech school		
27. supervisor lets new people try challenging jobs		
28. job interest		
29. sense of accomplishment from job		
30. reenlisting		
31. feel about career field today		
32. importance of job to unit		
33. importance of job to AF		-.38
34. advice to friend about AF		-.36
35. advice to friend about career field		
36. other military view your job		
37. civilians view of your job		

Eigenvalue	1.14	1.03
Percent variance accounted for	3.1	2.8

Appendix E-3

622X0: Remaining factors.

Item	Factors		
	4	5	6
1. mental effort			
2. physical effort			
3. responsibility			
4. freedom and independence			
5. major decisions			
6. how difficult task will be			.37
7. task variability			.51
8. little or no work	-.48*		
9. perform entire unit of work			
10. satisfied with geographic location			
11. physical conditions do not effect work			
12. time to finish work	-.37		
13. use what learned in tech school			
14. satisfied with tech school preparation			
15. delay in beginning job trained for			
16. work enthusiasm			
17. interested in learning more about job			
18. availability of tools and equipment			
19. helpfulness of co-workers			
20. satisfactory relationships with co-workers			
21. instruction from co-worker vs resident training			
22. co-workers motivated			
23. training level of co-workers			
24. helpfulness of supervisors on job performance			
25. consistency of feedback from supervisor			
26. instruction from supervisor vs tech school			
27. supervisor lets new people try challenging jobs			
28. job interest			
29. sense of accomplishment from job			
30. reenlisting			
31. feel about career field today			
32. importance of job to unit			
33. importance of job to AF		.52	
34. advice to friend about AF		.51	
35. advice to friend about career field			
36. other military view your job			
37. civilians view of your job			

Eigenvalue	1.31	1.24	1.10
Percent variance accounted for	3.5	3.3	3.0

* item reflected for scaling

Appendix E-4

426X2: Remaining factors.

Item	Factors	
	4	5
1. mental effort	.40	
2. physical effort	.41	
3. responsibility		
4. freedom and independence		-.35
5. major decisions		-.36
6. how difficult task will be	.46	
7. task variability		
8. little or no work		
9. perform entire unit of work		
10. satisfied with geographic location		
11. physical conditions do not effect work		
12. time to finish work		
13. use what learned in tech school		
14. satisfied with tech school preparation		
15. delay in beginning job trained for		
16. work enthusiasm		
17. interested in learning more about job		
18. availability of tools and equipment		
19. helpfulness of co-workers		
20. satisfactory relationships with co-workers		
21. instruction from co-worker vs resident training		
22. co-workers motivated		
23. training level of co-workers		
24. helpfulness of supervisors on job performance		
25. consistency of feedback from supervisor		
26. instruction from supervisor vs tech school		
27. supervisor lets new people try challenging jobs		
28. job interest		
29. sense of accomplishment from job		
30. reenlisting		
31. feel about career field today		
32. importance of job to unit		
33. importance of job to AF		
34. advice to friend about AF		
35. advice to friend about career field		
36. other military view your job		
37. civilians view of your job		

Eigenvalue	1.28	1.07
Percent variance accounted for	3.4	2.9

Appendix E-5

566X1: Remaining factors.

Item	Factors	
	4	5
1. mental effort		
2. physical effort		
3. responsibility		
4. freedom and independence		
5. major decisions	.35	
6. how difficult task will be		
7. task variability		
8. little or no work		
9. perform entire unit of work		
10. satisfied with geographic location		
11. physical conditions do not effect work		
12. time to finish work		
13. use what learned in tech school		
14. satisfied with tech school preparation		
15. delay in beginning job trained for		
16. work enthusiasm		
17. interested in learning more about job		
18. availability of tools and equipment		
19. helpfulness of co-workers		
20. satisfactory relationships with co-workers		
21. instruction from co-worker vs resident training		
22. co-workers motivated		
23. training level of co-workers		
24. helpfulness of supervisors on job performance		
25. consistency of feedback from supervisor		
26. instruction from supervisor vs tech school		
27. supervisor lets new people try challenging jobs		
28. job interest		
29. sense of accomplishment from job		
30. reenlisting		
31. feel about career field today		
32. importance of job to unit		-.43
33. importance of job to AF	-.44	-.56
34. advice to friend about AF		.40
35. advice to friend about career field		
36. other military view your job		
37. civilians view of your job		

Eigenvalue	1.32	1.18
Percent variance accounted for	3.6	3.2

Appendix E-6

902X0: Remaining factors.

Item	Factor
1. mental effort	
2. physical effort	
3. responsibility	
4. freedom and independence	
5. major decisions	
6. how difficult task will be	
7. task variability	
8. little or no work	
9. perform entire unit of work	
10. satisfied with geographic location	
11. physical conditions do not effect work	
12. time to finish work	
13. use what learned in tech school	
14. satisfied with tech school preparation	.48
15. delay in beginning job trained for	
16. work enthusiasm	
17. interested in learning more about job	
18. availability of tools and equipment	
19. helpfulness of co-workers	
20. satisfactory relationships with co-workers	
21. instruction from co-worker vs resident training	
22. co-workers motivated	
23. training level of co-workers	
24. helpfulness of supervisors on job performance	
25. consistency of feedback from supervisor	
26. instruction from supervisor vs tech school	
27. supervisor lets new people try challenging jobs	
28. job interest	
29. sense of accomplishment from job	
30. reenlisting	
31. feel about career field today	
32. importance of job to unit	
33. importance of job to AF	.44
34. advice to friend about AF	.37
35. advice to friend about career field	
36. other military view your job	
37. civilians view of your job	

