A SPECIAL STUDY

WORKFORCE QUALITY AND FEDERAL PROCUREMENT:

An Assessment

A Report to the President and the Congress of the United States by the U.S. Merit Systems Protection Board

U.S. MERIT SYSTEMS PROTECTION BOARD
1120 Vermont Avenue, NW
Washington, D.C. 20419

July 1992

Sirs:

In accordance with the requirements of the Civil Service Reform Act of 1978, it is an honor to submit this Merit Systems Protection Board report entitled "Workforce Quality and Federal Procurement: An Assessment."

In order to accomplish the many tasks assigned to the Federal Government, agencies rely extensively on the procurement of goods and services from the private sector. This report examines the quality of the members of the Federal procurement workforce and the work they perform.

Although contract specialists and their supervisors believe members of the procurement workforce are well-qualified to perform their jobs, clients are not altogether satisfied with the quality of service they receive. The implications of these findings are discussed and recommendations are offered for improving the quality of Federal contracting efforts.

We believe that you will find this report useful as you consider issues concerning the efficient and effective management of the Federal civilian workforce.

Respectfully,

Daniel R. Levinson
Chairman

Antonio C. Amador
Vice Chairman

Jessica L. Parks
Member

The President
President of the Senate
Speaker of the House of Representatives

A Special Study

WORKFORCE QUALITY AND FEDERAL PROCUREMENT: AN ASSESSMENT

U.S. Merit Systems Protection Board

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Executive Summary

In 1991, over 31,000 Federal procurement professionals were responsible for purchasing more than $191 billion in goods and services for the Federal Government. Not surprisingly, given a massive Federal budget deficit and periodic allegations of waste and mismanagement in the procurement process, a great deal of attention has been focussed on the quality of the Federal workers responsible for the vast number of contract and procurement actions taken each year. How qualified are these workers? Can their quality level be improved and, if so, how? Would improvements in workforce quality result in a more effective and efficient procurement process? These were questions the U.S. Merit Systems Protection Board sought to answer in a comprehensive study of the workforce quality and Federal procurement.

As discussed in this report, the Board found that while there is little evidence to suggest that the quality of the Federal procurement workforce has actually declined, neither has there been an increase in workforce quality to match the increasing demands that have been placed on procurement professionals. In fact, according to those most familiar with the procurement system, the workforce is struggling to keep up with potentially counterproductive growth in Federal procurement policy and procedures coupled with an increase in the complexity of the goods and services that the Government contracts for. Correcting this situation could involve: 1) efforts to improve the selection and training of procurement professionals; 2) efforts to encourage and reward creativity; and 3) efforts to simplify the procurement process.

Contract specialists, negotiators, officers, or administrators, procurement analysts, cost analysts, and small business specialists—individuals working under these various job titles make up the GS-1102 series portion of the Federal procurement workforce. It is this very important segment of the Federal workforce that serves as the focal point for this study by the U.S. Merit Systems Protection Board (MSPB or the Board). Even relatively modest improvements in the effectiveness of procurement professionals can have a tremendous budgetary payoff given the tens of billions of dollars involved in the transactions monitored or controlled by this segment of the Federal workforce.

One of the statutory responsibilities of the Board is to provide the President and Congress with periodic reports on the health of the Federal Civil Service and other merit systems. A major purpose

of the civil service system is to enhance the efficiency and effectiveness of the Federal Government by providing for a well-qualified and motivated workforce. Assessing the quality of the Federal workforce, therefore, has been an area of ongoing interest for MSPB. This particular study was initiated to evaluate the quality of the employees involved in Federal procurement activities and the work that they perform.

The information discussed in this study was obtained through four surveys distributed to different groups in order to obtain a variety of perspectives on the quality of work performed by members of the procurement workforce. Surveys were sent to approximately 9,300 current procurement professionals and their immediate supervisors. These surveys asked questions about how well members of the procurement workforce performed the various tasks involved in their jobs and factors which they believe affected performance. Information concerning the quality of service provided by procurement professionals was obtained from two client groups—Senior Executive Service (SES) members and private contractors.

Findings

- **Both contract specialists and their supervisors were quite positive about the capabilities of current members of the procurement workforce.** In fact, both supervisors and employees believe the quality of the procurement workforce is adequate, if not superior. Almost two-thirds of the employees said that they are capable of performing the tasks required by their jobs in an outstanding manner. This assessment of workforce capabilities was supported by the fact that 77 percent of the employees reported receiving above satisfactory annual performance appraisal ratings. Moreover, almost two-thirds said that they received some type of award during 1991.

- **While not quite as positive as their subordinates, supervisors reported that the contract specialists who work for them have the basic skills, knowledges, and abilities needed for their jobs.** When rating their subordinates on tasks that were identified as critical to the work of contract specialists using a five-point scale (with 5 being exceptional), employees received an average rating of 3.7. The only ability in which supervisors were critical of their subordinates was in their lack of creativity.

- **Although employees and their supervisors were quite positive about the capabilities of contract specialists, both groups indicated that procurement professionals need substantial amounts of additional training.** Supervisors, in particular, said that a majority of their subordinates could benefit from additional training in the areas of analytical ability, writing ability, being innovative, and the ability to conduct negotiations.

- **Responses from the two client groups also indicated that members of the procurement workforce were capable in a number of ways.** Both SES members and private contractors said that contract specialists were knowledgeable, helpful, well trained, and generally awarded contracts fairly.

- **Despite the high rating given to the capabilities of contract specialists by their clients, it was also clear that the service provided to clients was not always satisfactory.** Respondents from both groups said that the procurement actions were frequently not completed in a timely manner, that contract specialists did not demonstrate sufficient creativity in their work, and that the procurement process did not always serve the best interests of the Government.

- **Responses from all four groups indicated that many of the problems that exist in Federal procurement are the result of the increasing complexity of the procurement process.** In the view of respondents from all groups, the process has become so complicated that it is sometimes beyond the capability of the average contract specialist to meet the needs of his or her organization in a timely manner while at the same time ensuring that no regulations are broken. Frequently, only the exceptionally talented contract specialist is able to be fully responsive to organizational needs while still adhering to regulatory requirements.

Recommendations

1. **Provide Additional Training to Improve the Quality of the Current Workforce.** Contract specialists need to be better prepared to make the best possible business decisions and provide customer oriented support for their organizational clients. Based upon the information provided by procurement supervisors, training for contract specialists should be directed towards improving the capability of the workforce to conduct negotiations, analyze requirements, write clearly, and develop innovative solutions to meet organizational needs.

2. **Encourage and Reward Creativity.** Although supervisors of contract specialists criticize their subordinates for a lack of creativity, it is supervisors who must bear at least some of the responsibility for this state of affairs. If contract specialists are to be more creative, supervisors need to foster an environment where employees are not afraid to be innovative. Through their leadership, supervisors need to show employees how they can be more responsive to their customers in a cost-effective manner without breaking the rules.

3. **Ensure that High-Quality Selections Are Made for Entry-Level Positions.** Over time, an improvement in the quality of people becoming contract specialists can have a major impact on the quality of Federal procurements. In the recent past, supervisors have not always looked to all possible recruitment sources when filling vacancies. In this regard, greater use should be made of candidates referred for consideration using OPM's new Administrative Careers with America procedures. When considering current Federal employees for placement into entry-level procurement (GS-1102) positions, managers should use a wide area of consideration to gather a pool of high-quality applicants from a broad range of occupations and Federal organizations.

4. **Where Possible, Streamline and Simplify the Procurement Process.** The architects of the procurement process must constantly strive to provide regulatory and procedural safeguards against abuse while still allowing room for the exercise of reasonable judgement on the part of contract specialists. Contract specialists, their supervisors, and their clients all suggest that a reasonable balance in this regard has <u>not</u> been achieved in that the system tilts too heavily towards overly elaborate regulatory requirements and procedures. Too often, it was reported, procurement or contract decisions could <u>not</u> be made in the best interests of the Government and the taxpayer because of the lack of flexibility. For this reason, some simplification of the procurement process could actually improve its efficiency and cost-effectiveness.

Introduction

Background

For a number of years concern has been growing about the quality of the Federal workforce. This issue has important implications for the entire country. In this era of budget constraints, it is particularly important that the quality of the Federal workforce be sufficient to permit the Government to provide the services required by the American public as efficiently as possible.

In recent years, members of the public administration community have raised concerns about a possible decline in the quality of the Federal workforce and the effect it may have on Government operations. Many believe that the refusal to grant pay increases needed to maintain comparability with the private sector in the past and the deteriorating image of the Federal workforce have worked together to reduce the number of highly qualified applicants seeking Federal employment. As noted in several reports by the U.S. Merit Systems Protection Board (MSPB), there is also a perception among many Federal managers that there has been a marked decline in the quality of new hires.[1] To the extent that this has occurred, it could have detrimental effects on productivity for many years. In fact, the U.S. General Accounting Office (GAO) has concluded that the Federal Government's inability to consistently assure the quality of its workforce contributes to the deficiencies experienced in some Government programs and services.[2]

Although concern about a possible decline in quality has been widespread, there have been little or no concrete data to confirm or contradict this belief. Persons who have advocated changes in personnel policies to improve the Government's ability to attract and retain high-quality employees have had only anecdotal reports to support their position. The lack of hard data concerning the quality issue prompted the House Committee on Post Office and Civil Service to ask GAO to determine the feasibility of assessing the current quality of the Federal workforce and any changes that may occur over time. In response to this request, GAO issued a report which recommended a methodology for collecting quality-related information in selected Federal occupations.[3]

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[1] U.S. Merit Systems Protection Board reports addressing the issue of a possible decline the quality of the Federal workforce include: "Federal Personnel Policies and Practices—Perspectives From the Workplace," December 1987; and "Working for America: A Federal Employee Survey," June 1990.

[2] U.S. General Accounting Office, "The Public Service: Issues Affecting Its Quality, Effectiveness, Integrity and Stewardship," June 1989.

[3] U.S. General Accounting Office, "Federal Workforce: A Framework for Studying Its Quality Over Time," August 1988.

Introduction

Since there are no known historic standards against which to compare the quality of today's Federal workforce, it may not be possible to determine whether quality has declined. However, it is feasible to assess the quality of performance by members of the current workforce. Since MSPB believes that information concerning Federal workforce quality is critically important to Federal policymakers, both to determine whether interventions are needed and to serve as a benchmark for future research, the Board undertook this study of the quality of the Federal procurement workforce and the work that it performs.[4]

Why Study the GS-1102 Procurement Workforce?

There may be no area where there has been greater concern about the quality of Federal workers and the work they perform than in the procurement of goods and services from the private sector. During the 1970's and early 1980's there were several highly publicized incidents which involved questionable Federal spending. Employees responsible for Government procurements were severely criticized for spending too much money to purchase a variety of products ranging from coffee pots to major weapon systems.

As a result, the Government instituted a number of changes in the procurement process which were intended to reduce the probability of abusive spending. These changes included increasing the number of people working as contract specialists.[5] The intent was to reduce the pressure and responsibility for procurement actions that would be placed on any one person. The net effect was a 61-percent increase in the number of people employed in full-time permanent GS-1102 procurement positions between 1980 and 1991 (from 19,409 to 31,287).

In addition to increasing the number of people employed in the GS-1102 series, the Government attempted to reduce the likelihood of abuse in the procurement process by issuing many new regulations. In fact, according to the Office of Federal Procurement Policy (OFPP) of the Office of Management and Budget, the Federal Acquisition Regulations grew from 1120 pages in 1984 to 1548 pages in 1990. Moreover, in most cases, agencies have also issued volumes of their own internal rules interpreting these regulations.

Although these actions may be effective in reducing the number of abuses, they may also lead to other problems. In 1982, OFPP speculated that work in the procurement field would become increasingly complex as a result of so many new regulations. Given this increase in complexity, it was OFPP's view that a more professional procurement workforce would be needed to carry out agency missions.[6] For this reason, OFPP proposed the development of a uniform procurement system and efforts intended to improve the quality of Federal contract specialists.

Despite OFPP efforts at improvement, Federal procurement continued to be the subject of much criticism and scrutiny during the 1980's. In 1986, the President's Blue Ribbon Commission on

[4] Other studies issued by the U.S. Merit Systems Protection Board concerning Federal workforce quality include: "Who is Leaving the Federal Government?," August 1989; "Why Are Employees Leaving the Federal Government?," May 1990; and "Federal First-Line Supervisors: How Good Are They?," March 1992.

[5] For purposes of this study we will refer to all persons responsible for Federal procurements who work in the GS-1102 occupational series by the generic term contract specialist. This includes people employed under the titles of contract specialist, contract negotiator, contract officer, contract administrator, procurement analyst, and other similar positions classified in the GS-1102 series.

[6] U.S. Office of Management and Budget, Office of Federal Procurement Policy, "Proposal for a Uniform Federal Procurement System," February 1982, p. 37.

Defense Management (also known as the Packard Commission) reviewed the Defense acquisition process and concluded that it was cumbersome and inefficient. They found that acquisition personnel were burdened by too many laws, regulations, and layers of review. The Commission recommended that Defense acquisition policy and oversight be consolidated and that duplicative functions and excessive regulations be eliminated. According to the report:

> All of our analysis leads unequivocally to the conclusion that the defense acquisition system has basic problems that must be corrected. These problems are deeply entrenched and have developed over several decades from an increasingly bureaucratic and overregulated process.[7]

Problems in the area of procurement were not limited to the Department of Defense agencies. In 1989 GAO issued a study concerning the state of Federal procurement across Government agencies which concluded:

> The contracting deficiencies that we identified generally resulted from people failing to coordinate or to properly carry out their responsibilities, rather than from a need for additional rules and regulations governing what should be done when writing or administering contracts.[8]

According to GAO, "While additional rules and regulations are not required, we further believe that the deficiencies identified will continue to occur unless specific action is taken to strengthen civilian agency contracting practices."[9]

In addition to being concerned about potential problems in the Federal procurement process, the Board chose to look at the quality of Federal procurement because of the tremendous impact contract specialists have on Government operations. To illustrate the importance of their work, during 1990 alone, contract specialists made purchases costing the Government over $191 billion dollars.[10] This was an increase of almost $18 billion dollars (or 10 percent) since 1980. Unquestionably, employees who play pivotal roles in the expenditure of such large sums of money can dramatically affect the quality and cost effectiveness of services provided to the public by the Federal Government.

Purposes of This Study

This study was designed in an attempt to determine the quality of both the Government's contract specialist employees and their work. Since it is difficult to develop an adequate single definition of what is meant by quality in the area of Federal procurement, this study tried to assess quality from four different perspectives. Two of these perspectives were provided by people currently working in Federal procurement—current contract specialist incumbents and their

[7] President's Blue Ribbon Commission on Defense Management, "A Formula for Action: A Report to the President on Defense Acquisition," September 1986, p. 5.

[8] U.S. General Accounting Office, "Civilian Agency Procurement: Improvements Needed in Contracting and Contract Administration," September 1989, p. 33.

[9] Ibid., p. 34.

[10] Estimates of changes in the number of pages of the FAR between 1984 and 1990 as well as changes in the number of people employed in the GS-1102 series and monies spent were provided by the Office of Federal Procurement Policy of the Office of Management and Budget.

supervisors. The other two perspectives were from clients for the services provided by contract specialists—members of the Senior Executive Service and private sector vendors who provide goods or services to the Government under contracts administered by contract specialists. By integrating the perspectives of employees, their supervisors, senior Government managers, and private contractors, this study presents a multidimensional picture of the extent to which a major segment of the Federal workforce is accomplishing its assigned tasks.

