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CAREER DEVELOPMENT OF AIR FORCE OFFICERS IN CONTRACTING: AN EXAMINATION OF PERCEPTION AND UNDERSTANDING

THESIS

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THESIS

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Martin P. Hamlin

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Abstract

Developing and maintaining a motivated, professional contracting workforce is one important way in which the Air Force can more easily meet the challenges of increased requirements and decreased resources, both today and in the future. An effective career development program for Air Force officers in contracting is a key element in supporting a professional contracting community.

This research considered five factors deemed necessary for supporting career development, including experience, professionalism, expectations, mentoring, and training. The author studied the perceptions of captains in the contracting career field as a means of better understanding the unique career development challenges faced by contracting officers.

This study concluded that captains in contracting do not perceive one best career path, nor one best set of professional and technical skills. Also, career expectations remain high and mentoring activity low, despite recent institutional emphasis directed at both. Finally, the value of current required formal training, as rated by contracting officers, seems to be high.

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I. Background and Problem Statement

Background

In this era of increased requirements and decreased resources, Air Force officers serving in the contracting career field play a critical role in maintaining mission capabilities by ensuring the soundness of their business decisions. They maintain the vital link between the capabilities of industry and the fulfillment of the Global Engagement vision. With this responsibility comes the need to develop and maintain motivated and effective officers dedicated to the profession of contracting.

The contracting career field has experienced significant change in recent years through influences such as certification standards required by the Air Force Acquisition Professional Development Program (APDP) as a result of 1990 Defense Acquisition Workforce Improvement Act (SAF/AQ, 1994:5), revised procedures and instructions implemented by the Federal Acquisition Reform Act and other legislation, the Lightning Bolt initiatives (Kitfield, 1997:60), and the continuing integration of technology in the workplace and the incorporation of technological

advances in the business of contracting itself (Yukins, 1996:35). Influences from these sources have led to a remarkable revitalization of the business of Air Force procurement and a parallel metamorphosis in the profession of Air Force contracting.

To help maintain responsive support of a professional workforce in this framework, it is important to know how officers understand what is expected and required of them throughout their contracting careers. Specific job requirements evolve and change over time and across contracting functions, so periodic re-analysis of career development factors is needed to facilitate a better overall understanding of the career field as it exists in today's environment, and help to illuminate the perceived importance of developmental factors which continue to shape contracting professionals.

Problem

Establishing a motivated professional workforce requires, at least in part, the education of individuals regarding their responsibilities and opportunities within the career field. Continuing improvements to career development guidance is a requisite to providing current information to the workforce, and relevant feedback from

officers in contracting is a vital tool in this improvement effort.

However, while there exist numerous sources of officer development guidance and information about formal professional contracting training requirements, there are no current resources addressing officers' perceptions and understanding of the unique challenges of career development in the contracting field.

Objective

The primary objective of this research is to provide feedback to senior contracting leaders regarding the career development perceptions of officers in contracting. Elements of career development specifically investigated in this research include experience, professionalism, expectations, mentoring, and training. Knowledge of officers' understanding of these facets of career development is essential in generating career guidance tailored for officers in the contracting career field.

Justification

Recent initiatives have directed attention toward officer development. Global Engagement addresses officer growth by stating, "To prepare for the changes ahead, the Air Force has reviewed, generally reaffirmed, and initiated

some adjustments to its career development patterns for its officers, enlisted, and civilian force" (USAF, 1997:19). The Air Force mentoring initiative launched in late 1996 espouses the vital role of officer development and the critical value of supervisor involvement in the developing careers of junior officers (AFI 36-34:1). In response to the findings of the 1997 Quadrennial Defense Review, the Air Force Chief of Staff stated, "Quality of life and continued career development will continue as top Air Force priorities" (Fogleman, 1997-1:www). The Deputy Chief of Staff for Personnel underscores the need for establishing realistic career development goals by stating, "First and foremost is keeping our people focused on the Air Force's institutional needs" (McGinty, 1997:AFNS). AFMC/PK has designated calendar year 1997 as "Year of Training for AFMC Contracting" and in late 1996 specifically addressed officer career development in a letter to AFMC contracting officers describing development tools available to them (Roellig, 1996:1).

Congressman Nicholas Mavroules, an ardent supporter of professionalism in the Defense acquisition work force and author of the DAWIA legislation, argues the importance of training and development by stating:

> We clearly need to pay more attention to the people in the acquisition field. We need to train them better. We need to pay more attention to their career paths.

> We need to prepare them as professionals. (Mavroules, 1991:15)

Major General Robert Drewes, currently commander of Defense Contract Management Command, has emphasized the importance of professionalism in contracting by stating:

> While contracting is an integral part of the Air Force team, we are unique. We do not rely on large 'capital investments' in real estate, buildings, machinery, and equipment to get the job done. It is our people - a dedicated, professional contracting team...that turns critical requirements and scarce dollars into air and space power. (Drewes, 1993:23)

Finally, SAF/AQC and ASC/PK require information for developing updated career development guidance for officers in contracting to better reflect the current environment faced by contracting officers. This research assists in this endeavor by advancing understanding of career development perceptions of officers in contracting.