Eigenvalue	1.21
Percent variance accounted for	3.3

Appendix F-1

811X0: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	3.24	1.23	66(1)
13-18	3.05	1.47	57
19+	3.53	1.39	39
2. satisfied mental effort			
0-12	4.25	1.69	
13-18	4.06	2.03	
19+	3.50	1.79	
3. physical effort			
0-12	2.70	1.04	
13-18	2.42	1.98	
19+	2.69	1.06	
4. satisfied physical effort			
0-12	4.03	1.75	
13-18	3.40	1.78	
19+	3.75	1.72	
5. responsibility			
0-12	4.55	.70	
13-18	4.19	1.06	
19+	4.32	1.10	
6. satisfied responsibility			
0-12	5.38	1.25	
13-18	4.95	1.66	
19+	5.25	1.64	
7. freedom and independence			
0-12	2.15	.93	
13-18	2.02	1.07	
19+	2.35	.98	
8. major decisions			
0-12	1.91	.98	
13-18	1.80	.94	
19+	2.35	1.03	
9. how difficult task will be			
0-12	2.29	.95	
13-18	2.00	.87	
19+	2.41	.85	
10. satisfied difficulty			
0-12	4.11	1.46	
13-18	3.84	1.70	
19+	4.20	1.42	
11. task variability			
0-12	2.48	1.21	
13-18	1.98	1.14	
19+	2.28	1.22	
12. satisfied task variability			
0-12	3.92	1.66	
13-18	3.20	1.70	
19+	3.90	1.57	

13.	little or no work		
	0-12	3.27	1.32
	13-18	3.27	1.22
	19+	3.56	1.23
14.	perform entire unit of work		
	0-12	2.82	1.42
	13-18	2.70	1.30
	19+	2.85	1.44
15.	satisfied with geographic location		
	0-12	4.24	2.16
	13-18	3.43	2.13
	19+	3.88	2.03
16.	physical conditions do not effect work		
	0-12	2.31	1.08
	13-18	2.20	1.12
	19+	2.88	.93
17.	time to finish		
	0-12	4.32	1.00
	13-18	3.96	.79
	19+	3.95	.94
18.	use what learned in tech school		
	0-12	3.45	1.27
	13-18	3.07	1.26
	19+	3.20	1.36
19.	satisfied with tech school preparation		
	0-12	4.58	1.81
	13-18	4.41	1.71
	19+	4.57	1.58
20.	delay in beginning job		
	0-12	2.32	1.22
	13-18	2.10	.69
	19+	2.12	.79
21.	work enthusiasm		
	0-12	3.16	.96
	13-18	2.52	1.14
	19+	2.80	1.02
22.	interested in learning more about job		
	0-12	3.25	1.03
	13-18	2.98	1.27
	19+	3.35	1.08
23.	availability of tools and equipment		
	0-12	2.36	2.03
	13-18	1.68	1.73
	19+	1.90	1.82
24.	helpfulness of co-workers		
	0-12	4.30	.87
	13-18	4.04	1.03
	19+	4.15	.95
25.	satisfied with helpfulness		
	0-12	5.78	1.30
	13-18	5.70	1.32
	19+	5.98	1.00

26.	satisfactory relationships with co-workers		
	0-12	4.19	.63
	13-18	4.04	.74
	19+	4.18	.71
27.	quality of co-worker instruction		
	0-12	5.64	1.12
	13-18	5.25	1.19
	19+	5.33	1.29
28.	instruction from co-workers vs resident training		
	0-12	3.86	.73
	13-18	3.54	.68
	19+	3.00	.50
29.	co-workers motivated		
	0-12	3.47	1.10
	13-18	3.09	1.09
	19+	3.53	.96
30.	training level of co-workers		
	0-12	4.00	.56
	13-18	3.96	.53
	19+	4.02	.63
31.	helpfulness of supervisors on job performance		
	0-12	3.79	1.18
	13-18	3.79	1.13
	19+	3.85	1.12
32.	consistency of feedback from supervisors		
	0-12	3.69	1.06
	13-18	3.39	1.08
	19+	1.93	.89
33.	instruction from supervisor vs tech school		
	0-12	3.37	1.22
	13-18	3.57	1.05
	19+	3.77	1.01
34.	supervisor lets new people try challenging tasks		
	0-12	3.33	1.05
	13-18	3.13	1.03
	19+	3.23	1.25
35.	job interest		
	0-12	3.56	1.57
	13-18	2.67	1.53
	19+	3.13	1.26
36.	sense of accomplishment from job		
	0-12	3.18	1.42
	13-18	2.39	1.36
	19+	2.98	1.37
37.	reenlisting		
	0-12	3.72	1.72
	13-18	2.81	1.63
	19+	3.38	1.76
38.	feel about career field today		
	0-12	2.86	1.89
	13-18	2.33	1.68
	19+	2.43	1.68

39.	importance of job to unit		
	0-12	4.26	1.16
	13-18	4.12	1.25
	19+	4.25	1.06
40.	importance of job to AF		
	0-12	4.42	1.26
	13-18	4.26	1.20
	19+	4.43	1.13
41.	advice to friend about AF		
	0-12	3.72	1.08
	13-18	3.22	1.27
	19+	3.49	1.23
42.	advice to friend about career field		
	0-12	2.73	1.45
	13-18	2.23	1.39
	19+	2.53	1.26
43.	other military view job		
	0-12	2.95	1.34
	13-18	2.46	1.34
	19+	2.54	1.31
44.	civilians view job		
	0-12	3.67	1.16
	13-18	3.95	1.42
	19+	3.55	1.18

(1) cell means equivalent for other items

Appendix F-2

645X0: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	3.48	1.10	68(1)
13-18	3.41	1.04	75
19+	3.30	1.21	53
2. satisfied mental effort			
0-12	4.41	1.79	
13-18	4.75	.63	
19+	4.35	1.76	
3. physical effort			
0-12	2.52	1.33	
13-18	2.37	1.28	
19+	2.22	1.38	
4. satisfied physical effort			
0-12	4.29	1.73	
13-18	4.53	1.61	
19+	4.17	1.82	
5. responsibility			
0-12	3.70	1.15	
13-18	3.72	.93	
19+	3.87	1.16	
6. satisfied responsibility			
0-12	5.00	1.53	
13-18	5.13	1.49	
19+	4.98	1.66	
7. freedom and independence			
0-12	3.07	1.14	
13-18	3.21	.96	
19+	3.38	1.07	
8. major decisions			
0-12	2.55	1.01	
13-18	2.85	1.18	
19+	2.83	1.06	
9. how difficult task will be			
0-12			
13-18			
19+			
10. satisfied difficulty			
0-12	4.43	1.51	
13-18	4.84	1.43	
19+	4.40	1.77	
11. task variability			
0-12	2.32	1.15	
13-18	2.25	1.07	
19+	2.44	1.39	
12. satisfied task variability			
0-12	4.01	1.53	
13-18	4.38	1.74	
19+	4.12	1.91	