Another of our objectives in conducting this study was to develop a baseline which could be used to evaluate the effects of various factors on workforce quality over time. Rather than having to rely on anecdotal information concerning changes in quality, it is our hope that future researchers will be able to use these baseline data to determine the actual effect on contract specialist workforce quality of things such as pay reform, recruiting initiatives, and training efforts.

In addition, we used information collected in this study to validate a variety of presumed indirect indicators of quality. We asked employees and their supervisors participating in this survey questions about each employee's education level, major field of study, grade point average in college, and awards given. Responses to these items were statistically compared with assessments of the quality of work performed by the individual (as reported in both self ratings and ratings provided by the individual's supervisor) to determine which if any of these potential indicators were actually related to performance.

Quality in Procurement: Views from the Workforce

Methodology

If we want to understand the factors that affect the quality of the goods and services obtained through the Federal procurement process, one of the best places to start is with the people who probably know the most about the subject: the Federal employees working in the GS-1102 series and their supervisors. People who actually work as contract specialists, as well as those who supervise them, may be in the best position to judge whether members of the workforce have the skills, knowledges, and abilities that are required by their jobs. They are also the best available sources for information concerning qualifications, working conditions, and other factors which may affect how they perform their jobs.

In order to obtain information concerning these issues, we developed separate surveys for distribution to a sample of employees in the GS-1102 series and their supervisors. Employees were randomly selected from the Central Personnel Data File, maintained by the U.S. Office of Personnel Management (OPM), to be representative of all grade levels and major agencies in the Federal Government. Survey questionnaires for both employees and supervisors were developed with the help of subject-matter experts in the area of Federal procurement, particularly the Federal Acquisition Institute.[11]

Employees selected for the survey were asked to tell us how well they performed the aspects of their jobs that were identified as critical to successful performance through traditional job analysis techniques. They were also asked to tell us about their backgrounds and the conditions under which they worked. Copies of this survey were distributed by mail in March 1991 to 9,300 of the approximately 31,000 persons employed in the GS-1102 series. Altogether, completed surveys were returned from 5,807 employees, for a return rate of 62 percent.

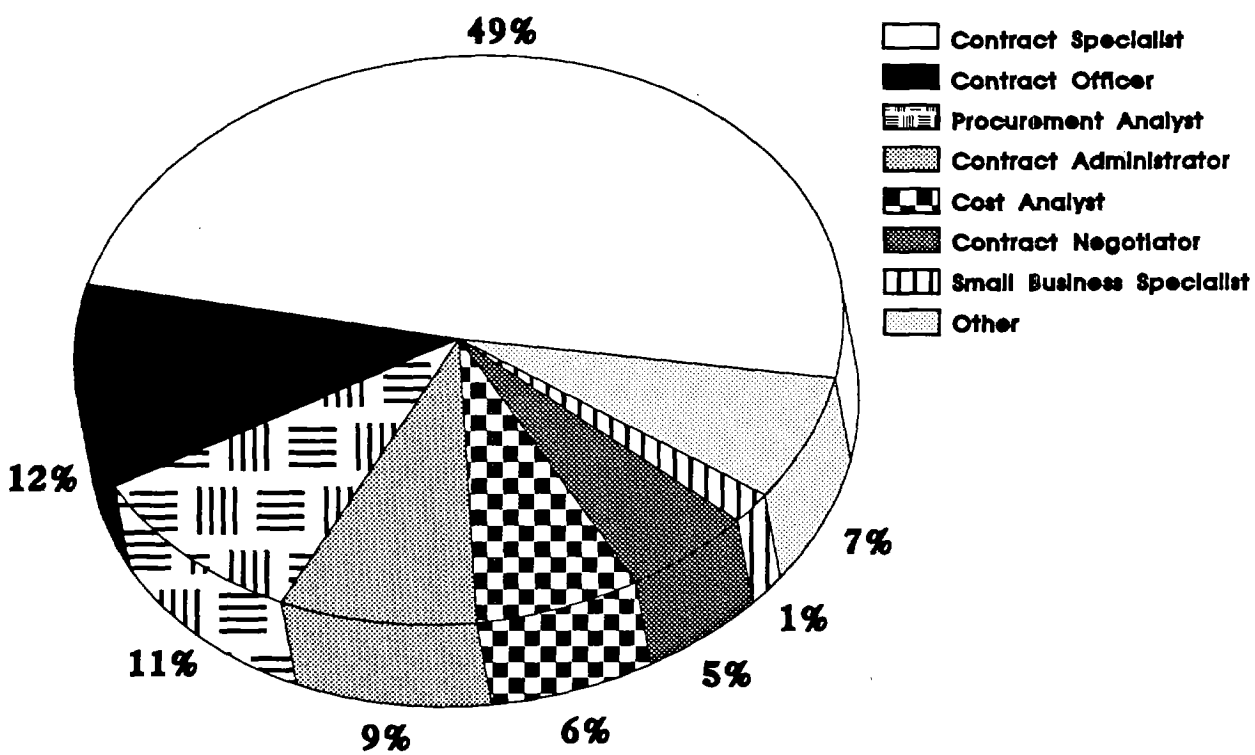
In order to get a second perspective on each employee's performance, we distributed to each employee's supervisor a survey very similar to the one sent to contract specialists. The questionnaire for supervisors differed from the one sent to employees primarily in that it asked supervisors to provide a confidential assessment of their subordinates' performance, in terms of both individual tasks and what they added to the accomplishment of organizational objectives.

[11] Although normally MSPB includes copies of surveys used in an appendix to its reports, in this case we have chosen not to do so because of the length of the surveys. Both the employee and supervisory surveys were each 16 pages long, while the survey for SES members was 8 pages and the survey for private contractors 4 pages. Anyone desiring copies of the surveys may obtain them by writing to the Office of Policy and Evaluation, U.S. Merit System Protection Board, 1120 Vermont Avenue, NW, Washington, DC, 20419.

Since a relatively high percentage of the total GS-1102 workforce was included as part of our sample, it was not uncommon for a given supervisor to be required to complete a survey for more than one subordinate. This placed a very large burden on some supervisors. Despite this situation, we received completed survey forms from 5,646 of the supervisors of the 9,300 employees selected for participation in this study. This represents a response rate of 61 percent.

To a great extent, the high response rate for both surveys was the result of the emphasis and support provided by the Office of Federal Procurement Policy, its task force for the professionalization of the procurement workforce, and the members of the Interagency Procurement Career Management Committee. MSPB is grateful for this support.

FIGURE 1. DISTRIBUTION OF JOB TITLES AMONG GS-1102 EMPLOYEES



General Characteristics of Federal Contract specialists

According to their responses, people working in the GS-1102 series most frequently describe themselves as contract specialists (49 percent). Figure 1 shows the distribution of all job titles for respondents. Among our respondents, 6 percent were trainees (i.e., at grades 5-7), 67 percent were found at the GS-9 to GS-12 levels, and 27 percent were at senior levels (i.e., GS-13 and above). The mean and median grade was GS-12. Most were covered by the General Schedule pay system (81 percent), with 18 percent being covered by the Performance Management and Recognition System. An additional 0.4 percent were members of the Senior Executive Service.

All employees were asked in our questionnaire whether they performed 99 different tasks that had been identified as important to the procurement function through job analyses conducted by the Federal Acquisition Institute. The results showed that even among employees with the same job title there was a great deal of diversity in the tasks each employee was required to perform.[12] However, most employees said that they were responsible for performing the majority of the 99 tasks included in the survey.

Ratings of Quality of Performance on Critical Tasks

Employees were also asked to rate their own performance using a five-point scale for each of the 99 tasks that they personally performed. Since analysis of the ratings showed that there was a great deal of variation in the tasks performed by different employees, we felt that rather than looking at employee ratings on all tasks, it was more useful to look at employee ratings on a subset of tasks that were important to most jobs. In order to decide which tasks were most important, we again asked for the assistance of subject-matter experts at the Federal Acquisition Institute. These experts identified 20 tasks which they believed were critical for almost all contract specialists to perform well. Review of these tasks showed that they were performed by most of the people working in this area. In fact, each task was performed by the vast majority of the contract specialists who were in nonsupervisory positions.

Employees' ratings of their performance on each of these 20 tasks are presented in table 1. A response of "1" meant that they believed they were unable to perform the task and a "5" meant that they performed this task exceptionally well. A "3" meant that they performed this task at an acceptable or average level. Table 1 also shows the average ratings provided by supervisors for their subordinates. In order to be sure that we were looking only at ratings for those employees who have advanced beyond trainee levels, only the ratings for employees at the GS-9 level or above were used in computing the results summarized in table 1. Additionally, in the case of supervisory ratings, results were based only on ratings for employees who have worked at least 6 months for the supervisor providing the rating. The results shown in tables 2 through 4 are also based solely on ratings from employees who are at grades GS-9 or above and, in the case of supervisory ratings, include only those employees who have worked for the supervisor providing the rating at least 6 months.

[12] An analysis of tasks performed by job title showed that the survey did not comprehensively cover the tasks performed by three groups of employees: procurement analysts, cost analysts, and small business specialists. This actually occurred by design. We expected that since these jobs were quite different in terms of the tasks performed, inclusion of all the tasks needed to cover these jobs would have made the questionnaire far too long. For this reason, analyses using ratings of performance on job-related tasks do not include the 18 percent of the GS-1102 workforce who work under these three job titles. Employees working in these positions were, however, included in analyses based upon self-ratings of abilities and overall supervisory assessments of performance.

Table 1

Average Self and Supervisory Ratings of Performance on Critical Tasks by GS-1102 Employees

(Ratings Provided for Employees at Grades GS-9 and Above)

Task	Ave. Self Rating	Ave. Supervisory Rating
Conduct market research	3.91	3.70
Review statements of work	3.88	3.77
Determine competition requirements	4.02	3.89
Identify price-related factors	3.63	3.59
Review business management factors	3.73	3.63
Identify contract type	3.93	3.78
Prepare requests for proposals	4.14	3.92
Determine low bids	4.02	3.89
Review technical evaluations	3.91	3.75
Evaluate offers	3.95	3.76
Conduct cost analysis	3.91	3.72
Determine competitive range	3.91	3.74
Develop negotiation strategy	3.87	3.68
Conduct negotiations	3.90	3.75
Determine standards of responsibility	3.98	3.84
Respond to protests	3.63	3.57
Monitor compliance	3.81	3.71
Identify contractual remedies	3.67	3.56
Determine contract modifications	4.05	3.84
Research claims	3.60	3.57
Average for 20 tasks	3.87	3.73

Note: Rating scale is explained in the text preceding this table.

Comparisons of the performance ratings provided by both employees and their supervisors show that both groups were quite positive about the quality of the work performed by members of the contract specialist workforce on these 20 critical tasks. In fact, the overall mean rating of 3.87 indicates that the overwhelming majority of employees (on average, 65 percent of the employees) thought that they performed these tasks in an above average manner. Supervisors also rated their employees positively but slightly lower, with an average rating of 3.73 (reflecting that, on average, 58 percent of the supervisors reported that their subordinates performed these tasks in an above average manner).

It is worth noting that there was a tendency for both employees and supervisors to use similar patterns in rating each of the 20 tasks. That is, although employees rated themselves higher than their supervisors did, they tended to rate themselves highest and lowest on the same tasks as did their supervisors. This indicates that the relative ratings of the different tasks probably reflect actual differences in performance. The tasks with the highest ratings from both sets of raters are probably those that employees perform the best, while those with the lowest ratings are ones where employees most need improvement.

Table 2

Percent of the GS-1102 Workforce Seen by Employees and Supervisors as Needing Additional Training on Critical Tasks

(Ratings Provided for Employees at Grades GS-9 and Above)

Task	Percent Needing Training: Employee Rating	Percent Needing Training: Supervisor Rating
Conduct market research	34	36
Review statements of work	38	36
Determine competition requirements	27	24
Identify price-related factors	41	38
Review business management factors	42	41
Identify contract type	31	29
Prepare requests for proposals	26	24
Determine low bids	24	20
Review technical evaluations	32	35
Evaluate offers	33	35
Conduct cost analysis	36	38
Determine competitive range	29	31
Develop negotiation strategy	36	38
Conduct negotiations	35	37
Determine standards of responsibility	24	23
Respond to protests	40	38
Monitor compliance	30	30
Identify contractual remedies	38	40
Determine contract modifications	25	25
Research claims	43	43
Average for 20 tasks	33	33

To the extent that self and supervisory ratings of performance on these 20 critical tasks are indicative of quality, it would appear that the quality of work performed by members of the GS-1102 workforce is quite high. Even so, as shown in table 2, apparently a relatively large percentage of both employees and supervisors believed that there is substantial room for improvement as indicated by the percentage of employees and supervisors who said that at least a moderate amount of training is required in order to perform each task better.

If a comparison is made between employees' self ratings of performance shown in table 1 and their expressed need for additional training presented in table 2, there is an apparent contradiction. Although the vast majority of the employees (on average, 96 percent) said that they were performing at least adequately, over one-third said that they needed additional training on these same tasks. This apparent discrepancy was at least partially explained in written comments received from numerous employees in response to the survey. Employees routinely maintained that they simply cannot keep up with the changes occurring in both the Federal Acquisition Regulations (FAR) and agency implementation of these regulations. According to one respondent, "There seems to me to be an exponential rate of growth in the regulations governing the procurement process." This growth in the number of regulations puts a tremendous burden on contract specialists. The result of all of the changes in regulations is that training is continually needed to keep current with the ever-changing Federal contracting environment. Many contract specialists believed the need for training will certainly increase as long as the number of regulations governing procurement actions continues to grow.

Additionally, the results show that both employees and supervisors believed that a substantial portion of the contracting specialists workforce need training that is specifically focused on each of the 20 critical tasks. Interestingly, although supervisors, on average, gave slightly lower performance ratings, both employees and supervisors believed that virtually the same percentage of employees need additional training on each task.

Ratings of the Abilities of Contract Specialists

In addition to collecting information concerning performance of work-related tasks, our survey asked employees to rate themselves on nine basic abilities that were identified as essential to performing the duties of a contract specialist through job analyses conducted by the Federal Acquisition Institute. Employees were asked to rate themselves using a four-point scale which ranged from "1," indicating that they believed that they do not possess an ability, to "4," indicating that they possess an ability to a great extent. A rating of "3" meant that they believed that they possess an ability to the extent needed to adequately perform tasks requiring the ability. Once again, ratings on the same abilities were obtained from each employee's supervisor.

Table 3 presents the percentage of employees who rated themselves as possessing each ability to the extent needed to adequately perform the tasks requiring each ability, as well as the ratings provided by their supervisors. The table also shows the percentage of employees rated (by themselves and their supervisors) as possessing each ability to the extent needed to perform in an outstanding manner.

As reflected in this table, employees generally believed that they are well-qualified to perform their jobs. Almost all of them felt that they possess the abilities needed to perform their job in at least an acceptable manner. With regard to most of the abilities, a large number of employees believed that they have the ability to do outstanding work. Exceptions to this were the abilities to innovate and to conduct negotiations.

As table 3 also shows, employees believed that they possess each of the abilities to a somewhat greater degree than did their supervisors. In every case more employees rated themselves as possessing adequate or outstanding levels of each ability than did their supervisors. In contrast to the ratings provided by employees, the supervisory ratings on the nine essential abilities presented a picture of a capable, but somewhat less than outstanding, workforce. As seen in this table, supervisors were uniformly and significantly less likely to rate employees as outstanding with regard to each ability. In one noteworthy area, ability to innovate, supervisors reported that more of their subordinates had less than adequate levels of this ability (25 percent), than were rated above average (22 percent).