Questions

This study investigates the following areas in examining how contracting officers perceive their career development needs:

1. Experience. Do officers in the contracting career field agree on what developmental experiences tend to define a successful contracting officer career? That is, is one set of experiences or one career path believed to be better than others for attaining personal career goals, and do the

perceptions of captains in contracting tend to agree with current Air Force guidance on officer professional development?

2. Professionalism. What types of abilities and attributes do contracting officers perceive to be essential to fulfilling their contracting career goals? Specifically, are particular technical skills or professional backgrounds believed by officers to be more important than others to contracting officer career development?

3. Expectations. What are the career expectations of officers in contracting? Given the institutional needs of the Air Force, are these expectations realistically attainable? What influence do supervisors have over the expectations of contracting officers?

4. Mentoring. To what extent is mentoring perceived to be an influential and effective element in the career development of officers in the contracting career field? In particular, how well has mentoring been implemented within the contracting community, in terms of both quantity and quality, and what factors may influence this answer?

5. Training. How effective are professional continuing education courses at providing contracting officers the knowledge required to do their job? Are these courses perceived by contracting officers to be useful for helping them perform their duties?

Definitions

The following definitions are used in this paper:

1. Career development is the continued accumulation of experience and improvement of personal and professional skills supporting career progression.

2. Career progression is the successive advancement in grade and assignment responsibility during the course of an individual's career.

3. Professional development is a subset of career development which specifically encompasses only job-related professional and technical skills.

4. Contracting officer is used here to mean an Air Force officer serving in the contracting career field, as opposed to a warranted acquisition contracting officer.

Limitations

This research is intended to evaluate elements of career development for officers in the contracting career field. The information presented may not be applicable to other career fields.

Environmental factors beyond the individuals' control were not investigated. The focus was on developmental choices available to officers in contracting and the career decisions they would make.

II. Literature Review

Introduction

This review addresses the general notion of career development and the important issues associated with the concept. Next, it reviews present Department of Defense and Air Force guidance regarding both officer professional development and career specific development. It also investigates career development literature related to the research questions addressed in this study, including research on mentoring.

Issues

When investigating the general topic of career development, some common issues are often repeated in the research and bear discussion here.

A common thread in virtually all informed views on career development is the concept of mutual gain. The symbiotic relationship between an individual and the organization is the simple basis for continued cooperation and reliance from both parties. The necessary meshing of individual and organizational needs drives organizations to develop their members, and individuals to strive to reach personal goals. Hall defines the broad meaning of career development as follows:

> Within an organizational context career development represents the outcomes created by the integration of individual career-planning activities with institutional career management processes. Career development is thus comprised of two separate but interrelated functions: career planning...and career management. (Hall, 1987:55)

Hall's definition supports the idea that career development benefits both the member and the organization, and therefore is necessary for continued existence of the institution.

A second issue common to career development literature is the question of equality in the necessary relationship between individual and institution. There rarely exists an association in this context where control is shared equally. The literature suggests there is little disagreement on whether the member or the organization is better able to successfully direct career development. Peters suggests that the individual is the primary controlling force:

> In a world where success depends upon brainpower and curiosity, the self-managed growth of the individual becomes paramount, and the wise corporation wittingly turns itself into a tool for fostering individuals' growth. Both the firm and its temporary constituents benefit. (Peters, 1994:66)

A third important issue when considering development is the role of the individual. Individuals have different experiences, talents, and goals they retain as members of a group. Successful organizations, like their successful members, recognize the individual as the catalyst for meaningful career development. Ultimately, it is the

individual, supported by the organization's investment, who must determine the course and effectiveness of career development. Waitley writes succinctly, "You must look in the mirror when you ask who is responsible for your success or failure" (Waitley, 1995:IX).

The individual's catalytic role in the career development process is determined to a great extent by his or her personal and professional goals. As Waitley points out, "Without clear, specific goals, even the most diligent work inevitably turns into nothing more than an unavoidable interruption between weekends" (Waitley, 1996:5). The emphasis on goals and goal-setting is echoed in Air Force Pamphlet 36-2630, which states, "goals are essential elements in achieving a successful career. You are the only one who knows your goals" (AFPAM 36-2630, 1995:76).

Guidance

The Department of Defense has recognized the vital role of growth and development of members of the acquisition professions in DoD 5000.52-M, *Career Development Program for Acquisition Personnel*. DoD 5000.52-M is intended to provide uniform procedures for effective career development of all persons serving in acquisition positions in the Department of Defense. The manual establishes education, training, and

experience standards for specific acquisition workforce position categories and career fields, provides career path guides for acquisition personnel, and addresses other important issues such as certification requirements and ethics standards. DoD 5000.52-M states that career development is accomplished through the combination of work assignments, job rotation, training, education, and self development programs.