13.	little or no work		
	0-12	2.44	.92
	13-18	2.51	.95
	19+	2.28	.94
14.	perform entire unit of work		
	0-12	2.88	1.22
	13-18	3.07	1.18
	19+	3.15	1.36
15.	satisfied with geographic location		
	0-12	4.40	2.00
	13-18	4.56	2.06
	19+	4.02	2.31
16.	physical conditions do not effect work		
	0-12	3.28	.83
	13-18	3.11	.94
	19+	3.08	1.00
17.	time to finish		
	0-12	3.40	1.05
	13-18	3.41	.99
	19+	3.25	1.11
18.	use what learned in tech school		
	0-12	2.68	1.22
	13-18	2.85	1.18
	19+	2.38	1.11
19.	satisfied with tech school preparation		
	0-12	3.75	1.56
	13-18	3.68	1.75
	19+	3.38	1.44
20.	delay in beginning job		
	0-12	1.68	1.13
	13-18	1.68	1.04
	19+	1.98	1.42
21.	work enthusiasm		
	0-12	2.97	.98
	13-18	3.15	1.17
	19+	2.96	1.04
22.	interested in learning more about job		
	0-12	3.62	1.15
	13-18	3.55	1.33
	19+	3.57	1.50
23.	availability of tools and equipment		
	0-12	1.45	1.94
	13-18	1.23	1.73
	19+	1.74	1.91
24.	helpfulness of co-workers		
	0-12	4.01	1.14
	13-18	3.95	1.03
	19+	3.74	1.46
25.	satisfied with helpfulness		
	0-12	5.54	1.46
	13-18	5.28	1.76
	19+	5.20	1.81

26.	satisfactory relationships with co-workers		
	0-12	4.08	.98
	13-18	4.21	1.00
	19+	4.28	1.05
27.	quality of co-worker instruction		
	0-12	5.32	1.38
	13-18	5.15	1.60
	19+	4.83	1.58
28.	instruction from co-workers vs resident training		
	0-12	3.93	1.24
	13-18	3.81	1.02
	19+	3.62	.99
29.	co-workers motivated		
	0-12	3.65	.97
	13-18	3.74	1.12
	19+	3.76	1.11
30.	training level of co-workers		
	0-12	4.04	.72
	13-18	3.83	.84
	19+	3.91	.68
31.	helpfulness of supervisors on job performance		
	0-12	4.06	1.18
	13-18	3.93	1.07
	19+	3.87	1.18
32.	consistency of feedback from supervisors		
	0-12	3.76	.98
	13-18	3.70	1.11
	19+	3.42	1.26
33.	instruction from supervisor vs tech school		
	0-12	3.83	1.10
	13-18	3.81	1.19
	19+	3.87	1.26
34.	supervisor lets new people try challenging tasks		
	0-12	3.65	.92
	13-18	3.79	1.01
	19+	3.55	1.19
35.	job interest		
	0-12	3.51	1.38
	13-18	3.60	1.49
	19+	3.46	1.37
36.	sense of accomplishment from job		
	0-12	3.26	1.27
	13-18	3.42	1.29
	19+	3.43	1.37
37.	reenlisting		
	0-12	3.88	1.60
	13-18	3.89	1.66
	19+	3.72	1.88
38.	feel about career field today		
	0-12	2.91	1.78
	13-18	2.95	1.79
	19+	2.94	1.81

39.	importance of job to unit		
	0-12	4.13	1.09
	13-18	4.19	1.04
	19+	4.18	1.03
40.	importance of job to AF		
	0-12	3.98	1.06
	13-18	4.01	.97
	19+	4.30	.84
41.	advice to friend about AF		
	0-12	3.60	1.20
	13-18	3.63	1.08
	19+	3.81	1.06
42.	advice to friend about career field		
	0-12	2.97	1.25
	13-18	2.98	1.30
	19+	2.72	1.17
43.	other military view job		
	0-12	2.91	.97
	13-18	2.83	1.04
	19+	2.74	1.10
44.	civilians view job		
	0-12	3.00	.89
	13-18	3.10	.98
	19+	2.98	.94

(1) cell frequencies equivalent for other items

Appendix F-3

622X0: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	2.87	1.10	78(1)
13-18	3.11	.94	87
19+	2.99	1.21	70
2. satisfied mental effort			
0-12	3.65	1.96	
13-18	3.87	1.80	
19+	3.45	1.91	
3. physical effort			
0-12	2.94	.97	
13-18	3.07	.96	
19+	2.96	1.08	
4. satisfied physical effort			
0-12	4.25	1.62	
13-18	4.17	1.53	
19+	3.81	1.75	
5. responsibility			
0-12	3.47	1.00	
13-18	3.61	1.00	
19+	3.49	1.10	
6. satisfied responsibility			
0-12	4.53	1.80	
13-18	4.77	1.61	
19+	4.27	1.80	
7. freedom and independence			
0-12	2.82	.88	
13-18	2.93	1.05	
19+	2.99	1.04	
8. major decisions			
0-12	2.12	.94	
13-18	2.54	1.12	
19+	2.34	1.07	
9. how difficult task will be			
0-12	2.28	.88	
13-18	2.43	.91	
19+	2.28	.91	
10. satisfied difficulty			
0-12	3.83	1.63	
13-18	4.22	1.54	
19+	3.91	1.57	
11. task variability			
0-12	1.97	1.02	
13-18	2.08	1.05	
19+	1.87	.93	
12. satisfied task variability			
0-12	3.59	1.74	
13-18	3.94	1.67	
19+	3.36	1.74	