Interestingly, despite the fact that they rated themselves highly on almost every ability, many employees felt that additional training is needed in each of the nine areas if they are to perform their jobs well. Table 4 shows the percentage of the GS-1102 workforce seen as needing training in order to improve performance, by both the incumbents themselves and their supervisors.

Table 3

Self and Supervisory Ratings of Abilities Essential to the Work of GS-1102 Employees

(Percent of GS-9 and Above Employees Rated "Adequate" and "Outstanding")

	Self Ratings		Supervisory Ratings	
Ability	Adequate	Outstanding	Adequate	Outstanding
Directing Work Activities	50	41	54	28
Planning and Organizing	42	52	50	37
Human Relations Ability	46	46	52	32
Analytical Ability	47	45	48	37
Oral Communications	47	46	52	37
Writing Ability	46	46	51	33
Ability to Innovate	54	32	53	22
Ability to Initiate Action	48	45	50	34
Conducting Negotiations	48	36	49	33
Average	48	43	51	33

Table 4

Percent of the GS-1102 Workforce Seen by Employees and Supervisors as Needing Additional Training in Abilities Essential to Their Work

(Ratings Provided for Employees at Grades GS-9 and Above)

Ability	Percent Needing Training: Employee Rating	Percent Needing Training: Supervisor Rating
Directing Work Activities	30	55
Planning and Organizing	26	53
Human Relations Ability	34	55
Analytical Ability	40	58
Oral Communications	31	50
Writing Ability	35	57
Ability to Innovate	37	55
Ability to Initiate Action	26	47
Conducting Negotiations	53	66
Average	35	55

Table 4 shows that a sizable percentage of both employees and supervisors believed that there is a definite need for more training in almost every aspect of work performed by contract specialists. However, perhaps what is most striking is the discrepancy between employees and supervisors in terms of the percentage of employees they believed need training in virtually every ability. Although supervisors believed that employees generally possess acceptable levels of the abilities needed to perform their job, they apparently also believed that there is much room for improvement. In fact, in almost every area, supervisors said that the work of over half of the people they supervised could be improved by additional training. By contrast, only about one-third of the employees reported that they could benefit from additional training. Both employees and supervisors agreed, however, that the area with the most room for improvement is conducting negotiations. For their part, supervisors also felt that significant improvements could be made through training in analytical ability and the ability to write. This assessment is particularly important since supervisors frequently indicated, in comments provided to our survey, that analyzing and writing are two of the most important abilities needed by contract specialists.

Research and Official Performance Appraisal Ratings

Another important measure of the quality of an employee's work is the official performance appraisal rating that a supervisor is required to give each subordinate every year. This is a rating provided on a five-point scale, running from "unsatisfactory" (or "1") to "outstanding" (or "5"). Theoretically, a rating of "fully successful" (or "3") is a good rating indicating that the employee is performing the job that he or she is supposed to do in an acceptable manner. In actual practice, however, the majority of employees in the Federal Government receive ratings higher than "fully successful."[13]

In order to gather data about these ratings for contract specialists, we asked employees what rating they had received during their most recent formal performance appraisal. In response to this question, 31 percent said that they had been rated "outstanding" and 45 percent "exceeds fully successful." Only 24 percent indicated that they had been rated "fully successful." Fewer than 1 percent said that they had been rated "less than fully successful." These same respondents reported similar distributions of ratings for each of the previous 2 years as well.[14]

In our opinion, the formal performance rating given to the employee each year can be influenced by a number of factors other than the employee's work performance. In fact, research by OPM has shown that when supervisors were asked to provide confidential ratings on the performance of employees they supervised, these ratings were significantly different from the official performance rating they gave the employee.[15] Accordingly, we adapted six rating scales for use with the procurement function from the scales used by OPM in their studies of workforce quality.[16] We asked each employee's supervisor, for purposes of our research, to provide confidential ratings of their subordinate's work on each of these six dimensions. Each supervisor was also asked to provide an overall research rating assessing each employee's contribution to the organization. As is done when providing an employee with an official performance rating, supervisors were asked to rate employees on a five-point scale, with a "1" being assigned to the lowest rating and a "5" to the highest. Table 5 shows the average most recent official rating as reported by employees. It also presents the average ratings provided by supervisors for their subordinates on each of the six confidential research rating scales and the overall research rating given to members of the contract specialist workforce.

[13] U.S. Merit Systems Protection Board, "Toward Effective Performance Management in the Federal Government," July 1988, p. 8.

[14] Comparable percentages of employees receiving ratings above "fully successful" have been reported for other occupational series in the Federal Government. In U.S. Office of Personnel Management, "Scientists and Engineers in Civilian Agencies: Study of Quality-Related Factors (1990)," Rept. No. WQR 91-01, March 1991, p. 15, it is reported that 66 percent of these employees received ratings above "fully successful." Similarly, U.S. Office of Personnel Management, "Computer Specialists in Federal Agencies: Study of Quality-Related Factors," Rept. No. WQR 91-02, June 1991, p. 23, reports that 69 percent of the employees working in this area received ratings above "fully successful."

[15] Jay Gandy, "Quality of PAC Hires: Job Performance and Other Indicators for 1983-1986 Appointments in Professional and Administrative Career (PAC) Occupations," U.S. Office of Personnel Management, Rept. No. WQR 90-1, June 1990.

[16] For other studies in workforce quality using confidential ratings of subordinate performance see: U.S. Office of Personnel Management, "Scientists and Engineers in Civilian Agencies: Study of Quality-Related Factors (1990)," Rept. No. WQR 91-01, March 1991; and U.S. Office of Personnel Management, "Computer Specialists in Federal Agencies: Study of Quality-Related Factors," Rept. No. WQR 91-02, June 1991.

Table 5

Most Recent Official Rating and Mean Research Ratings for GS-1102 Employees

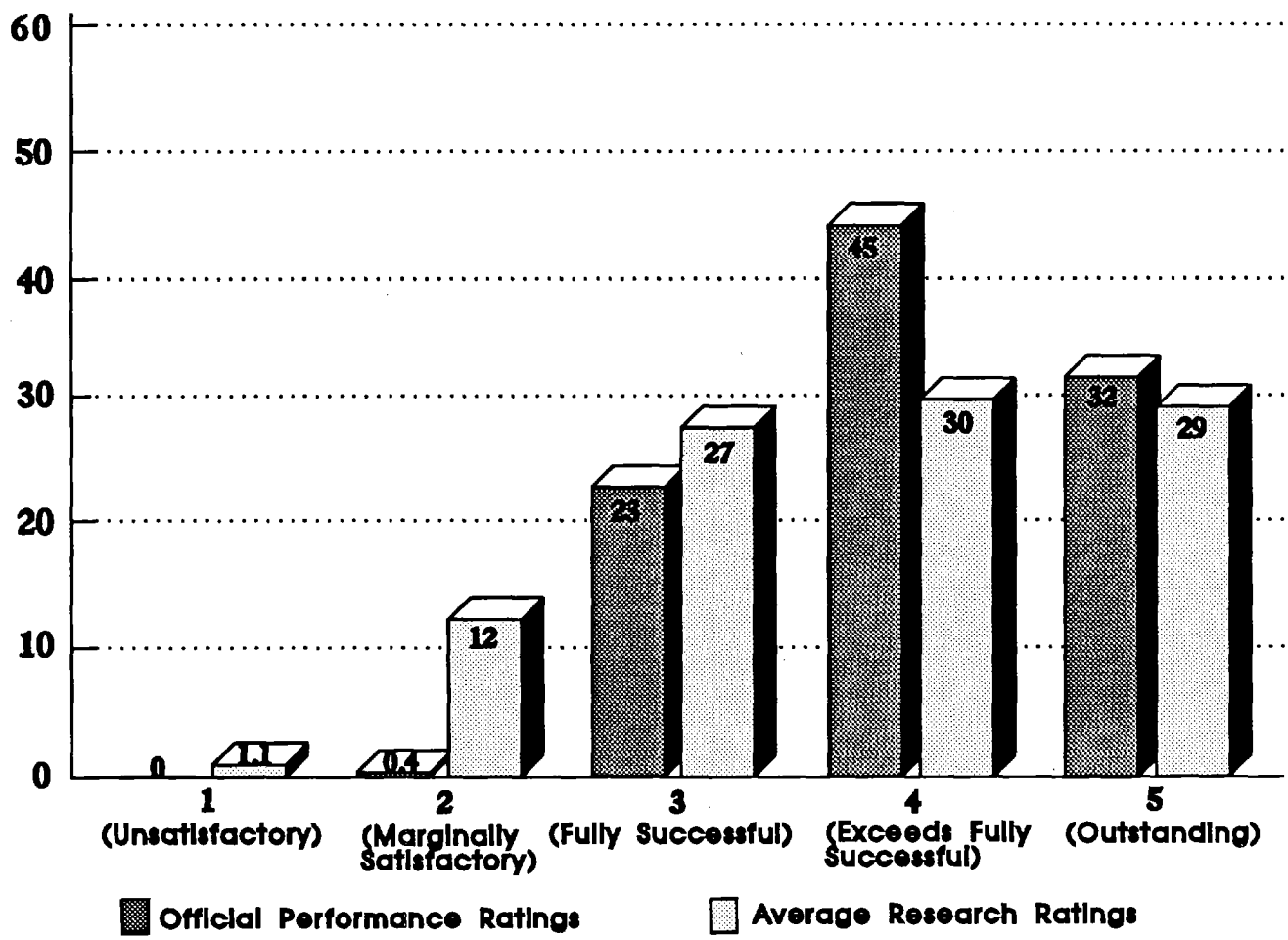
Most Recent Official Appraisal Rating	4.07
Mean Research Ratings	
Quantity of Work Performed	3.63
Quality of Work	3.76
Variety of Assignments Handled	3.66
Concern with Meeting Customer Needs	4.00
Creativity of Work	3.40
Possession of Required Skills, Knowledges, and Abilities	3.95
Mean of Six Research Rating Elements	3.74
Overall Research Rating	3.72

As table 5 shows, compared to the official performance appraisal ratings, supervisors frequently gave lower ratings to their subordinates when asked to provide confidential research ratings of employee performance. To some extent, this may reflect inflation in the official performance appraisal ratings. Employees not only received significantly lower overall research ratings than official ratings but, as shown in figure 2, there was also a more even distribution for the overall research ratings than for the official ratings. Considerably fewer employees were rated in the "highly successful" (4) category, and many more employees were rated "minimally successful" (2) in the overall research ratings than in the official ratings.

Although inflation in the official performance appraisal ratings may account for some of the difference between those ratings and the confidential research ratings, it does not account for all of the difference. If it did, there would be a strong statistical relationship between the two types of ratings (i.e., employees who received high official ratings would most frequently receive high research ratings and employees who received low official ratings would tend to get low research ratings).

While there were statistically significant relationships between an employee's most recent official rating and each of the six confidential research ratings provided for that employee, the amount of similarity between the ratings was surprisingly small (i.e., employees who received high official

FIGURE 2. DISTRIBUTION OF OFFICIAL AND AVERAGE RESEARCH RATINGS FOR GS-1102 EMPLOYEES



ratings often did not receive similarly high research ratings).[17] Similar relationships between official and research ratings have been reported in research conducted by OPM.[18]

One possible reason for the difference between official ratings and the research ratings is the fact that employees provided the information concerning their latest official rating. If employees

[17] Across the six research dimensions the correlation coefficients with the official rating ranged from r=.22 (concern with meeting customers needs) to r=.35 (quantity of work performed). The correlation coefficient between the overall research rating and the official rating was r=.37. In each case the correlation coefficients were significant at the p.< .01 level.

[18] Jay Gandy, Walter Mann, and Alice Outerbridge, "Job performance criteria and biodata validity: Comparisons and considerations," In J.C. Sharf (Chair), "Innovative research on the IAR: The first Federal-wide biodata form," Symposium conducted at the fifth annual conference of the Society for Industrial and Organizational Psychology, Miami Beach, FL, April 1990, p. 5.

were not accurate in reporting this information, this could account for some of the differences between the two types of ratings. Results from other studies indicate, however, that employees do tend to be accurate in providing this type of information.[19] It is possible, however, that some of the difference between the two types of ratings could have resulted from some employees having changed supervisors between the time of their most recent official performance rating and when we conducted this survey. It is unlikely, however, that this would have happened frequently enough to account for all of the difference.

Based upon these results we can conclude that official performance ratings and the confidential research ratings do not measure all of the same aspects of the quality of an employee's work performance. While we cannot say definitively that the research ratings provide more accurate assessments of the quality of the work performed by a given employee than the official performance rating, it is clear that the different types of ratings result in somewhat different assessments of performance. Taken together the two types of ratings probably provide a more complete picture of the quality of an employee's work than would otherwise be available. The point is that in assessing the quality of work performance among procurement professionals, and presumably other occupations, it is important not to rely solely on official performance appraisal ratings.

Despite supervisors' tendency to give lower research ratings than official ratings, the research ratings we obtained were still fairly high. In fact, over 59 percent of the employees received average research ratings that placed them in a category above "fully successful." In response to one question, over 92 percent of the supervisors also said that the employees they supervise make efficient use of time. Another 64 percent said that the quality of the work performed by their subordinates was superior. Additionally, when questioned about the ability of their subordinates to handle multiple job operations, 60 percent said that their subordinates could efficiently perform many different assignments. Moreover, 70 percent felt that their employees almost always maintained a positive service orientation towards clients and colleagues. Only in the area of creativity were supervisors somewhat negative, as only 44 percent said that the work of their subordinates showed a high degree of creativity.

Factors Related to Contract Specialist Workforce Quality

Educational Characteristics of Contract Specialists

In addition to analyzing ratings on abilities, performance of job-related tasks, and overall performance, we attempted to look at a number of additional factors that could be related to the quality of work performed by Federal contract specialists. This effort included collecting information from GS-1102 incumbents concerning their formal educational backgrounds, awards they have received, and Government training courses they have completed.

An issue of some concern among senior management officials in procurement was the level of education completed by people working in procurement. In discussions held with these officials when we were planning this study, they suggested that too few of the people entering the GS-1102 series during the last 10 to 15 years have completed sufficient levels of education to prepare them to perform their work. According to at least some of these senior officials all contract specialists

[19] U.S. Office of Personnel Management, "Computer Specialists in Federal Agencies: Study of Quality-Related Factors (1990)," Rept. No. WQR 91-02, June 1991, p. 21.

Table 6

Highest Level of Education Completed by Current GS-1102 Employees

Highest Education Level Completed	Percent
Less than High School	0.1
High School Graduate	15.9
Some College	27.1
Bachelor's Degree	29.1
Some Graduate School	11.8
Master's Degree	14.3
Ph.D. or Other Professional Degree	1.6

should possess at least an undergraduate college degree. The highest levels of education completed for persons working in the GS-1102 series are shown in table 6.

Given the concerns expressed to us by senior officials in procurement, it is somewhat surprising to note that over half (57 percent) of the people working in this area have earned at least a bachelor's degree and about one in six has obtained at least a master's degree. There is some evidence, however, to support the contention of many senior procurement managers that persons entering the GS-1102 series during the last 10 to 15 years are somewhat less likely to have achieved the educational level attained by those who entered the contract specialist workforce before that time. In fact, a breakdown by length of time working in the GS-1102 series revealed that over 61 percent of the persons working in this series for 15 or more years have attained at least a bachelor's degree. By comparison, slightly fewer than 53 percent of the people entering this series during the last 15 years have completed the same level of education. It is possible, however, that some of the difference in the percentage of employees possessing a college degree may be related to the fact that employees with more years of service would also have had more time to earn a college degree after becoming procurement specialists.