13.	little or no work		
	0-12	2.60	.93
	13-18	2.52	.89
	19+	2.47	.90
14.	perform entire unit of work		
	0-12	2.96	1.32
	13-18	3.13	1.28
	19+	3.38	1.13
15.	satisfied with geographic location		
	0-12	3.37	2.17
	13-18	3.86	2.23
	19+	3.82	2.28
16.	physical conditions do not effect work		
	0-12	2.94	1.03
	13-18	3.01	.96
	19+	2.66	1.13
17.	time to finish		
	0-12	3.56	1.05
	13-18	3.28	1.15
	19+	3.34	1.21
18.	use what learned in tech school		
	0-12	2.83	1.45
	13-18	2.75	1.29
	19+	2.31	1.24
19.	satisfied with tech school preparation		
	0-12	4.27	1.90
	13-18	4.14	1.78
	19+	3.95	1.87
20.	delay in beginning job		
	0-12	1.45	.71
	13-18	1.65	1.07
	19+	1.52	1.03
21.	work enthusiasm		
	0-12	2.85	1.15
	13-18	2.73	1.14
	19+	2.49	.93
22.	interested in learning more about job		
	0-12	3.19	1.32
	13-18	3.22	1.34
	19+	3.02	1.23
23.	availability of tools and equipment		
	0-12	3.05	1.23
	13-18	2.33	1.58
	19+	2.91	1.53
24.	helpfulness of co-workers		
	0-12	3.67	1.18
	13-18	3.60	1.05
	19+	3.49	1.25
25.	satisfied with helpfulness		
	0-12	5.22	1.66
	13-18	5.05	1.52
	19+	4.93	1.72

26.	satisfactory relationships with co-workers		
	0-12	4.06	.80
	13-18	3.74	.98
	19+	3.93	.90
27.	quality of co-worker instruction		
	0-12	4.91	1.43
	13-18	4.65	1.32
	19+	4.54	1.39
28.	instruction from co-workers vs resident training		
	0-12	3.19	.93
	13-18	3.16	.96
	19+	3.24	.92
29.	co-workers motivated		
	0-12	3.31	.97
	13-18	3.10	1.17
	19+	2.79	1.08
30.	training level of co-workers		
	0-12	3.71	.63
	13-18	3.67	.78
	19+	3.47	.85
31.	helpfulness of supervisors on job performance		
	0-12	3.51	1.03
	13-18	3.55	1.26
	19+	3.55	1.33
32.	consistency of feedback from supervisors		
	0-12	3.29	1.12
	13-18	3.30	1.18
	19+	3.36	1.32
33.	instruction from supervisor vs tech school		
	0-12	3.04	.98
	13-18	3.10	1.20
	19+	3.27	1.26
34.	supervisor lets new people try challenging tasks		
	0-12	2.94	1.02
	13-18	3.15	1.06
	19+	3.00	1.19
35.	job interest		
	0-12	3.06	1.44
	13-18	3.31	1.63
	19+	2.90	1.28
36.	sense of accomplishment from job		
	0-12	2.94	1.33
	13-18	3.07	1.47
	19+	2.86	1.37
37.	reenlisting		
	0-12	3.36	1.87
	13-18	3.28	1.82
	19+	3.25	1.65
38.	feel about career field today		
	0-12	2.27	1.70
	13-18	2.40	1.76
	19+	2.14	1.60

39.	importance of job to unit		
	0-12	3.94	1.13
	13-18	3.89	1.31
	19+	4.04	1.17
40.	importance of job to AF		
	0-12	4.10	1.11
	13-18	4.07	1.19
	19+	3.88	1.28
41.	advice to friend about AF		
	0-12	3.53	1.18
	13-18	3.36	1.33
	19+	3.53	1.17
42.	advice to friend about career field		
	0-12	2.38	1.29
	13-18	2.29	1.30
	19+	1.97	1.25
43.	other military view job		
	0-12	1.88	.96
	13-18	1.69	1.02
	19+	1.40	.76
44.	civilians view job		
	0-12	2.49	1.02
	13-18	2.39	1.15
	19+	2.00	.90

(1) cell frequencies equivalent for other items

Appendix F-4

426X2: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	3.64	.84	85(1)
13-18	3.28	.95	81
19+	3.55	.88	74
2. satisfied mental effort			
0-12	5.32	1.30	
13-18	4.76	1.71	
19+	5.24	1.43	
3. physical effort			
0-12	3.68	.80	
13-18	3.57	.91	
19+	3.76	.82	
4. satisfied physical effort			
0-12	5.35	1.33	
13-18	5.08	1.60	
19+	5.46	2.08	
5. responsibility			
0-12	3.91	1.03	
13-18	3.81	1.02	
19+	3.96	.93	
6. satisfied responsibility			
0-12	5.52	1.30	
13-18	5.04	1.67	
19+	5.36	1.34	
7. freedom and independence			
0-12	2.61	.93	
13-18	2.48	.96	
19+	2.47	.95	
8. major decisions			
0-12	1.78	.79	
13-18	1.98	.95	
19+	2.19	1.05	
9. how difficult task will be			
0-12	3.02	.64	
13-18	2.77	.80	
19+	2.99	.70	
10. satisfied difficulty			
0-12	5.16	1.25	
13-18	4.85	1.53	
19+	5.11	1.43	
11. task variability			
0-12	3.00	1.07	
13-18	2.90	1.19	
19+	3.11	1.14	
12. satisfied task variability			
0-12	5.05	1.38	
13-18	4.67	1.70	
19+	4.81	1.64	

13.	little or no work		
	0-12	2.48	.75
	13-18	2.30	.70
	19+	2.26	.85
14.	perform entire unit of work		
	0-12	3.61	1.15
	13-18	3.33	1.20
	19+	3.89	.88
15.	satisfied with geographic location		
	0-12	4.88	2.13
	13-18	4.57	2.01
	19+	4.74	2.04
16.	physical conditions do not effect work		
	0-12	2.98	.87
	13-18	2.88	1.05
	19+	2.78	.95
17.	time to finish		
	0-12	3.63	.83
	13-18	3.35	.86
	19+	3.37	.87
18.	use what learned in tech school		
	0-12	3.15	1.01
	13-18	2.86	1.14
	19+	2.71	1.17
19.	satisfied with tech school preparation		
	0-12	4.36	1.58
	13-18	4.38	1.59
	19+	3.83	1.72
20.	delay in beginning job		
	0-12	1.49	.81
	13-18	1.72	1.11
	19+	1.62	.93
21.	work enthusiasm		
	0-12	3.36	.91
	13-18	3.21	.94
	19+	3.30	.90
22.	interested in learning more about job		
	0-12	4.29	.86
	13-18	4.10	.87
	19+	4.00	1.04
23.	availability of tools and equipment		
	0-12	3.94	1.05
	13-18	3.26	1.05
	19+	3.27	1.13
24.	helpfulness of co-workers		
	0-12	4.29	1.03
	13-18	4.07	1.00
	19+	4.14	.97
25.	satisfied with helpfulness		
	0-12	6.08	1.36
	13-18	5.84	1.27
	19+	5.90	1.29