Self reports of grades obtained in school also suggest that employees did quite well in the course of getting their degrees. The overall grade point average (GPA) reported by contract specialists who completed college was 3.13 on a four-point scale. Moreover, the GPA for the employee's last 2 years was 3.29 and 3.35 in his or her major field. Additionally, more than 75 percent of the employees reported that they were in the top 25 percent of their graduating class.

While survey responses make it clear that most contract specialists have completed at least some college, an additional potentially important question is whether the education they have completed is in any way related to the procurement work that they are asked to perform. For this reason, we asked employees whether they had completed a variety of courses which might be relevant to work in this field. Table 7 shows the percentage of employees in the GS-1102 series who have completed undergraduate or graduate courses which might be considered related to the procurement function.

Table 7

College Courses Completed by GS-1102 Employees

Course Title	Percent Completing Course: Undergraduate	Percent Completing Course: Graduate
Marketing	34	4
Accounting	49	5
Business Management	43	7
Business Statistics	30	4
Business Economics	37	5
Other Business	38	5
Banking and Finance	24	3
Operations Research	7	1
Mathematics	45	3
Computer Science	26	2
Economics	44	5
Political Science	28	2
Principles of Contracting	28	2
Contract Law	41	3

As this table illustrates, the vast majority of the incumbents in GS-1102 positions have completed at least some college-level course work which may be related to their work as contract specialists. Nevertheless, fewer than half have completed a large number of procurement-related college courses (i.e., six or more courses). It is also worth noting that the likelihood of completion of college courses in these areas varied by length of service. Persons with less experience in the procurement field, on average, have completed fewer of these college courses.

In our discussions with senior procurement officials several of them suggested that the quality of the procurement workforce could be improved by establishing new minimum qualification standards for people entering the GS-1102 series. Their proposal included limiting hiring for entry-level positions in the GS-1102 series to college graduates or to persons who have completed at least 24 hours of college courses in related subjects. To the extent that it can be shown that coursework in related fields is related to performance, it is possible that the quality of new entrants to the contract specialist workforce could be improved by this requirement. It should be noted, however, that according to our results, only about 40 percent of the current GS-1102 workforce would meet the requirement of 24 hours of related coursework. More importantly, an analysis of the relationship between completion of these courses and work performance revealed that there is only a minimal

relationship between the number of these courses the person has completed and the various assessments of his or her performance. In a way this finding is not surprising. According to supervisors responding to our survey, the performance of contract specialists often depends upon their ability to think analytically and write clearly. Competence in these abilities may be demonstrated in a variety of courses, from science to English, and not just in those that would appear to be directly related to procurement work.

Completion of Government-Sponsored Training Courses

In addition to having completed college courses, persons in procurement may have completed Government-provided training courses which were intended to prepare them to do their jobs. These courses differ from those that are offered through colleges or universities in that they are typically shorter in nature and focus on a particular aspect of Federal procurement. The percentage of incumbents who reported having completed formal Government-provided training in a variety of general procurement-related areas is shown in table 8.

Clearly, most of the people working in this area have completed training in the basic procurement areas. Considerably fewer, however, have completed advanced courses. Presumably the more training completed the better prepared employees should be to perform their jobs well. In fact, analyses using the various ratings of performance that were discussed earlier in this

Table 8

Completion of Government Training in Procurement by GS-1102 Employees

Training Area	Percent Completing
Basic Procurement Management	81
Advanced Procurement Management	51
Contract Administration	70
Advanced Contract Administration	38
Cost and Price Analysis	81
Advanced Cost and Price Analysis	19
Government Contract Law	74
Small Purchases	63

study showed that there was indeed a statistically significant relationship between the number of training courses completed and each of the ratings of performance. This was true regardless of whether the ratings were provided by incumbents or their supervisors.

Likelihood of completion of these courses to some extent varied by agency. *Although discussions with procurement personnel revealed the expectation that persons working for the Defense agencies (i.e., the Army, Navy, Air Force, and Defense Logistics Agency) would be more likely to have completed training, particularly advanced training, this did not prove to be the case.* In fact, we found very few differences between employees working for Defense agencies and those working for non-Defense agencies.

Awards Received by Members of the GS-1102 Workforce

Receipt of some type of award during 1990 was reported by almost two-thirds of the procurement workforce. Some 47 percent reported receiving at least one award during 1989. Table 9 breaks down these totals by type of award.

To the extent that awards are a good indication of high-quality work, employees in the GS-1102 series are certainly doing a good job. Given the distribution of official performance appraisal ratings that was discussed earlier, it is not surprising that a high percentage of incumbents received performance awards. Perhaps even more importantly, statistical analysis revealed that the total

Table 9

Percent of GS-1102 Employees Receiving Awards During the Past 24 Months

Type of Award	Most Recent 12 Months	12 Months Preceding
Performance	48.0	31.3
Beneficial Suggestion	2.4	3.7
Special Act	13.5	12.1
Quality Step Increase	16.1	9.4
Sustained Superior Perf.	15.8	14.8
SES Presidential Rank	0.1	0.2
Professional Society	0.8	0.1
Foundation	0.1	0.1
Other Awards	4.4	1.8

Note: The percentages can't be summed to the total percentage of the GS-1102 workforce receiving awards since individuals may have received more than one award.

number of awards received by a person was strongly related to both self and supervisory assessments of performance in our study.

Other Factors Affecting the Quality of Work in Federal Procurement

> *There is an incredibly large body of procurement laws, regulations, and procedures to know and keep current on. It is very difficult between formal training sessions to keep current and educated on the many changes that occur in Federal contracting.*
>
> *—A survey respondent*

Based on the results just presented, it is clear that in terms of the direct match between critical job requirements and workforce characteristics, both supervisors and employees believe that the quality of the procurement workforce is at least adequate if not superior. Even so, supervisors, in particular, believed that there was substantial room for improvement as indicated by their belief that significantly more training is needed for large portions of the workforce. Perhaps even more importantly, comments provided by both employees and supervisors in response to our survey revealed that there were a number of potentially substantial problems which both groups believed limited the quality of the work performed by contract specialists. Literally thousands of comments were received from both employees and supervisors, many of whom repeated the same themes. In our view, even though we cannot provide definitive information about the pervasiveness of the concerns raised in the written comments, the perspective they provide is an important backdrop against which to evaluate data obtained from our surveys.

As mentioned earlier, one recurrent theme among the comments provided by employees was the belief that they are being overwhelmed by changes to the procurement process. To quote one employee, "Contract Specialists are overwhelmed by laws and regulations and are under very close scrutiny of the public. All of this goes into making it a very stressful job." Still another employee complained, "On average, I read 50 to 60 pages of regulation changes each week."

According to many of the contract specialists providing written comments in response to our survey, this situation was frequently made even more difficult since either adequate money for training was not available or their work load was so heavy that they were not permitted to take the time to attend training. Moreover, some of these same employees believed that the quality of the training they did receive was poor. According to these employees, the training they received was too simplified and not sufficiently specific to meet their needs. Other employees expressed concern that, because of the lack of sufficient training, the Government was put at a significant disadvantage when they engaged in negotiations with their counterparts from the private sector. All of this added to the pressure that many contract specialists said was a daily part of their jobs. According to these employees, there was constant pressure to do things more quickly while at the same time their workload was such that they felt that they could barely keep afloat.

From the perspective of the supervisors who provided written comments, the main problems facing the procurement workforce were the volume of the work and the complexity of the procurement process. Of course, these problems are interrelated. As was the case with the contract specialists themselves, these supervisors reported that the procurement process has become so complex that even the small procurement actions can take an inordinate amount of time and involve excessive paperwork. According to one supervisor, "The procurement system needs a complete overhaul. Contract specialists are so hamstrung by rules and oversight that they cannot buy what we need in a timely manner." Once again this was a theme that was frequently repeated by

many of the supervisors providing written comments. From the perspective of these supervisors, there are so many rules that contract specialists in many agencies have little or no discretion. Unfortunately, these same supervisors thought that this sometimes resulted in decisions that seemingly made little business sense.

The increasing complexity of the procurement process frequently has also had the effect of lengthening the procurement process and, as a result, there is constant pressure from management to speed up a process that has been slowed down by regulatory requirements. According to some employees, this has sometimes resulted in a tendency for management to put tremendous pressure on contract specialists to bend the rules. As one supervisor said:

> Nearly all GS-1102's want and try to do the best they can, but there are so many laws and regulations which result in over control of Government contracting, which leads to impatience in project control officials, who then pressure contract specialists to short cut the process.

For many employees the situation becomes all but intolerable at the end of the fiscal year, when organizations are concerned with spending all of the money allocated to them so that they will not lose this money or have their budgets cut the following year. In their written comments, a number of respondents told us that their organizations were more interested in obligating all of the money they were budgeted before the end of each year than they were in making sure that procurements were made in conformance with applicable rules and regulations. As one respondent noted, "The largest obstacle procurement professionals face is pressure of management to do other than what is required by law and regulation." According to another: "We are encouraged every day to break laws, not just regulations, in order to obligate more dollars." Quite a few supervisors were also concerned about this issue. According to one supervisor: "The biggest problem I see in contract specialists is the pressure to obligate dollars instead of writing good contracts."

At the same time that contract specialists are being pressured to complete contracts and obligate dollars more quickly, their agencies are legally responsible for the integrity of the contracts they write. Despite pressures of the sort described in their written comments, apparently most employees recognized that breaking the rules is not an acceptable response since very few employees (only 7 percent) responded to our survey by disagreeing with the statement that the contracting activities for which they were responsible were always completely legal and defensible.

In fact, discussions with senior procurement officials concerning the interpretation of survey results suggested that the emphasis on legal and defensible contracts may be so great in some organizations that it has become the overriding concern in the minds of many contract specialists. According to the written comments provided by one supervisor: "Playing it safe and by the book is what gets rewarded." This is not to say that supervisors were suggesting that employees should break the rules, only that the emphasis has shifted from finding legal ways of meeting the needs of the organization to being sure to protect oneself. One supervisor summed up this feeling by saying: "The whole measure of a contract now is not whether it is timely, cost effective, or obtains the Government's requirement, but whether it can sustain a protest."

Although it is certainly important for a contract to be able to stand in the face of a protest, too much emphasis on protecting oneself apparently fosters

a closed-minded approach to contracting. According to many supervisory comments, this type of thinking leads to an authoritarian enforcement mentality where contract specialists rigidly apply the rules that they have learned, often without adequate understanding of the options available to them and sometimes even without a sufficient appreciation of the missions of the organizations they support. This type of thinking probably also contributes to the belief held by many supervisors that their subordinates lack the ability to innovate (see tables 3 and 4) and lack creativity (see table 5).

A number of incumbents apparently shared similar concerns. Several noted in their written comments that the proliferation of regulations has had the effect of stifling their creativity and inhibiting their ability to be responsive to the needs of their organization. As one respondent put it:

> [We] are severely discouraged from utilizing discretion through either the requirements for extensive higher review and documentation and/or downright fear of reprisal for even suggesting a FAR [Federal Acquisition Regulations] authorized deviation from their organization's norm * * *. The culture is to blindly follow the established routine without any consideration of the taxpayers who pay them and the people in the field whom they ultimately serve.

Based upon both survey responses and written comments, it appears that while supervisors believed that most of the people who worked for them had the ability to perform the tasks required of them under the best of conditions, they also thought that their subordinates seldom possessed the abilities needed to devise creative legal solutions to organizational problems given the situations in which they typically find themselves. As a result of the complexity of the Federal procurement system and organizational pressure to obligate all allocated money, contract specialists are frequently faced with a dilemma of how to provide the service required by their organization without breaking the rules. Unfortunately, under these conditions it appears that only those employees possessing an unusual amount of analytical ability and creativity are able to successfully meet both of these goals. According to supervisors, employees possessing these abilities to a lesser extent typically either chose to bend the rules or developed an inflexible approach to contracting that often alienated managers in the organizations in which they work.

Changes in Workforce Quality Over Time

As a result of the increased complexity of the procurement process and the need to deal with mounting pressure from management, many supervisors suggested in their comments that today's average contract specialist must be even *more* capable than the contract specialist of 10 to 15 years ago. Unfortunately, some supervisors also thought that rather than improving, the quality of new entrants to the GS-1102 series has actually declined. This is a view that MSPB has found to be common among Federal supervisors in other occupational series.[20]

Although not perfect, one way we can begin to get some indication of possible changes in quality over time is to compare persons who entered the GS-1102 series at different times to see if they differ in terms of their performance ratings and the various quality indicators included in this study. Table 10 compares the official performance appraisal ratings and average research ratings for persons having different lengths of service in the GS-1102 occupational series.

[20] U.S. Merit Systems Protection Board, "Working for America: A Federal Employee Survey," June 1990, p. 7.

Table 10

Performance Appraisal Ratings and Research Ratings by Length of GS-1102 Service

Length of Service	Average Official Performance Rating	Average Research Rating
0-3 Years	3.97	3.69
4-6 Years	4.09	3.81
7-9 Years	4.12	3.82
10-14 Years	4.16	3.91
15-20 Years	4.12	3.92
21 or More Years	4.20	3.88
Overall Average	4.09	3.82

Although the trend for both ratings is certainly in the direction of higher ratings for employees who have the longest service, statistical tests show that the only group with significantly different ratings are the employees with 3 years or less experience. In both cases, this group received lower ratings. Given the fact that only the group with the least experience received lower ratings, it is likely that this difference reflects the fact that this group is primarily composed of trainees who are still learning the work required of contract specialists. As such, it should not be surprising that they received somewhat lower ratings. To some extent, the trend for groups with longer lengths of service to receive higher ratings is explained by the fact that higher graded employees, who generally also have longer service, tend to receive higher performance ratings. It is not, therefore, surprising that the group with the least experience received the lowest ratings. This group is primarily composed of lower graded employees who are in many cases trainees who are still learning the work required of contract specialists.

We made a similar comparison between tenure groups using some of the other quality-related factors such as employees' educational characteristics, training, and awards. The results of these analyses, which are presented in table 11, revealed several differences among the groups. Employees with 15 or more years of experience were somewhat more likely to have received a bachelor's degree than were employees with less experience. Additionally, employees with 6 or fewer years of service were less likely to have completed advanced degrees.

In other findings related to education, although employees who have been working as contract specialists for 15 or more years were found to have lower GPA's, there were no significant differences among groups in terms of class standing. Additionally, the groups did not differ in terms of their reported grades in high school or the number of procurement-related courses they had completed.

TABLE 11

QUALITY FACTORS BY TIME IN THE GS-1102 SERIES

YEARS EXPERIENCE AS GS-1102	Total Number Respondents	Percent Bachelor Degrees	Percent Advanced Degrees	Percent in Top 25% of Class	Number of Awards Last 24 Months	Overall GPA	Number of Related Courses	Years of Clerical Experience
0 - 3 Years	1053	53	11	78	1.6	3.2	5.6	6.1
4 - 6 Years	964	52	12	79	1.8	3.2	5.4	5.4
7 - 9 Years	609	54	15	78	2.0	3.1	5.7	5.5
10 - 14 Years	750	53	20	75	1.8	3.2	5.4	5.8
15 - 20 Years	439	60	19	68	1.8	3.0	5.5	3.6
21 or More Years	289	62	17	68	1.8	2.8	6.1	3.4
AVERAGE		54	15	76	1.8	3.1	5.6	5.4

For some unknown reason, employees with 7 to 9 years of experience received significantly more awards that those in other tenure groups. A more important finding was the large difference in the amount of experience in clerical positions between employees having 15 or more years of experience and those having less. On average, employees entering this field in the last 15 years (i.e., since 1976) had almost twice as much clerical experience as those entering before that time. This finding is important since, as discussed below, it is not uncommon for senior officials in procurement to believe that the Government has relied too much during the last 10 to 15 years on the internal placement of clerical personnel to fill entry-level GS-1102 positions.