26.	satisfactory relationships with co-workers		
	0-12	4.22	.79
	13-18	4.06	.82
	19+	4.21	.61
27.	quality of co-worker instruction		
	0-12	5.81	1.37
	13-18	5.46	1.46
	19+	5.45	1.33
28.	instruction from co-workers vs resident training		
	0-12	3.96	1.02
	13-18	3.83	1.08
	19+	3.80	.93
29.	co-workers motivated		
	0-12	4.07	.90
	13-18	3.76	.98
	19+	3.84	.97
30.	training level of co-workers		
	0-12	4.17	.56
	13-18	3.95	.65
	19+	3.97	.52
31.	helpfulness of supervisors on job performance		
	0-12	4.09	1.05
	13-18	3.69	1.22
	19+	3.86	1.17
32.	consistency of feedback from supervisors		
	0-12	3.67	.97
	13-18	3.40	1.19
	19+	3.64	1.12
33.	instruction from supervisor vs tech school		
	0-12	3.97	1.08
	13-18	3.65	1.20
	19+	3.81	1.21
34.	supervisor lets new people try challenging tasks		
	0-12	3.80	.97
	13-18	3.65	1.23
	19+	3.61	1.15
35.	job interest		
	0-12	4.79	1.19
	13-18	4.40	1.40
	19+	4.60	1.34
36.	sense of accomplishment from job		
	0-12	3.96	1.19
	13-18	3.92	1.13
	19+	3.85	1.21
37.	reenlisting		
	0-12	3.28	1.66
	13-18	3.73	1.40
	19+	3.48	1.71
38.	feel about career field today		
	0-12	4.27	1.55
	13-18	3.85	1.79
	19+	4.51	1.58

39.	importance of job to unit		
	0-12	4.34	1.12
	13-18	4.43	1.07
	19+	4.64	.73
40.	importance of job to AF		
	0-12	4.38	1.12
	13-18	4.32	1.20
	19+	4.67	.67
41.	advice to friend about AF		
	0-12	3.84	.92
	13-18	3.74	.95
	19+	3.36	1.18
42.	advice to friend about career field		
	0-12	3.73	.98
	13-18	3.66	1.15
	19+	3.77	1.02
43.	other military view job		
	0-12	3.49	.90
	13-18	3.52	.87
	19+	3.41	1.14
44.	civilians view job		
	0-12	3.91	.94
	13-18	3.85	.89
	19+	3.92	.89

(1) cell frequencies equivalent for other items

Appendix F-5

655X1: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	3.23	.75	69(1)
13-18	2.93	.81	131
19+	2.96	.63	57
2. satisfied mental effort			
0-12	4.57	1.52	
13-18	4.36	1.58	
19+	4.12	1.94	
3. physical effort			
0-12	3.30	.88	
13-18	3.05	.83	
19+	3.00	.83	
4. satisfied physical effort			
0-12	4.55	1.52	
13-18	4.55	1.52	
19+	4.74	1.70	
5. responsibility			
0-12	3.64	.92	
13-18	3.57	.94	
19+	3.56	.96	
6. satisfied responsibility			
0-12	4.99	1.44	
13-18	4.88	1.52	
19+	4.88	1.65	
7. freedom and independence			
0-12	3.00	.80	
13-18	3.07	.85	
19+	3.07	.75	
8. major decisions			
0-12	2.19	1.00	
13-18	2.35	.96	
19+	2.25	.93	
9. how difficult task will be			
0-12	2.57	.83	
13-18	2.50	.72	
19+	2.44	.76	
10. satisfied difficulty			
0-12	4.42	1.46	
13-18	4.43	1.57	
19+	4.35	1.72	
11. task variability			
0-12	2.46	1.09	
13-18	2.12	1.03	
19+	2.32	1.09	
12. satisfied task variability			
0-12	4.43	1.59	
13-18	4.15	1.70	
19+	4.32	1.69	

13.	little or no work		
	0-12	2.93	.99
	13-18	3.07	.88
	19+	3.09	.94
14.	perform entire unit of work		
	0-12	3.09	1.03
	13-18	3.03	1.04
	19+	3.01	1.01
15.	satisfied with geographic location		
	0-12	4.14	1.98
	13-18	4.38	2.06
	19+	4.28	2.22
16.	physical conditions do not effect work		
	0-12	2.70	.99
	13-18	2.90	1.02
	19+	2.79	.98
17.	time to finish		
	0-12	4.03	.55
	13-18	4.04	.57
	19+	3.89	.67
18.	use what learned in tech school		
	0-12	3.20	1.03
	13-18	3.06	1.19
	19+	3.00	1.26
19.	satisfied with tech school preparation		
	0-12	4.99	1.44
	13-18	4.78	1.76
	19+	5.04	1.77
20.	delay in beginning job		
	0-12	1.72	.98
	13-18	1.80	.96
	19+	2.04	1.18
21.	work enthusiasm		
	0-12	3.09	.89
	13-18	3.03	.99
	19+	3.11	.79
22.	interested in learning more about job		
	0-12	3.72	1.10
	13-18	3.58	1.18
	19+	3.88	1.14
23.	availability of tools and equipment		
	0-12	3.57	1.22
	13-18	3.51	1.21
	19+	3.07	1.32
24.	helpfulness of co-workers		
	0-12	4.19	.89
	13-18	4.15	.85
	19+	3.86	1.17
25.	satisfied with helpfulness		
	0-12	5.70	1.38
	13-18	5.68	1.39
	19+	5.46	1.48