Sources of Entry Into Procurement Positions and Workforce Quality

A recurring concern in the supervisors' written comments was also raised during our discussions with senior management officials in procurement. Some people in both groups were disturbed by the fact that most of the employees who were selected into GS-1102 vacancies during the last 10 to 15 years entered this procurement series by being transferred from jobs in other series. These are sometimes called inservice placements, and usually involve the transfer of employees from series with limited advancement potential into the GS-1102 series. While some supervisors said in their comments that some of their best employees came from inservice placements, others felt that many of their least productive employees became contract specialists in this manner.

As one supervisor noted: "* * * most new GS-1102's are former secretaries, clerks, or contract assistants who have come up through the ranks. Many have little formal education [beyond high school] and as a result lack analytical thought processes and are not very innovative in their approaches." Another supervisor said that, while good selections could result from inservice placement "* * * the individuals who are not as successful have a difficult time getting out of a clerical mode," by which he meant they were "lacking [in] the initiative and drive needed to execute and administer contracts with minimum supervision." This supervisor's point was that while inservice placements could be a valuable source for filling GS-1102 vacancies, a large number of poor selections were also made from this source.

Before 1981, many employees were selected for professional and administrative positions on the basis of their performance on one of the Government's general tests of ability.[21] After 1981, the Government abandoned the use of the centralized test that had been used for selecting among applicants for professional and administrative fields such as procurement because it was alleged that the way in which the test scores were used resulted in a discriminatory pattern of selections. After this test was abandoned, agencies could request and be given the authority to make their own selections through use of what was termed the Schedule B hiring authority. However, agencies were supposed to use the Schedule B authority on an interim basis and only if they had exhausted their ability to fill vacancies from the inservice placement of employees from other series. Inservice placements had been used by agencies even before the development of the Schedule B authority to provide upward mobility opportunities to people, frequently from clerical positions, who were believed to have the potential to work in higher level jobs.

Some agencies also developed what are often called intern programs to select and develop entry-level personnel in procurement as well as some other professional and administrative fields. Generally, these programs involved extensive competition and fairly rigorous selection criteria. Still other people found their way into GS-1102 procurement positions through avenues such as the Co-op and Work Study Programs. These were programs which were designed to allow college and high school students, respectively, to work part-time for the Federal Government while at the same time attending school.

Because of concerns about the possible consequences of having a high proportion of the new entrants to the GS-1102 series being selected using inservice placement procedures, we decided to look into whether there was a meaningful difference in performance based upon how a person entered the contract specialist series. Although our survey for employees did not directly ask contract specialists whether they had entered this field through inservice placement, we did ask them whether they had entered the GS-1102 series through the other entry procedures that were discussed above. Possible response categories included the Co-op Program, the Work Study Program, an internship program, the Schedule B hiring authority, or performance on a written test. Employees could also choose an answer of "another special program," "no special program," or "don't know." Since we did not provide a separate category to identify employees who entered the GS-1102 series through inservice placements, we expected that most of the employees who came in through this method would respond to the survey by selecting either the "other special program" or the "no special program" response.

[21] For additional information on this topic see: U.S. Merit Systems Protection Board, "In Search of Merit: Hiring Entry-Level Federal Employees," September 1987.

Table 12 shows the number of contract specialists who said that they had entered the GS-1102 series through each source of entry and the average years of clerical experience for workers entering by these sources. Although the "other special program" and "no special program" categories were not necessarily limited to persons who had entered through inservice placement, it is clear that most of the people choosing either of these responses had extensive clerical experience. In fact, employees choosing either of these two response categories typically had significantly more experience in clerical positions than persons who said that they had entered the GS-1102 series in other ways. Additionally, persons selecting one of these two responses were much more likely to have longer Federal service in series other than the GS-1102 than people who had entered the contract specialist field through other routes. Although these results do not ensure that all of the respondents who said that they had become contract specialists through either "no special program" or "other special program" were in fact inservice placements, the pattern is quite consistent with what would be expected for people who had entered the GS-1102 series from this source.

We used statistical procedures to test for differences among the sources of entry in terms of the various self and supervisory ratings of performance that were discussed earlier in this section. Results of these analyses are shown in table 13.

Table 12

Number of Respondents by Source of Entry Into the GS-1102 Series and Average Years of Clerical Experience

Entry Source	Number of Respondents	Average Years Clerical Experience
Intern program	362	2.1
Written tests	707	3.2
Co-op Program	98	2.8
Schedule B	211	3.3
Work Study Program	38	4.7
Other special program	371	6.1
No special program	2,035	7.0

TABLE 13

AVERAGE PERFORMANCE RATINGS AND SOURCE OF ENTRY INTO THE GS-1102 SERIES

SOURCE	Supervisory Rating (Abilities)	Supervisory Rating (Tasks)	Annual Performance Rating	Research Rating	Self Rating (Abilities)	Self Rating (Tasks)
Intern Program	3.19	3.76	4.11	3.88	3.37	3.98
PACE/FSEE	3.22	3.85	4.14	3.90	3.38	3.99
Cooperative Program	3.16	3.69	4.06	3.88	3.36	3.89
Schedule B	3.14	3.68	4.10	3.76	3.32	3.86
Work Study	2.96	3.35	4.16	3.58	3.10	3.70
Other Special Program	3.09	3.60	4.03	3.75	3.26	3.76
No Special Program	3.08	3.65	4.09	3.81	3.27	3.80
AVERAGE	3.12	3.69	4.10	3.82	3.30	3.85

As table 13 illustrates, based upon the entry source alternatives that we provided, there was a consistent pattern of statistically significant differences in performance ratings among the different sources of entry (i.e., differences in average ratings which have been statistically determined to most likely reflect real differences in performance among the various groups). Although the differences in average scores among the groups were not large, further tests showed that employees who had entered the GS-1102 series through either an intern program or a written test consistently received the highest performance ratings. This was true regardless of whether the ratings were provided by the employees' supervisors or the employees themselves. Employees who had become contract specialists via either Schedule B procedures or the Co-op Program tended to receive performance ratings that were lower than those for employees coming from an intern program or written tests but higher than those for employees entering from the remaining sources.

This same general pattern of rating among the source of entry groups was also found in terms of the extent to which supervisors indicated that their subordinates needed additional training in the area of analytical capabilities as well as in the

ability to write, innovate, and conduct negotiations. With regard to each of these abilities, persons entering the GS-1102 ranks from either an intern program or a written test were significantly less likely to be seen as needing additional training. No difference in terms of the need for training in these areas was found among people entering the procurement workforce from the other possible sources. Additionally, it should be noted that the only performance variable for which there were no significant differences among groups based upon source of entry was the employee's official performance appraisal rating.

As mentioned earlier, although the differences in both self and supervisory performance ratings among entry groups were statistically significant, the size of the differences in the various assessments of performance were not very large. There were, however, a number of factors which probably work against finding large differences in the average performance ratings among the groups. For example, the identification of employees into entry groups is far from perfect. Many employees may not remember how they entered the GS-1102 series. It is not unlikely that some of those who entered through one of the special programs but did not remember doing so would have responded in either the "no special program" or "other special program" categories. To the extent this occurred, it would tend to reduce the differences between respondents in these categories and respondents from other sources of entry. In addition, there was a tendency towards high self and supervisory ratings for a very large portion of the contract specialist workforce. The fact that so many employees received high self and supervisory ratings tends to blur distinctions in actual performance among individual workers. This, in turn, reduces the likelihood of obtaining large differences in mean performance ratings among any separate groups within the total population, in this case based on the different ways in which a person could enter the GS-1102 workforce.

Quality in Procurement: Views of Clients

Sampling Client Views

As part of the Board's and OPM's research programs on Federal workforce quality, an Advisory Committee on Federal Workforce Quality Assessment was established in 1990. During our meetings with members of this group, they suggested that valuable information about workforce quality could be obtained from the clients to whom goods or services are provided. This view was also held by some of the senior procurement officials with whom we held discussions. Accordingly, a third and fourth perspective of procurement work quality was provided by persons who were, in a real sense, clients for the work performed by contract specialists. One facet of client satisfaction was provided through information collected from a survey of current members of the Senior Executive Service. The intent of this was to learn what people in charge of major Government organizations thought of the adequacy of the procurement services that they received. An additional survey was sent to private sector companies that had contracts with the Government and whose representatives had dealings with Federal contract specialists. Persons responding to each of these surveys were asked about the overall effectiveness of Federal procurement practices, the quality of products provided to the Government by the private sector, and the quality of work performed by the individual Federal contract specialists with whom they dealt.

Surveys designed to assess the extent of "client satisfaction" with the work performed by contract specialists were mailed to 2,790 randomly selected senior executives, or about 40 percent of the approximately 7,000 members of the SES. Completed survey forms were returned by 1,412 individuals, for a return rate of 51 percent.

Since only responses of individuals who were knowledgeable about the work of contract specialists were relevant to this study, SES members were asked to tell us if their organization relied on the work of contract specialists and if they were able to evaluate the quality of the work performed by the contract specialists supporting their organization. If neither of these conditions was met, the responses for these executives were eliminated from further consideration. After discarding the responses from senior executives who met neither of these criteria, we were left with valid responses from 918 SES members.

These 918 senior executives reported that they were quite knowledgeable about procurement actions in their organization. This was especially true in connection with contracts having a value over $25,000, about which 82 percent said that they knew a great deal. The extent to which these SES members were knowledgeable about Federal procurement was also indicated by the fact that

almost 99 percent said that they were at least "somewhat familiar" with the Government contracting process (with 68 percent indicating that they were "very familiar" with at least some aspects of the contracting process).

A second group of clients for the work performed by contract specialists was the private sector firms that provide contracted goods or services to the Government. These organizations frequently depend upon the Government for a large portion of their business and, for this reason, are often quite familiar with the Federal procurement process and the work of contract specialists. A comprehensive list of businesses contracting with the Government is contained in the Federal Procurement Data File maintained by the General Services Administration. We selected a random sample of 900 contracts awarded within the last year from this file. The sample was drawn to represent contracts of all types, from purchases of office equipment to contracts written for the procurement of major weapons systems. We developed a questionnaire with the assistance of procurement subject matter experts and distributed it to the business responsible for each contract.

Completed surveys were returned from 373 contractors, for a return rate of about 41 percent. While this return rate is not unusual for surveys of the private sector, it is possible that the information that we obtained may not be representative of the entire population of Government contractors. However, it should be noted that a number of businesses called or wrote back to us and said that the reason they did not complete the survey was because they were unable to identify a person currently employed by them who had sufficient knowledge about the contract in question to respond to our survey. Thus our final sample, although relatively small, may be representative of those businesses most knowledgeable about Federal procurement. It should be noted, however, that because of the nature of our sample, surveys were only distributed to businesses which had been awarded the particular contract selected for inclusion in our sample. It is, therefore, possible that the losing businesses would have had a somewhat different view than the contractors who won the contract.

The Quality of Solicitations

When private contractors learn that a Government agency is interested in contracting for particular goods or services, they normally find out the details of the contract by requesting copies of a formal solicitation from the agency's contract specialists. Solicitations are prepared by contract specialists and sent to businesses expressing interest in contracting with the Government. Generally, potential contractors will have to respond to the solicitation with a bid or proposal by a specified date. Therefore, it is important that the solicitation reach vendors quickly so that they can respond in a timely manner. The vast majority of the vendors (93 percent) said that the solicitation for the contract that they were awarded was received in a timely manner. Most (81 percent) also reported that the requirements laid out in the solicitation were sufficiently clear to enable them to understand what it was that the Government wanted to buy. Even so, comments provided by several of the contractors responding to our survey indicated that they had problems understanding the Government's solicitation. As one respondent to the survey said:

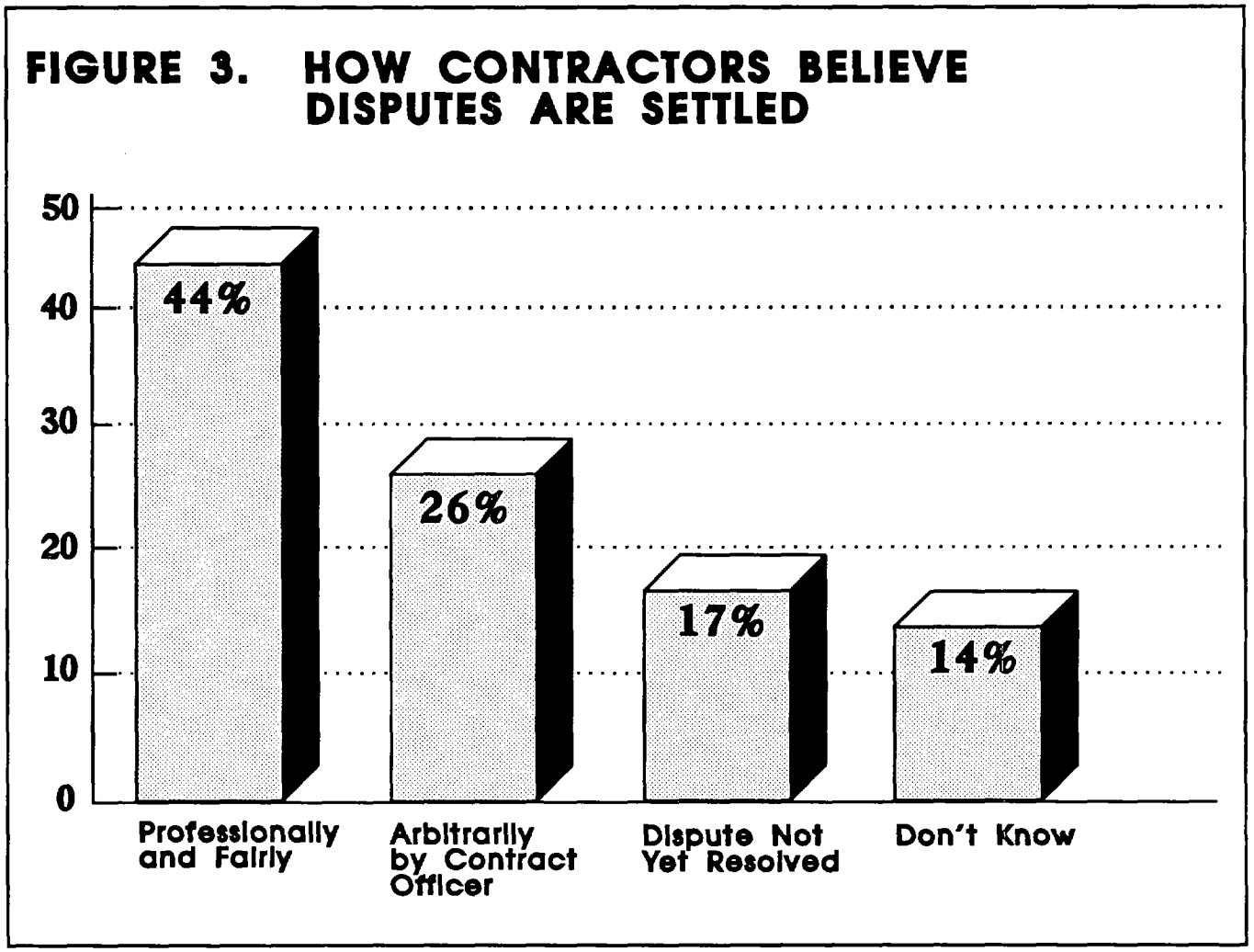
> [T]he Government has in most cases put out a very poor solicitation, full of errors and then left it to the contractors to find the errors and try to correct [them] * * *. The errors include incorrect technical data listings, incorrect specifications, lack of technical data and drawings, and incorrect clauses from the FAR [Federal Acquisition Regulations].