26.	satisfactory relationships with co-workers		
	0-12	4.10	.75
	13-18	4.13	.63
	19+	3.98	.83
27.	quality of co-worker instruction		
	0-12	5.41	1.31
	13-18	5.23	1.35
	19+	5.22	1.38
28.	instruction from co-workers vs resident training		
	0-12	3.54	.88
	13-18	3.55	.97
	19+	3.17	1.08
29.	co-workers motivated		
	0-12	3.75	.93
	13-18	3.48	1.04
	19+	3.58	.96
30.	training level of co-workers		
	0-12	4.04	.60
	13-18	4.12	.55
	19+	3.98	.67
31.	helpfulness of supervisors on job performance		
	0-12	3.84	1.24
	13-18	3.77	1.16
	19+	3.80	1.10
32.	consistency of feedback from supervisors		
	0-12	3.57	1.18
	13-18	3.52	1.16
	19+	3.27	1.07
33.	instruction from supervisor vs tech school		
	0-12	3.43	1.13
	13-18	3.29	1.19
	19+	3.25	1.11
34.	supervisor lets new people try challenging tasks		
	0-12	3.39	.94
	13-18	3.32	1.10
	19+	3.23	1.06
35.	job interest		
	0-12	4.00	1.50
	13-18	3.76	1.46
	19+	3.88	1.43
36.	sense of accomplishment from job		
	0-12	3.58	1.19
	13-18	3.19	1.28
	19+	3.42	1.10
37.	reenlisting		
	0-12	3.43	1.61
	13-18	3.67	1.70
	19+	3.70	1.70
38.	feel about career field today		
	0-12	3.68	1.93
	13-18	3.19	1.98
	19+	3.53	1.87

39.	importance of job to unit		
	0-12	4.14	1.24
	13-18	4.22	1.02
	19+	4.26	1.17
40.	importance of job to AF		
	0-12	4.14	1.24
	13-18	4.23	1.02
	19+	4.26	1.17
41.	advice to friend about AF		
	0-12	3.65	1.17
	13-18	3.79	.96
	19+	3.75	1.18
42.	advice to friend about career field		
	0-12	3.22	1.27
	13-18	3.02	1.37
	19+	3.14	1.20
43.	other military view job		
	0-12	2.40	.96
	13-18	2.24	.96
	19+	2.35	1.14
44.	civilians view job		
	0-12	2.96	1.14
	13-18	2.95	.95
	19+	2.93	1.00

(1) cell frequencies equivalent for other items

Appendix F-6

902X0: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	4.02	.93	48(1)
13-18	3.87	1.02	87
19+	3.69	1.01	71
2. satisfied mental effort			
0-12	4.79	1.66	
13-18	4.88	1.77	
19+	4.48	1.75	
3. physical effort			
0-12	3.23	1.06	
13-18	3.20	.97	
19+	2.93	.93	
4. satisfied physical effort			
0-12	4.88	1.35	
13-18	4.86	1.65	
19+	4.51	1.45	
5. responsibility			
0-12	4.23	1.04	
13-18	4.14	.90	
19+	3.79	1.05	
6. satisfied responsibility			
0-12	5.00	1.68	
13-18	5.10	1.84	
19+	4.89	1.55	
7. freedom and independence			
0-12	2.61	.91	
13-18	2.89	.92	
19+	2.65	.81	
8. major decisions			
0-12	1.73	.78	
13-18	2.14	1.00	
19+	2.20	.93	
9. how difficult task will be			
0-12	2.84	.69	
13-18	2.60	.83	
19+	2.62	.88	
10. satisfied difficulty			
0-12	4.59	1.38	
13-18	4.53	1.69	
19+	4.27	1.80	
11. task variability			
0-12	2.55	1.06	
13-18	2.54	1.28	
19+	2.66	1.26	
12. satisfied task variability			
0-12	4.61	1.63	
13-18	4.23	1.78	
19+	4.26	1.69	

13.	little or no work		
	0-12	2.59	.79
	13-18	2.60	.81
	19+	2.60	.73
14.	perform entire unit of work		
	0-12	3.14	1.14
	13-18	3.43	1.24
	19+	3.46	1.14
15.	satisfied with geographic location		
	0-12	4.10	2.12
	13-18	4.03	2.29
	19+	4.31	2.16
16.	physical conditions do not effect work		
	0-12	3.26	1.05
	13-18	3.15	1.14
	19+	3.42	.84
17.	time to finish		
	0-12	3.47	.68
	13-18	3.63	.91
	19+	3.51	.97
18.	use what learned in tech school		
	0-12	3.40	.92
	13-18	3.48	1.21
	19+	3.25	1.19
19.	satisfied with tech school preparation		
	0-12	4.38	1.75
	13-18	4.58	1.76
	19+	4.07	1.72
20.	delay in beginning job		
	0-12	1.57	.71
	13-18	1.51	.82
	19+	1.73	1.03
21.	work enthusiasm		
	0-12	3.37	.97
	13-18	3.28	1.04
	19+	3.27	.88
22.	interested in learning more about job		
	0-12	3.93	1.11
	13-18	3.87	1.16
	19+	3.92	1.00
23.	availability of tools and equipment		
	0-12	3.04	1.63
	13-18	2.91	1.41
	19+	2.73	1.66
24.	helpfulness of co-workers		
	0-12	4.20	1.04
	13-18	4.22	.93
	19+	4.01	.93
25.	satisfied with helpfulness		
	0-12	5.78	1.49
	13-18	5.90	1.39
	19+	5.52	1.40

26.	satisfactory relationships with co-workers		
	0-12	4.31	.69
	13-18	4.23	.75
	19+	4.17	.70
27.	quality of co-worker instruction		
	0-12	5.45	1.54
	13-18	5.83	1.10
	19+	5.42	1.17
28.	instruction from co-workers vs resident training		
	0-12	3.60	.81
	13-18	3.51	.95
	19+	3.62	.91
29.	co-workers motivated		
	0-12	3.49	1.16
	13-18	3.63	1.08
	19+	3.45	1.08
30.	training level of co-workers		
	0-12	4.00	.71
	13-18	4.05	.60
	19+	4.01	.69
31.	helpfulness of supervisors on job performance		
	0-12	3.61	1.46
	13-18	3.85	1.22
	19+	3.73	1.28
32.	consistency of feedback from supervisors		
	0-12	3.53	1.26
	13-18	3.41	1.17
	19+	3.39	1.05
33.	instruction from supervisor vs tech school		
	0-12	3.42	1.11
	13-18	3.43	1.18
	19+	3.43	1.04
34.	supervisor lets new people try challenging tasks		
	0-12	3.71	1.00
	13-18	3.85	.98
	19+	3.64	1.08
35.	job interest		
	0-12	4.67	1.28
	13-18	4.44	1.51
	19+	4.35	1.42
36.	sense of accomplishment from job		
	0-12	3.96	1.12
	13-18	3.83	1.25
	19+	3.86	1.10
37.	reenlisting		
	0-12	3.78	1.67
	13-18	3.74	1.69
	19+	3.85	1.46
38.	feel about career field today		
	0-12	3.45	2.08
	13-18	3.57	1.92
	19+	3.28	1.93

39.	importance of job to unit		
	0-12	4.02	1.35
	13-18	4.19	1.02
	19+	4.07	1.10
40.	importance of job to AF		
	0-12	4.20	1.14
	13-18	4.09	1.15
	19+	3.92	1.23
41.	advice to friend about AF		
	0-12	3.73	1.20
	13-18	3.66	1.18
	19+	3.44	1.14
42.	advice to friend about career field		
	0-12	3.44	1.30
	13-18	3.38	1.25
	19+	2.96	1.37
43.	other military view job		
	0-12	3.49	1.16
	13-18	3.25	1.21
	19+	3.10	1.11
44.	civilians view job		
	0-12	3.55	1.28
	13-18	3.57	1.01
	19+	3.35	1.12

(1) cell frequencies equivalent for other items

Appendix F-7

314X4: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	3.57	.98	21(1)
13-18	3.85	.73	117
19+	3.84	.90	73
2. satisfied mental effort			
0-12	4.23	2.02	
13-18	5.62	1.24	
19+	5.10	1.50	
3. physical effort			
0-12	3.14	1.01	
13-18	2.77	.73	
19+	2.77	.87	
4. satisfied physical effort			
0-12	5.00	1.38	
13-18	5.12	1.13	
19+	4.47	1.60	
5. responsibility			
0-12	3.00	.94	
13-18	3.64	.90	
19+	3.66	1.06	
6. satisfied responsibility			
0-12	4.57	1.86	
13-18	5.38	1.14	
19+	4.74	1.60	
7. freedom and independence			
0-12	2.52	.98	
13-18	2.94	.75	
19+	2.84	.88	
8. major decisions			
0-12	1.62	.80	
13-18	2.35	.87	
19+	2.38	.94	
9. how difficult task will be			
0-12	2.71	1.10	
13-18	3.22	.63	
19+	3.09	.81	
10. satisfied difficulty			
0-12	4.48	1.57	
13-18	5.13	1.20	
19+	4.68	1.40	
11. task variability			
0-12	3.14	1.53	
13-18	3.30	.96	
19+	3.17	1.24	
12. satisfied task variability			
0-12	4.52	1.54	
13-18	5.15	1.18	
19+	4.68	1.65	

13.	little or no work		
	0-12	2.86	1.11
	13-18	2.67	.80
	19+	2.69	.97
14.	perform entire unit of work		
	0-12	3.19	1.21
	13-18	3.84	.87
	19+	3.85	.89
15.	satisfied with geographic location		
	0-12	4.67	2.13
	13-18	4.75	2.02
	19+	4.54	2.17
16.	physical conditions do not effect work		
	0-12	3.10	1.04
	13-18	3.13	.99
	19+	2.99	1.11
17.	time to finish		
	0-12	3.86	.96
	13-18	3.85	.67
	19+	3.75	.75
18.	use what learned in tech school		
	0-12	2.90	1.59
	13-18	3.41	1.10
	19+	3.26	1.11
19.	satisfied with tech school preparation		
	0-12	4.19	1.81
	13-18	4.31	1.62
	19+	3.82	1.69
20.	delay in beginning job		
	0-12	2.95	1.86
	13-18	2.17	1.00
	19+	2.03	1.06
21.	work enthusiasm		
	0-12	3.19	1.08
	13-18	3.13	.76
	19+	3.05	.90
22.	interested in learning more about job		
	0-12	4.33	.97
	13-18	4.08	.93
	19+	4.21	.80
23.	availability of tools and equipment		
	0-12	3.90	1.14
	13-18	3.89	.80
	19+	3.58	1.10
24.	helpfulness of co-workers		
	0-12	3.95	1.07
	13-18	4.07	.94
	19+	3.74	.97
25.	satisfied with helpfulness		
	0-12	5.57	1.54
	13-18	5.75	1.23
	19+	5.21	1.47

26.	satisfactory relationships with co-workers		
	0-12	4.14	.79
	13-18	4.14	.73
	19+	4.00	.83
27.	quality of co-worker instruction		
	0-12	5.24	1.48
	13-18	5.32	1.35
	19+	5.03	1.31
28.	instruction from co-workers vs resident training		
	0-12	3.30	.86
	13-18	3.50	1.03
	19+	3.32	1.10
29.	co-workers motivated		
	0-12	3.81	.93
	13-18	3.83	.81
	19+	4.00	1.00
30.	training level of co-workers		
	0-12	3.86	.73
	13-18	3.90	.73
	19+	3.58	.80
31.	helpfulness of supervisors on job performance		
	0-12	3.67	1.20
	13-18	3.65	1.04
	19+	3.42	1.22
32.	consistency of feedback from supervisors		
	0-12	3.48	1.12
	13-18	3.34	1.05
	19+	3.27	1.17
33.	instruction from supervisor vs tech school		
	0-12	3.10	1.14
	13-18	3.40	1.11
	19+	3.37	1.12
34.	supervisor lets new people try challenging tasks		
	0-12	2.86	1.31
	13-18	2.75	.86
	19+	3.56	1.11
35.	job interest		
	0-12	4.24	1.64
	13-18	4.88	.95
	19+	4.43	1.38
36.	sense of accomplishment from job		
	0-12	3.57	1.47
	13-18	3.93	.99
	19+	3.73	1.24
37.	reenlisting		
	0-12	3.23	1.45
	13-18	3.56	1.59
	19+	3.13	1.46
38.	feel about career field today		
	0-12	4.81	1.44
	13-18	4.74	1.36
	19+	4.45	1.28

39.	importance of job to unit		
	0-12	4.23	1.00
	13-18	4.41	.82
	19+	4.22	.87
40.	importance of job to AF		
	0-12	4.10	1.37
	13-18	4.44	.84
	19+	4.29	.79
41.	advice to friend about AF		
	0-12	3.85	.75
	13-18	3.82	1.02
	19+	3.30	1.13
42.	advice to friend about career field		
	0-12	3.76	1.04
	13-18	4.06	.85
	19+	3.93	.94
43.	other military view job		
	0-12	3.60	.82
	13-18	3.75	.78
	19+	3.52	.85
44.	civilians view job		
	0-12	3.42	1.12
	13-18	3.79	.83
	19+	3.54	.89

(1) cell frequencies equivalent for other items

Appendix F-8

427X2: Trend analysis cell means, standard deviations, and frequencies.