In order to be considered as a potential source for the required goods or services, businesses typically must submit information to demonstrate that they are qualified to fulfill the terms of the contract. A description of what they are required to submit is also contained in the solicitation. According to the respondents to this survey, most (71 percent) were able to understand from the solicitation what they were required to submit. A significant minority, however, indicated that they did not understand the requirements or needed additional clarification on this issue. More importantly, in spite of the fact that most vendors said that they were able to understand what they were required to submit, 41 percent said that they formally requested clarification on some portion of the solicitation. Moreover, only 77 percent of the vendors who formally requested clarification felt that their questions were fully answered. This is a particularly significant finding in light of the fact that these responses came from the businesses that ended up getting the contract. It is therefore probable that an even higher percentage of the businesses that lost the competition for the contract had problems understanding exactly what it was the Government wanted them to submit.

Frequently, when the work provided by the contractor is technical in nature, an employee well-versed in the subject will be appointed by the Government organization as a contracting officer's technical representative. It is this person's responsibility to work with the agency contract specialists and the vendor to ensure that the Government is receiving the goods or services that it needs. According to the vendors, a Government contracting representative was appointed for 73 percent of the contracts. Of those expressing an opinion, 93 percent said that the working relationship between their company and the contracting representative was one which has facilitated the delivery of quality products to the Government. Similarly, 76 percent said that their business had a good working relationship with the contracting representative.

Despite the existence of a good working relationship with the contracting representative, it is possible that there will be disputes concerning the delivery of services or products under the terms of the contract. Although 95 percent of the vendors said that they were performing the services or delivering the products that they expected to on the basis of the solicitation, and 99 percent said that their products were of at least acceptable quality, more than one-third reported that there had been disputes about their performance under the terms of the contract. In more than half of those instances, the disputes involved the nature of the goods or services to be provided under the terms of the contract. Although in some cases this was certainly the result of poor performance on the part of the contractor, it is also possible that some of the problems were the result of a lack of clarity on the part of the Government which led to the contractor's incomplete understanding as to what was expected.

Figure 3 shows how private vendors thought the disputes were resolved. While the most common response on the part of the vendors was that the dispute was resolved professionally and fairly, about a quarter of the contractors believed that the dispute was resolved arbitrarily. Although disgruntlement arising from losing the dispute may account for some of this finding, the fact that 26 percent believed that the dispute was not resolved fairly also suggests that communication and understanding between contractors and Government representatives could be improved.



Client Views of Procurement Workforce Quality

In the course of planning this study we conducted numerous discussions with Federal personnel in the procurement field. During these discussions many of the procurement authorities expressed concern that we intended to assess the attitudes of senior management officials towards the procurement function. They felt that there was a natural tension between people in management and people working in procurement that could affect the managers' evaluations of procurement personnel.

Contrary to the expectations of procurement officials, in many ways the senior executives responding to our survey thought quite highly of the contract specialists who support their organizations and, as shown in table 14, they viewed several aspects of the work performed by contract specialists quite positively. In particular, SES members thought that contract specialists who support their organization are knowledgeable and apply regulations fairly and accurately. Perhaps not surprisingly, given the fact that they were responsible for activities in their organization,

91 percent of the senior executives said that contracts are awarded fairly and appropriately. Additionally, 86 percent reported that the efforts of contract specialists supporting their organization resulted in contracts that are always legal and defensible. There was also general agreement (i.e., 90 percent expressing agreement) that the quality of the work performed by these same contract specialists at least meets acceptable standards. Given all of the above results, it is not surprising that 72 percent of the respondents said that contract specialists often make substantial contributions to their organizations.

Although senior executives were generally positive concerning many aspects of the work performed by contract specialists, in several areas they said there is room for improvement. For example, senior executives were somewhat less satisfied about the extent to which people working in procurement maintain a positive service orientation towards clients or colleagues in their organization. In response to this item, only 60 percent said that contract specialists usually maintain a helpful attitude when dealing with representatives of the organizations that they support. It may

Table 14

SES and Contractor Opinions Concerning GS-1102 Employees

(Percent of SES Members and Contractors Responding to the Question "Federal contract specialists (are):")

	SES Members		Contractors	
Item	Agree	Disagree	Agree	Disagree
Knowledgeable about Federal procurement procedures.	90	4	68	15
Apply Government regulations accurately and fairly.	79	8	58	20
Well trained.	74	13	63	24
Generally helpful.	74	14	66	16
Provide prompt responses to questions.	62	21	56	29

Notes: 1. The column labelled "Agree" includes both "Strongly Agree" and "Tend to Agree" responses. Similarly, the "Disagree" column includes both "Strongly Disagree" and "Tend to Disagree" responses. 2. "Neither Agree nor Disagree" and "Don't Know" responses were omitted.

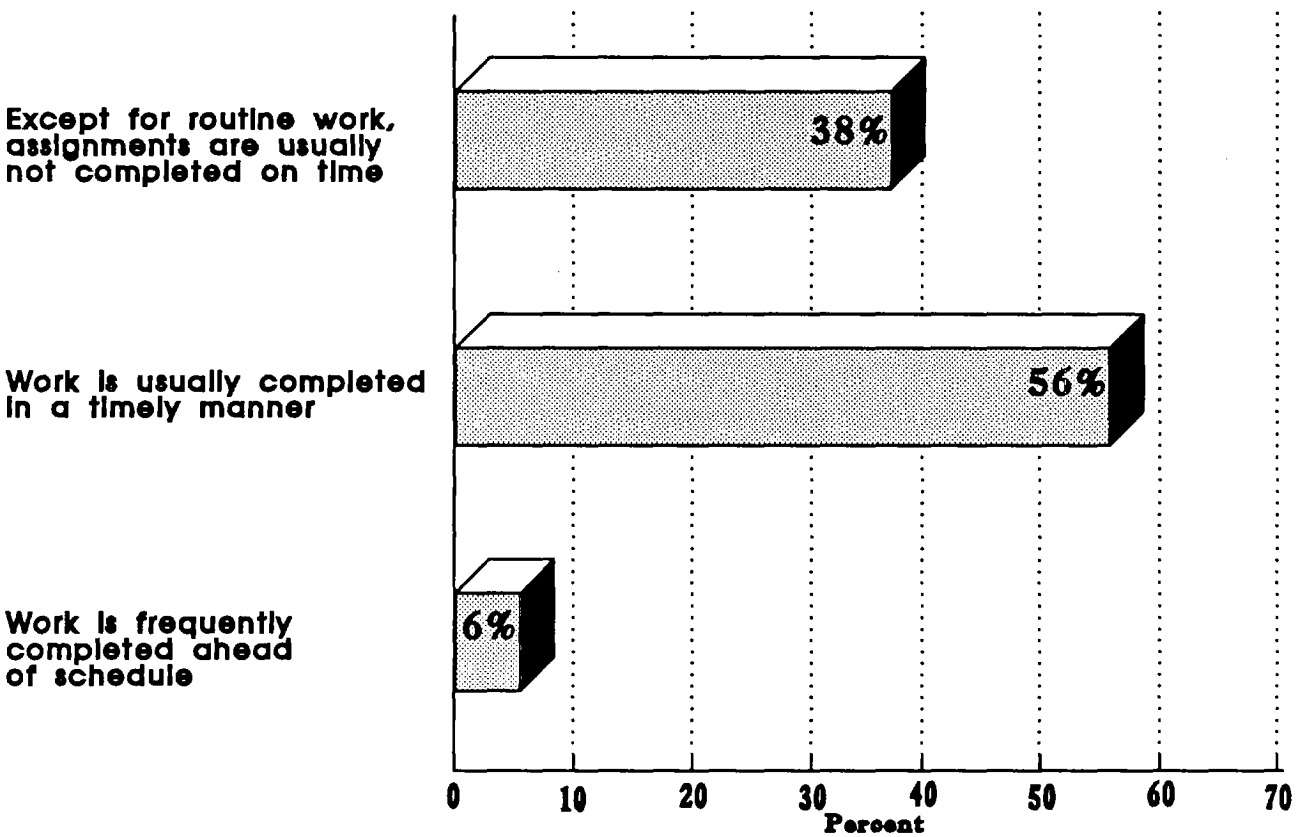
also be significant that a sizable minority (24 percent) of SES members expressed concerns that the work output of contract specialists who support their organization is low and that work is performed at a slower than acceptable rate.

Similarly, as figure 4 shows, 38 percent of the senior executives said that with the possible exception of some routine tasks, work by contract specialists supporting their organization was usually not completed in a timely manner.

While the timeliness of procurement actions was an important concern to many senior executives, the comments that they provided in connection with the survey revealed that some SES members had other significant concerns about procurement in their organizations. A number of senior executives provided comments such as: "Much of the restricted productivity I have witnessed seems to be due to excessive layers of regulations that keep getting added." In the eyes of one senior manager this has made things so complicated that:

FIGURE 4. SES VIEWS OF TIMELINESS OF PROCUREMENT ACTIONS

To what extent is work done by Contract Specialists for your organizations performed in a timely manner?



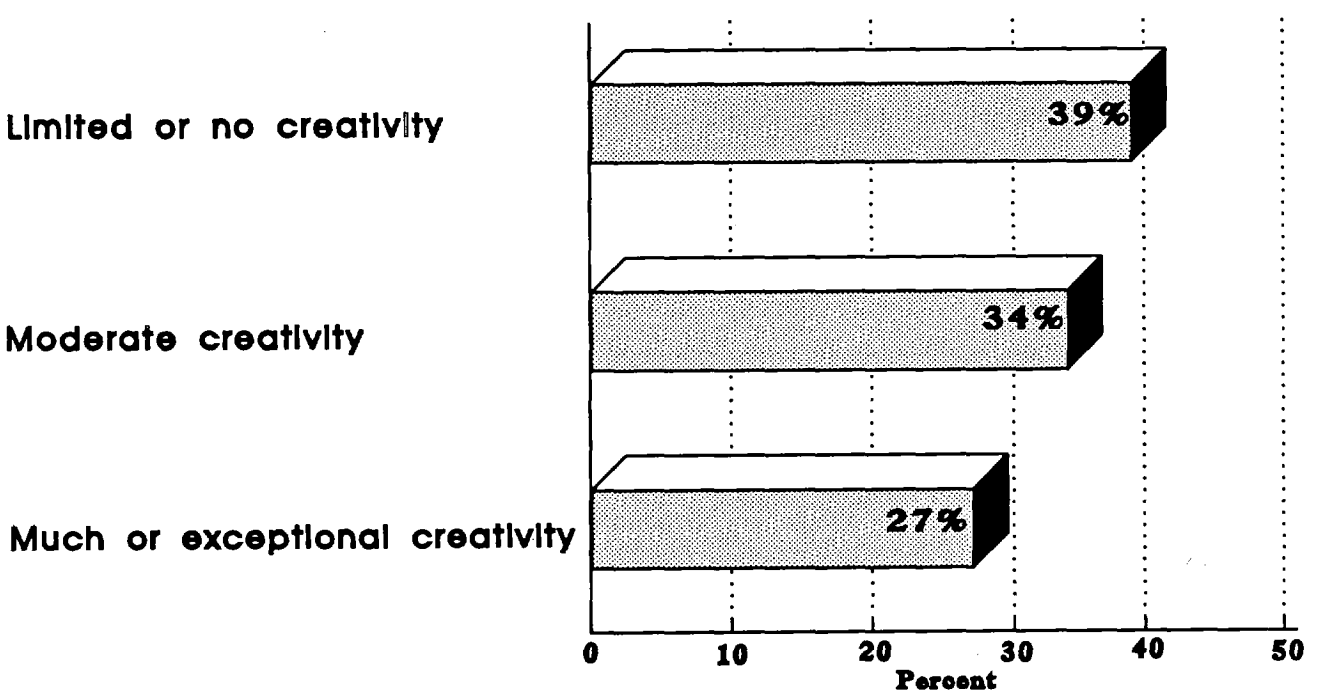
> Only the brightest and most courageous are able to work effectively. The rest work as if they believe that their primary job is to avoid trouble and controversy * * *. The risk of doing something improper or illegal has inflicted the Government with a kind of self-administered paralysis.

As was the case for supervisors, a very common theme in the comments provided by members of the SES was that they thought that too many contract specialists were "rule-bound" and prone to attempt to apply rules blindly to a variety of contracting situations without adequately understanding the objectives, goals, or mission of the organization. These same senior executives saw contract specialists as myopic defenders of contract regulations rather than as team players whose purpose is to get the job done effectively. As such, contract specialists were seen to be more inclined to follow a procurement cookbook than to look for innovative and legal solutions to organizational needs.

This perception on the part of some SES members was also reflected in their response to a question about the creativity of the work performed by contract specialists. As figure 5 illustrates, 39 percent of the senior executive respondents said that the contract specialists supporting their organization show inadequate creativity in their work.

FIGURE 5. SES VIEWS OF GS-1102 EMPLOYEES

How much creativity is shown in the work done by Contract Specialists in your organization?



This concern with the lack of creativity also was exhibited in the responses of SES members to a question concerning the skills which they believed are lacking in experienced contract specialists in their organizations. Table 15 shows the five skills senior executives most commonly believed are lacking in experienced contract specialists.

It is worth noting that full-performance-level contract specialists were more likely to be seen as lacking creativity and ingenuity than were entry-level personnel. They were also more likely to be seen as lacking initiative. It also appears that senior executives felt that some contract specialists do not work well with other members of their organization. According to our SES respondents, significant portions of the contract specialist workforce lack both group interaction and cross-disciplinary skills. This last finding may account for the results discussed earlier; i.e., that many contract specialists were seen as lacking a positive service orientation.

Although critical of their contract specialists in some ways, senior executives recognized that some of the concerns they raised may have resulted from the conditions under which contract specialists frequently must work. For example, 58 percent of the SES members said that contract specialists who support their organization are too often asked to perform difficult tasks under tight time constraints (only 20 percent disagreed). Additionally, most (51 percent) indicated that contract specialists are often under undue pressure as a result of having too much work to perform. By contrast, only 25 percent felt that this is not the case.

As can also be seen from table 14, private contractors held a generally positive view of Federal contract specialists in at least several areas. Like the senior executives, contractors felt that Federal contract specialists were basically knowledgeable, well-trained, and helpful. Even so, they tended to be somewhat less positive than were the senior executives with respect to the same items.

Table 15

Percent of SES Members Believing that Full-Performance-Level GS-1102 Employees Lack Five Key Skills

Skill Area	Percent of SES Members
Creativity and Ingenuity	43
Cross-Disciplinary Skills	28
Initiative	27
Management Skills	23
Group Interaction Skills	22

Responses to other items on the survey revealed that there were some areas of concern among private contractors. Although 85 percent of the contractors said that their firm has a good working relationship with the contract specialist assigned to their contract, almost one-third of these same private sector respondents did not think that contract specialists are prepared to discuss substantive issues concerning the contract. Additionally, almost one-third did not believe that contract specialists provide prompt responses to their questions. According to one respondent:

> All Government staff we have dealt with have been courteous and helpful, but it has been almost impossible to get any kind of decision on a problem in a timely manner. Even simple technical or financial problems require three or four levels of referral which results in months (and occasionally years) of delay.

While the first priority of contract specialists should be meeting the needs of their organization in a cost-effective and legal manner, it is also important that they be able to work well with the private businesses with whom they deal. There are, however, some indications that Federal contract specialists do not always have a good working relationship with private contractors. Although arguably not their main responsibility, more than a third of the contractors reported that contract specialists are not particularly concerned with the best interests of the contractor's company. Additionally, written comments provided by the contractors suggested that from their perspective contract specialists are not always easy to work with. In the words of one respondent, "There is very much of an 'us versus them' mentality among Government negotiators. Many seem to view the contractor as a crook who is not to be trusted." According to another vendor, "Government employees fail to respect those employees in the private sector as fellow professionals. * * * On several occasions, Government employees have been rude to the point of embarrassment."

Although the relationship between contract specialists and their counterparts in the private sector is important, of perhaps even greater concern is the fact that 20 percent of the respondents did not feel that contract specialists apply regulations accurately and fairly. Moreover, given that all the respondents to this survey were companies who were winners in the contracting process, it is particularly noteworthy that only 68 percent of the private contractors said that based upon their own experience, contract awards are determined fairly and appropriately. This may be related to the fact that even these successful contractors may have lost contracts in the past even though they felt they made the Government very competitive offers.

Client Views of Federal Procurement Process

> *The continuing changes to the Federal Acquisition Regulations make it virtually impossible to stay abreast of the requirements. Increased oversight has become cumbersome, delayed the process, and has created an atmosphere of fear and distrust. This has greatly impacted the decisionmaking process and has increased overall costs to both the Government and the contractor.*
>
> *—A private contractor*

In addition to questions about the individuals with whom they deal, we asked both the contractors and the senior executives a series of questions concerning the Federal procurement process. Generally, the views of private contractors

concerning the Federal procurement process were very similar to those held by the SES members. As table 16 shows, both groups had very little positive to say about the procurement process. Among both groups there was a general consensus that the Federal procurement process does not effectively reduce waste, fraud, or abuse, and does not serve the best interest of either the Government or private contractors.

Both the contractors and the senior executives were negative about the procurement process in several additional ways. For example, 63 percent of the contractors felt that the contracting process is too time consuming, and 58 percent said that the process for awarding contracts is too cumbersome. Similarly, the vast majority of SES respondents said that the Federal procurement process takes too long (91 percent) and involves too much "red tape" (89 percent). As a result, more often than not, members of both groups reported that the procurement process is ineffective in meeting either the needs of the Government or private sector contractors.

Once again, written comments—this time those provided by SES respondents—helped to explain these findings. According to these senior executives, *the main problem with the Federal procurement system is that it has become far too complicated.* In the view of many senior executives this has had a detrimental effect on procurement in their organizations in at least two ways.

TABLE 16

SES and Contractor Opinions of the Federal Procurement Process

(Percent of SES Members and Contractors Responding to the Question "The Federal Procurement Process":)

	SES Members		Contractors	
Item	Agree	Disagree	Agree	Disagree
Effectively reduces the incidence of waste, fraud, and abuse.	39	40	29	39
Serves the best interests of the Government.	34	47	42	36
Serves the best interests of private sector contractors.	25	45	11	65

Notes: 1. The colums labeled "Agree" include both "Strongly Agree" and "Tend to Agree" responses. Similarly, the "Disagree" columns include both "Strongly Disagree" and "Tend to Disagree" responses. 2. "Neither Agree nor Disagree" and "Don't Know" responses were omitted.

First, the increase in paperwork associated with most procurement actions has greatly increased the workload for most contract specialists. This has added considerably to the pressure felt by many contract specialists and has made it more difficult for them to meet important organizational deadlines. As a result, the relationship between contract specialists and their clients is often strained and contract specialists may be pressured to bend or even break the rules in order to complete a procurement action in a more timely manner.

Second, senior executives indicated that in many cases the complexity of the system has simply exceeded the capabilities of the contract specialists who support their organizations. In their view, all too frequently, contract specialists may not understand either the options that are available to them or all the regulatory requirements that govern procurement actions. This lack of understanding of options may be what supervisors and senior executives were referring to when they said that too many contract specialists lack creativity. As a result, procurement actions may be delayed, and when finally completed, may not represent the best or most cost-effective approaches to meeting the needs of their organization.

Many senior executives thought that this leaves the Government with only two alternatives. In the words of one respondent, either: "The entire procurement system needs to be simplified and made more efficient" or "the quality of the people operating the system has to improve."

A review of the comments included by the private contractors responding to our survey revealed several additional recurring themes. For example, contractors—

- ❑ Have a general lack of understanding and acceptance of the process for determining contract awards;
- ❑ View the procurement process as overly bureaucratic and slow; and
- ❑ Feel that contract specialists are not adequately prepared to work effectively in an increasingly complex procurement environment.

The most difficult thing for businesses to understand was the role of the weighting of technical merit versus cost in determining who would win the contract. Many contractors thought that the Government was too concerned with getting the lowest possible bid, even to the point of accepting products or services of inferior quality. As one respondent put it:

> Requests for clarification on the effect of price in the evaluation are met by general, unspecific responses which often result in sacrificing quality to achieve a low price in order to increase the probability of winning the contract. This occurs despite Government pronouncements regarding the importance of quality.

An even larger area of concern was the bureaucratic nature of the contracting process. According to many of the respondents providing written comments this has gotten markedly worse in recent years. A sampling of the comments from private contractors addressing this issue includes the following:

> The Federal procurement process is wrought with inefficiency and nonsensical administrative trappings. Congress has totally disrupted the procurement process by their micro-management of the details of the process. They legislate cumbersome rules and regulations without regard to the viability or impact on those of us in the profession.

> Typically, a contract from a private owned customer is 1-2 pages in length. The contract from the Government to buy exactly the same thing is typically 30-40 pages in length.

According to their comments, both SES respondents and private contractors believe that the complexity involved in processing procurement actions has greatly increased over the last 10 years. Unfortunately these same respondents said that the quality of the Federal contract specialists has not undergone a similar increase. Instead, comments from both groups suggested that contract specialists are themselves overwhelmed by the complexity and paperwork associated with procurement actions. In fact, although contractors often appreciated attempts by contract specialists to make things flow smoothly, many also thought that most contract specialists are not able or adequately prepared to work effectively, given the intricacies of the procurement process.

Some other respondents from both groups were even harsher concerning the capabilities of Federal contract specialists. The views of three private contractors are expressed in the following quotes:

> If the Government employees were more interested in getting the job done equitably instead of covering themselves, everything would be more efficient.

> Most of our jobs now are administered by unqualified persons.

> Too many people blindly carry out their duties by strictly applying rules and regulations based on very limited experience and understanding.

Possible Indicators of Workforce Quality

Method for Demonstrating the Utility of Potential Quality Indicators

In the introduction to this report, we stated that one of the goals of MSPB in undertaking this study was to identify easily measurable workforce factors that relate to successful job performance. In essence, we were hoping to identify valid indicators or predictors of workforce quality that could be used to track changes in quality. These indicators could be potentially useful to both policymakers and future researchers who wish to determine whether workforce quality has changed over time as a result of policy initiatives or other efforts.

In undertaking this study, we identified several potential quality indicators. Included were items which were easy to assess and which subject-matter experts in the area of procurement thought might be related to successful performance. The measures used in this study included education level, performance in school, courses completed in fields related to procurement, the number of Government sponsored training courses completed, the number of awards received, and work experience.

In order to show that some or all of the factors mentioned above are valid indicators of workforce quality, it is necessary to demonstrate the existence of a statistically significant relationship between an individual's possession of these attributes and assessments of the quality of his or her work. In the course of conducting this study, we collected from both individual workers and their supervisors the various ratings of contract specialists work performance that were discussed in earlier sections of this report.

In addition to the ratings of performance provided by employees and their supervisors, one measure of performance was included which did not depend directly on judgements of quality. This was the advancement rate of the employee. This was defined as the grade attained by each employee, taking into account how long he or she had been working as a contract specialist. Since employees who are most able to perform the work required of contract specialists should generally be the ones who advance the farthest in terms of grade, the grade attained by an employee should reflect the quality of his or her work. Of course, employees who have been in the GS-1102 series for only a relatively short period of time will not have had the opportunity to advance to levels reflecting the quality of their work. For this reason, we used statistical analyses which permitted us to look at the relationship between a person's grade level and the potential indicators of quality, while at the same time removing the effect of the amount of time the person worked as a contract specialist.

Since some of the attributes we were interested in exploring in these analyses came from information supplied by employees and other information was provided by supervisors, it was necessary to link the survey responses from a particular employee to the information that was obtained from his or her supervisor. For this reason, we were not able to use the information that was collected from every employee or supervisor responding to our survey. Instead, information in this portion of the report is based only on data obtained for those cases where completed surveys were returned from both an employee and his or her supervisor. Altogether, records with matched responses for both employees and supervisors were returned in 4,155 cases. This was a more than adequate number of linked sets of responses to permit analyses addressing the relationship between potential indicators of quality and actual assessments of work performance.

Although it would certainly have been valuable if we had been able to do so, it was technically not feasible to relate measurements of individual performance to the assessments of overall workforce quality that were obtained from either the SES members or the private sector vendors. For this reason, we determined the validity of the potential indicators of workforce quality solely on the basis of assessments of performance obtained from employees and their supervisors.

Relationships Between Work Performance Assessments and Potential Indicators of Quality

We used statistical analyses to determine the extent of the relationship between each of the assessments of work performance and each of the potential quality indicators. While results of these analyses for each of the potential indicators of quality and each type of performance assessment are shown in the appendix to this report, in general, none of the potential quality indicators were highly correlated to actual assessments of performance. At best, these indicators showed a small but statistically significant relationship to performance.

Although the size of the relationship was not particularly large, the level of formal education completed was one of the better available predictors of performance. There was a relatively strong relationship between education and advancement rate and a modest but significant relationship between education and the ratings of performance obtained from both employees themselves and their supervisors. With regard to most of the assessments of performance, people who have a bachelor's degree do better than those without one and those with an advanced degree perform even better. Given the existence of a significant relationship between education level and most of the measures of performance, it is interesting that education level was not found to be related to the formal annual performance appraisal rating. For some reason, even though supervisors rated employees with more education higher in a variety of ways, they did not give them higher formal performance appraisal ratings.

The number of Government training courses completed and the number of awards received also showed a consistent pattern of relationship to the various performance ratings. In fact, both would seem to have some potential as indicators of changes in the quality of the procurement workforce over time. This potential is limited, however, by the extent to which the availability of training and awards is driven by budgetary considerations. If decisions on awards and training were made independently of budget limitations, then increases in either would be likely to

indicate improvements in workforce quality. It is also worth noting that the existence of a significant relationship between completion of training and performance also provides evidence that training can be effective in improving performance.

Performance in school was also related to assessments of work performance, although to somewhat less an extent than level of education completed. Interestingly, class standing appeared to be a slightly better predictor of performance than did the person's GPA, which showed a low but significant relationship to four of the nine measures of performance collected in this study. Somewhat surprisingly, a self report of general grades in high school showed a greater relationship to performance than did a self report of GPA in college. We also found that the patterns of relationship between an employee's GPA during the last 2 years of college, as well as in his or her major field, were virtually identical to the pattern obtained for the overall GPA.

It is also interesting that the number of college courses completed in related fields showed the greatest relationship to employee's self assessments. This might indicate that although completion of courses in related fields does not actually improve performance, at least according to ratings provided by supervisors, it may increase the person's confidence in his or her ability to do the work of a contract specialist.

The relationship between work experience in other occupational fields and performance was also somewhat surprising. To some extent, the more years of experience a person had working outside of Government the lower the ratings given for his or her work performance. This was true for both self and supervisory ratings. The reasons for this result are unknown, although it may be a finding that is peculiar to the unique character of Federal procurement work.

There was also a significant negative correlation between years of experience in clerical work and performance as a contract specialist. As a group, employees with more clerical experience tended to get lower ratings than those with other backgrounds. It was particularly interesting that employees drawn from these backgrounds not only received lower ratings from their supervisors, but also on average gave themselves lower ratings. We also found that the average yearly time devoted to self improvement was not generally related to assessments of work performance. Similarly, years of work experience in accounting or other technical areas was unrelated to performance in the current job.

Based on the results of this part of the study, it appears that even though the extent of the relationships was small, there are a few general indicators of quality which might be used to track gross changes in the quality of the Federal procurement workforce. These include: the education level of the workforce, the number of awards received, the number of training courses completed and, to a lesser extent, class standing.

Summary of Findings on Quality in Federal Procurement

The Quality of Work in Federal Procurement

This study began with several purposes. The first was to evaluate the quality of the procurement workforce and the work that they perform. To some extent, we expected that the quality of the current members of the Federal procurement workforce would be a major component affecting the quality of procurement actions. Thus, one of the first things we looked at was the quality of the contract specialist workforce. To do this we began with a tentative definition which suggested that workforce quality might be measured by the extent to which the skills, knowledges, and abilities possessed by members of the workforce match the requirements of the job. In the course of conducting this study, however, we found that the quality of the workforce cannot be evaluated apart from the environment in which it operates. A meaningful assessment of the quality of procurement in the Federal Government must include both an evaluation of the capabilities of the workforce and an appraisal of other factors that affect performance.

Using the definition of workforce quality as the match between employee skills and job requirements, we found the Federal procurement workforce to be basically qualified. Contract specialists generally believed that they possess the skills, knowledges, and abilities that they need, and to some extent their view is substantiated by the large percentage of employees who received high performance appraisal ratings and awards. However, most employees said that additional training is required, both to perform critical tasks better and to stay abreast of changes in regulations.

Supervisors were also positive about the capabilities of their subordinates, but overall presented a picture of a somewhat less able workforce than did the employees themselves. Although supervisors believed that their subordinates possess at least acceptable levels of required skills and abilities, they also thought that there is considerable room for improvement. In many cases, supervisors saw additional training as a way to improve. This was especially true with regard to the ability of their subordinates to conduct negotiations, to write, to be analytical and to be innovative.

When we looked more closely at the information provided by employees and supervisors as well as the client groups of senior executive and contractors, it was clear that the quality of the work performed by contract specialists involved more than a simple assessment of their ability to carry out the tasks needed to purchase goods and

services for the Government. Although both employees and supervisors believed that most contract specialists know how to perform the tasks required to conduct most procurement actions, clients of contract specialists were not entirely satisfied with the quality of the service they are given.

SES members were quite positive about some work outcomes. In their eyes, contracts are awarded fairly and appropriately; regulations are applied accurately; and contract specialists are knowledgeable about procurement regulations. However, many senior executives were concerned about the timeliness of some procurement actions. More importantly, many did not believe that the procurement process is particularly responsive to the needs of their organization. From the perspective of our SES respondents, the procurement process has become too complicated—so complicated, in fact, that they believed the system's complexities may exceed the capabilities of the contract specialists who must administer the system. According to the SES members, this can result in heavy work loads and difficulties in meeting organizational deadlines. Unfortunately, these results can lead to additional pressure being placed on contract specialists to cut corners or break rules in order to improve timeliness or obligate more money.