Item by category	Mean	S.D.	f
1. mental effort			
0-12	3.52	.87	21(1)
13-18	3.80	.83	36
19+	3.56	.62	18
2. satisfied mental effort			
0-12	5.14	1.46	
13-18	5.22	1.59	
19+	5.50	1.33	
3. physical effort			
0-12	2.76	.62	
13-18	2.89	.32	
19+	2.89	.58	
4. satisfied physical effort			
0-12	5.00	1.48	
13-18	4.86	1.50	
19+	5.33	1.32	
5. responsibility			
0-12	3.71	.85	
13-18	4.17	1.03	
19+	4.06	.80	
6. satisfied responsibility			
0-12	5.19	1.33	
13-18	5.42	1.48	
19+	5.67	1.08	
7. freedom and independence			
0-12	3.05	.97	
13-18	2.81	.92	
19+	3.00	.84	
8. major decisions			
0-12	2.33	.86	
13-18	2.46	1.09	
19+	2.72	.75	
9. how difficult task will be			
0-12	2.76	.62	
13-18	2.86	.59	
19+	2.88	.58	
10. satisfied difficulty			
0-12	4.67	1.56	
13-18	4.92	1.40	
19+	5.17	.99	
11. task variability			
0-12	2.76	1.04	
13-18	2.60	1.03	
19+	2.72	1.02	
12. satisfied task variability			
0-12	4.14	1.59	
13-18	4.56	1.76	
19+	4.61	1.29	

13.	little or no work		
	0-12	3.19	1.08
	13-18	3.81	.89
	19+	3.06	.72
14.	perform entire unit of work		
	0-12	3.65	1.27
	13-18	3.94	1.12
	19+	3.24	1.35
15.	satisfied with geographic location		
	0-12	3.62	2.20
	13-18	4.92	1.68
	19+	3.72	2.14
16.	physical conditions do not effect work		
	0-12	2.67	1.11
	13-18	2.38	1.02
	19+	2.33	1.19
17.	time to finish		
	0-12	3.95	.80
	13-18	3.92	.69
	19+	3.94	.73
18.	use what learned in tech school		
	0-12	3.90	1.00
	13-18	4.17	.86
	19+	4.11	.83
19.	satisfied with tech school preparation		
	0-12	5.05	1.20
	13-18	5.34	1.64
	19+	5.38	1.09
20.	delay in beginning job		
	0-12	1.42	.60
	13-18	1.71	.83
	19+	1.44	.70
21.	work enthusiasm		
	0-12	3.33	.66
	13-18	3.46	.89
	19+	3.44	.62
22.	interested in learning more about job		
	0-12	3.81	1.08
	13-18	3.97	1.18
	19+	3.78	1.00
23.	availability of tools and equipment		
	0-12	3.86	.96
	13-18	3.65	1.12
	19+	3.56	.86
24.	helpfulness of co-workers		
	0-12	4.00	.84
	13-18	4.03	1.06
	19+	4.00	1.08
25.	satisfied with helpfulness		
	0-12	5.38	1.43
	13-18	5.58	1.40
	19+	5.83	1.29

26.	satisfactory relationships with co-workers		
	0-12	3.86	.85
	13-18	3.94	.67
	19+	4.11	.68
27.	quality of co-worker instruction		
	0-12	5.10	1.34
	13-18	5.42	1.32
	19+	5.22	1.48
28.	instruction from co-workers vs resident training		
	0-12	3.57	.98
	13-18	3.47	.91
	19+	3.50	1.10
29.	co-workers motivated		
	0-12	3.71	.84
	13-18	3.58	.94
	19+	3.78	.88
30.	training level of co-workers		
	0-12	3.90	.54
	13-18	3.86	.68
	19+	4.06	.64
31.	helpfulness of supervisors on job performance		
	0-12	3.76	1.18
	13-18	3.63	1.05
	19+	4.06	.87
32.	consistency of feedback from supervisors		
	0-12	3.52	1.03
	13-18	3.53	.94
	19+	3.50	.99
33.	instruction from supervisor vs tech school		
	0-12	3.38	1.02
	13-18	3.60	.88
	19+	3.83	1.20
34.	supervisor lets new people try challenging tasks		
	0-12	3.20	1.01
	13-18	3.47	1.33
	19+	3.61	.78
35.	job interest		
	0-12	4.45	1.28
	13-18	4.92	1.25
	19+	4.72	1.02
36.	sense of accomplishment from job		
	0-12	3.60	.88
	13-18	3.78	1.15
	19+	3.94	.73
37.	reenlisting		
	0-12	3.00	1.75
	13-18	2.88	1.65
	19+	3.00	1.53
38.	feel about career field today		
	0-12	3.50	1.76
	13-18	4.63	1.76
	19+	4.00	1.72

39.	importance of job to unit		
	0-12	4.10	1.12
	13-18	4.58	.81
	19+	4.11	1.28
40.	importance of job to AF		
	0-12	4.20	1.01
	13-18	4.63	.49
	19+	4.06	1.26
41.	advice to friend about AF		
	0-12	3.40	.94
	13-18	3.81	.81
	19+	3.69	.87
42.	advice to friend about career field		
	0-12	3.79	.92
	13-18	4.38	1.04
	19+	3.61	1.24
43.	other military view job		
	0-12	3.21	.86
	13-18	3.72	.61
	19+	3.35	.93
44.	civilians view job		
	0-12	3.36	.83
	13-18	3.79	.86
	19+	3.67	.97

(1) cell frequencies are equivalent for other items