To a great extent, both employees and their supervisors shared this view of the procurement process. Moreover, supervisors and senior executives indicated in their comments that too often, in order to deal with these pressures and protect themselves, contract specialists become so rule bound that they lose their perspective about their role in the organization. The cumulative effect led many SES members to conclude that the procurement process frequently results in procurement decisions that are neither cost-effective nor in the best interests of the Government.

Private sector vendors were also concerned with the procurement process and the work performed by Federal contract specialists. They shared the view of SES members, contract specialists, and supervisors that the procurement process has become too complicated. Like many Federal contract specialists, they reported considerable difficulty keeping abreast of all the changes occurring in Federal procurement regulations.

Several additional concerns which relate more directly to the work performed by contract specialists were also expressed by private contractors. Specifically, they indicated that they sometimes had problems understanding exactly what the Government wishes to buy. To some extent, this may have been the result of the multitude of regulatory requirements that must be met in connection with most procurement actions, but contractors also believed this problem arose because, in their view, contract specialists sometimes lack an adequate understanding of substantive issues involved in the contract. Similarly, SES members said that contract specialists sometimes do not fully understand the nature of the goods and services that they are supposed to purchase for their organization.

Private contractors also reported a relatively high number of disputes with contract specialists concerning their performance under the terms of the contract. A sizable minority of these contractors believed these disputes were settled in an arbitrary manner. More critically, contractors sometimes said that contract specialists are not sensitive to their needs, do not respond to them in a timely manner, and in some cases show them little respect. For all of these reasons, private vendors asserted that the cumulative effect of these problems is such that the procurement process frequently serves the best interests of neither the Government nor private businesses.

Given the concerns of supervisors, SES members, and private contractors, it is apparent that there are significant problems and dissatisfactions with the work performed by contract specialists. The primary factor behind these problems appears to be the inability of contract specialists to deal with the increasingly complicated requirements under which they must work. Over the past 10 to 15 years, there has been a tremendous increase in the number and complexity of the regulations which govern Federal procurements. As the number of regulations has increased, so has the complexity of job requirements and the amount of time it takes for a contract specialist to complete many purchases. Under these conditions it is not enough to possess merely adequate skills. Rather, to do a good job in today's work environment, it appears that most contract specialists need a high degree of both analytical ability and creativity. Unfortunately, these are exactly the skills both supervisors and members of the SES believed are most often lacking in contract specialists.

While exceptional contract specialists are able to use their creativity to develop innovative and legal solutions to meet organizational requirements, less capable employees are frequently faced with a dilemma. Either they bow to management pressure to do things faster, even if this involves bending the rules, or they develop a rule-bound approach that can compromise their responsiveness to organizational needs. Given the potential personal costs associated with failure to adhere to procurement regulations, it is not surprising that many contract specialists choose to follow the latter course. It is also not surprising that members of their organization are sometimes not satisfied by the resulting support.

Validation of Potential Quality Indicators

A second purpose of this study was to determine whether there is, in fact, a statistically significant relationship between the potential quality indicators and actual performance. Although the sizes of the relationships are small, there are a few general indicators of quality which might be of some limited use in tracking gross changes in the quality of the Federal procurement workforce.

The single best indicator is the education level of the workforce. In general, the more education completed by a worker the higher the quality of his or her work. This is not to say, however, that a person must possess a college degree in order to be a high-quality contract specialist. The relationship between education and performance is not large enough to indicate that possession of a college degree should be a minimum qualification for admission to the field.

To a lesser degree, assessments of performance in both high school and college were found to be valid predictors of quality. Of the various measures of scholastic performance, class standing appears to be a slightly better indicator of quality than does either GPA or the number of college courses completed in procurement-related fields, both of which showed a small degree of relationship to at least a few of the assessments of work performance.

Two other factors look like they might be fairly good indicators of quality under certain conditions. To the extent that the number of awards is not dictated by budgetary considerations or changes in management philosophy, the percentage of employees receiving

awards could probably serve as a fairly good indicator of changes in workforce quality. Increases in the number of awards given would, of course, imply improvements in the quality of the workforce. Similarly, changes in the average number of training courses completed by each employee would reflect changes in the quality of the workforce.

Establishment of a Baseline for Future Research

A final goal of this study was to provide information that can serve as a baseline for use in future research. Considerable information has been obtained through this study that can be used for this purpose. In addition to determining which of the measures we tested are valid predictors of quality, this study collected a great deal of information which can serve as a basis for determining changes in the quality of the contract specialist workforce over time.

Summaries of the various ratings of work performance collected through this study were presented elsewhere in this report. We hope that this information will be used by future researchers to track changes in the capabilities of the Federal procurement workforce over time. Although the ratings of abilities and performance provided by both employees and supervisors were high, if improvements are made in the quality of the procurement workforce, then even higher ratings should be expected. Using a few of these ratings should make it easier to track the progress of efforts such as those of the Office of Federal Procurement Policy to professionalize the procurement workforce.

Recommendations

Recommendation 1: Provide Additional Training to Improve the Quality of the Current Workforce

According to the results obtained in this study, contract specialists need to be better prepared to make the best possible business decisions for their organizations in a timely manner. Based upon the assessments provided by procurement supervisors in response to our survey, training should be directed towards improving the capability of the workforce to conduct negotiations, analyze requirements, write clearly, and develop innovative solutions to meet organizational needs.

Training is particularly important since almost half of the current procurement workforce has fewer than 7 years of experience in the occupational series. Incumbents with the least experience are the ones most likely to need training. Moreover, approximately three-quarters of the people employed in the GS-1102 series currently work for one of the Defense agencies. Since it is clear that the immediate future will bring reductions in the size of the Defense budget, it is unlikely that the total Federal procurement workforce will continue to grow as it has since 1981. For this reason, any marked improvements in the quality of the procurement workforce are not likely to come from large infusions of highly qualified new workers. Significant improvements in workforce quality can only result through an improvement in the capabilities of current GS-1102 incumbents.

Although at the present time both employees and supervisors are looking to training to help them cope with the difficult work situations they often face, training in and of itself may not be the answer. Unless it is done well, training may only teach people the rules and how to apply them in a predetermined fashion. It will not necessarily provide them with the breath of understanding of procurement which is required to work in today's world. For this reason, it is our view that procurement training needs to address a key issue: how to make informed business decisions that permit an organization to purchase goods and services needed to meet mission objectives in a cost-effective manner.

In order to make informed business decisions, people need to be trained in the philosophy of procurement. This includes a better understanding of the mission of their organization and the role they play in purchasing the goods and services needed to meet organizational requirements. They also need to know the range of options that are available to them and to understand the basis for choosing among available options. At some level this probably also involves an understanding of the private sector businesses with which they will be dealing. From the perspective of the private contractors, it would probably also be

useful for the contract specialist to understand how their business operates and the factors that affect their ability to deliver the goods or services they will be producing.

Recommendation 2: Encourage and Reward Creativity

This study found that both employees and their supervisors believed that most of the people working as Federal contract specialists have the skills, knowledges, and abilities needed to perform well. In the final analysis, however, the customers for the services provided by contract specialists were not always satisfied. To some extent, inappropriate or inadequate supervision may have contributed to this result.

Although supervisors of contract specialists criticize their subordinates for a lack of creativity, it is the supervisors who must bear at least some of the responsibility for this state of affairs. It is the supervisors who set the tone for the organization. In many cases they choose to reward "rule-bound" approaches to contracting and discourage their subordinates from being more creative and using the flexibilities that are currently available to them. If contract specialists are to be more creative, supervisors need to foster an environment in which employees are not afraid to be innovative. Employees need to know that risk taking can be beneficial to the organization as long as it does not result in illegal actions. Through their leadership, supervisors need to show employees how they can be more responsive to their customers without breaking the rules.

Emphasis should also be placed on ensuring that contract specialists understand that they are an integral part of a team whose purpose is to meet organizational objectives and serve the public good. Accordingly, supervisors should strive to create an atmosphere in which making good business decisions is at least as likely to be rewarded as avoiding protests.

Recommendation 3: Ensure that High-Quality Selections Are Made for Entry-Level Positions

According to many supervisors, there has been a decline in the quality of new entrants to the GS-1102 series over the last 10 to 15 years. While there is only minimal evidence to support this contention, it is clear that the skills, knowledges, and abilities needed by contract specialists have increased in number or complexity. For this reason, efforts designed to improve the quality of selections for GS-1102 vacancies are important. Over time, an improvement in the quality of the people becoming contract specialists can have a major impact on the quality of Federal procurements.

In at least the recent past, supervisors of contract specialists have not always looked to all possible recruitment sources. Very little use in filling vacancies has been made of the persons available through the Presidential Management Intern Program or OPM's recently developed Administrative Careers with America (ACWA) procedures. In fact, even though a written test developed for use in conjunction with the ACWA procedures has been shown to be a useful instrument for selecting high-quality applicants,[22] only 77 new contract specialists were selected from this source during fiscal year 1991.[23] In our view, an improvement in the quality of new entrants to the

[22] For information concerning OPM's Administrative Careers with America procedures see: U.S. Merit Systems Protection Board, "Attracting and Selecting Quality Applicants for Federal Employment," April 1990.

[23] Information concerning the number of persons selected through the use of the ACWA procedures during fiscal year 1991 provided by the U.S. Office of Personnel Management.

GS-1102 series can be made through greater use of the applicants who are referred for consideration through either use of the ACWA procedures or the Presidential Management Intern Program.

Since the vast majority of new contract specialists have entered the GS-1102 series through the use of inservice placements and there is some evidence suggesting that, on average, the quality of persons selected in this manner may be marginally lower than that for people selected in other ways, it is also important that efforts be made to ensure that new inservice placements are of the highest possible quality. Based on the small but statistically significant differences we found in assessments of performance as related to source of entry, it is apparent that supervisors making inservice placement selections have not always done a good job of selecting from among the best people available from within the Federal Government. In fact, to the extent that poor selections have been made through the use of inservice placements, supervisors must bear much of the responsibility. In our view, when inservice placement procedures are used to select people for contract specialist vacancies, managers need to look beyond the employees working for their immediate organization. Consideration should be given to employees with high potential regardless of where they work in the organization or even the agency. Procurement managers should also look to their personnel offices for assistance in developing valid selection procedures for identifying the best candidates for entrance into the GS-1102 series.

In order to assist supervisors in the selection of new entrants into the GS-1102 series, OFPP has proposed the development of an inservice placement exam to screen applicants who already work for the Government in other positions and who wish to be considered for entry-level positions in the GS-1102 series. To the extent that OPM, working with OFPP, can develop an exam which provides a valid assessment of a person's ability to become a high-quality contract specialist, MSPB concurs with this effort.

Although the Board believes that additional efforts are required to ensure that high-quality inservice selections are made, we do not believe that internal placements should be eliminated. This source of entry provides an important avenue of advancement to employees with ability who might otherwise be stuck in positions in which they could not reach their highest potential. Additionally, under economic conditions where the Government has difficulty attracting adequate numbers of high-quality applicants from external sources, employees already working for the Government in other areas have always been a critically important source for meeting staffing requirements.

Similarly, even though we found that there was a significant relationship between the education of an employee and his or her performance, the relationship was not of sufficient magnitude to limit selection to only those applicants who have completed college. Since many persons who do not have a degree are excellent contract specialists, applicants should not be eliminated from competition just because they do not possess a college degree or a degree in a business-related field. Instead, whenever possible, agencies and managers should use rigorous competition and valid selection instruments to ensure that they select the best possible applicants regardless of the source of entry.

Recommendation 4: Where Possible, Streamline and Simplify the Procurement Process

Over the years the procurement process has become increasingly complex, primarily to provide a measure of control over the actions of the contract specialists in an attempt to curb both intentional and unintentional abuses of the procurement process. Thus, the complexity of the

procurement system may reflect an assessment of Government officials concerning the limitations of the procurement workforce. By providing so much structure through increases in rules and regulations, procurement policymakers may be saying that contract specialists are likely to get into trouble if they are given too much flexibility. Unfortunately, this has led to unforeseen consequences. As the number and complexity of the regulations has increased, the ability of contract specialists to be responsive to the best interests of their organizations and the Government as a whole has decreased.

From the perspective of MSPB, any attempt to improve the quality of Federal procurement should include a careful review of the procurement process itself. In the current state of affairs, it is frequently only the exceptionally talented contract specialist who is able to be fully responsive to his or her organization and still adhere to regulatory requirements. For this reason, it is our view that a decision is needed concerning the appropriate balance between guarding against abuses and providing contract specialists with the flexibilities that may allow them to complete work in a more timely and cost effective manner. This evaluation should include an assessment of the net effect of recent regulatory changes. The goal in looking at issues like these should be to identify those areas that can be simplified without an inordinate reduction in protection against abuse.

Where it is feasible to do so, contract specialists need to be given greater flexibility to make good management decisions which are in the best interests of the Government. Simplification of the procedures can reduce the burden placed on contract specialists, improve the timeliness of actions, and allow organizations more options to make good decisions in purchasing the things that they need. Of course the capability to do this rests on the assumption that contract specialists understand how to use any additional options that may be provided to them. Accordingly, the quality of the workforce should be as high as realistically possible.

APPENDIX

The table below presents the correlation coefficients showing the amount of relationship between each assessment of employee performance and each of the potential indicators of quality. In general, a correlation coefficient indexes the amount of relationship between two variables. The greater the absolute value of the coefficient (i.e., the larger the number disregarding whether the sign is positive or negative) the greater the similarity in what the two scores are measuring. The highest possible score is 1.00, meaning that the two variables are in effect measuring the same thing. The lowest score is 0.00 which means that the two measures have nothing in common.

As can be seen in this table, many of the correlation coefficients tend to be close to 0.00. This means that, in these instances, the relationship between the various assessments of performance and the potential quality indicators is rather small. The best of these potential indicators (i.e., those indicators having the largest correlation with assessments of performance) were the employee's education level, number of training courses completed, and number of awards received.

TABLE 17

RELATIONSHIP BETWEEN PERFORMANCE ASSESSMENTS AND QUALITY INDICATORS FOR GS-1102 EMPLOYEES (Correlation Coefficients)

Performance Assessments	Education	Class Standing	Overall GPA	High School Grades	No. of Related Courses	Years Outside Government	No. of Training Courses	Awards Last 24 Months	Years Business Experience	Years Clerical Experience
Average Self Rating (9 Abilities)	.14	.11	.01*	.10	.11	.01*	.18	.13	.05	-.06
Average Self Rating (20 Tasks)	.13	.10	.10	.13	.06	-.11	.14	.20	.02*	-.10
Average Supervisory Rating (9 Abilities)	.14	.10	.01*	.11	.15	-.04	.31	.15	.12	-.07
Average Supervisory Rating (20 Tasks)	.13	.08	.05	.12	.08	-.11	.21	.19	.08	-.09
Annual Performance Appraisal Rating	.03*	.06	.07	.11	-.00*	-.07	.08	.31	.02*	.00*
Advancement Rate (Grade Attained Controlling for length of Service)	.39	.21	.01*	.10	.02*	-.08	.36	.18	-.02*	-.25
Average Research Rating	.06	.07	.10	.13	.01*	-.12	.11	.21	.00*	-.05
Supervisory Assessment Training Required (Crititcal Tasks)	.10	.04	-.01*	.04	.03	.02*	.10	.04	..08	-.06
Supervisory Assessment Training Required (9 Abilities)	-.11	-.04	-.01*	-.06	-.07	.06	-.21	-.09	-.12	.08

Note: Except where indicated by "*" all of the correlation coefficients represent statistically significant relationships at the $p \leq .05$ level.
* means that there was not a statistically significant relationship between the different measures.

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