The primary Air Force documents regarding development of the officer corps are Air Force Instruction 36-2611, *Officer Professional Development;* Air Force Pamphlet 36-2630, *Officer Professional Development Guide;* and Air Force Instruction 36-2302, *Professional Development.* Each of these documents addresses specific aspects of career or professional development of officers, including issues such as possible career paths and educational opportunities.

The primary purpose of AFI 36-2611 is to provide information on a variety of topics that affect professional development of all active duty officers. In this regard, the instruction advises that "The Air Force needs career-oriented officers concerned with their own growth" (AFI 36-2611, 1996:3). Similarly, AFPAM 36-2630 states that the goal of officer professional development is "to develop a well-rounded, professionally competent officer corps, to

meet current and future mission requirements" (AFPAM 36-2630, 1995:1). This pamphlet also introduces the concept of the "three-legged stool," upon which an officer is supported by the ideals of knowledge, performance, and leadership (AFPAM 36-2630, 1995:89). This popular structural definition of career development is echoed by AFMC/PK in a letter to contracting officers encouraging their attention to the career development process and the individual's central role in fulfilling their career goals and objectives (Roellig, 1996:1). Finally, AFI 36-2302 gives particular guidance on graduate-level and continuing education programs which help ensure the availability of specialized knowledge required by the Air Force (AFI 36-2302, 1994:1).

The Contracting Career Path Guide published by the Air Force Personnel Center establishes some general guidelines for examining the basics of the contracting field relative to officers (AFPC, 1997:www). The guide briefly discusses some of the issues previously discussed, including depth versus breadth (i.e., specialist versus generalist), organizational requirements versus individual needs, and individual responsibility in the career development process. The guide also addresses the value of realistic individual career goals and expectations.

Additional guidance specifically for officers in the contracting career field is provided by the Deputy Assistant

Secretary for Contracting (SAF/AQC) through the World Wide Web. The Air Force Contracting home page contains a dedicated area for conveying career development information and contains information regarding professional certifications and other training guides. The site also contains numerous links to other Air Force and Defense contracting-related sites.

The primary message from the present Air Force guidance supports the notion that the individual is at the heart of the career development process. As AFMC/PK points out, "You are the most important person in achieving your goals" (Roellig, 1996:1). Whatever institutional programs may be in place to foster professional growth, ultimately it is the member, with organizational support, who must recognize and commit to personal, professional, and career development.

Literature

Career development is an important variable in the human resource equation of any organization. Considering the pointed question of what goes into career development of contracting personnel, Webb et. al. propose that education, experience, professionalism, and mentoring form the supporting basis for developing personnel in the contracting career field (Webb et. al., 1991:11).

Much of the literature of professional and career development emphasizes flexibility in this era of rapid change and uncertain futures. Hall clearly supports this argument:

> During the next twenty years, career development opportunities and programs will be affected by technological, organizational, and individual changes. More organizations will experience pressure to decrease their size due to increased competition. Most organizations will need to be adaptable and employ a flexible work force. Confronted with change and uncertainty, individuals will need to be adaptive, able to handle ambiguity, and resilient in the face of career barriers. (Hall, 1987:21)

Others have tackled the argument of whether an individual should endeavor to be a specialist or a generalist with regard to the organization's particular industry. Following the specialist approach, Peters submits that the tenacious and time-consuming pursuit of "hidden levers" is the key to success. These hidden levers represent the disregarded and often laborious details of the daily requirements of work. According to Peters, by seeking out and mastering these details, the individual becomes indispensable to the organization and thereby ensures success (Peters, 1994:34).

The generalist theory is supported by those who believe it is more advantageous for both the organization and the member if the individual is more knowledgeable about the "big picture." This reasoning follows the assumption that

the member can then better understand and contribute to the institution's goals, thereby becoming a more valuable member. Yate proposes that specialists simply repeat a year's worth of experience for year after year, and risk being pigeonholed into specific roles or duties (Yate, 1993:274).

Bernes and Magnusson argue that establishing career development services is an important way in which organizations may hedge against the uncertainty of the future. They contend that "the continuity and success of an organization depends, to a great extent, on its ability to attract, evaluate, develop, use, and retain, well-qualified people" (Bernes, 1996:569). Consequently, there is a continually increasing pressure on organizations which promote from within to establish and maintain well-organized and well-managed human resource and career development programs, services, and resources. In addition, Bernes' and Magnusson's research shows that career planning services such as career planning workshops and formal mentoring programs received the highest effectiveness ratings in their research. Unfortunately, these services were the least available in the organizations they studied (Bernes, 1996:572).

Mentoring

In general terms, mentoring can be defined simply as a developmental relationship between an experienced senior colleague, or mentor, and a less experienced junior colleague, or protégé (Noe, 1988:457). Noe investigates a popular view of the mentoring relationship by examining the two primary functions of the mentoring process. These include social functions such as role modeling and counseling, and career functions such as sponsorship and coaching, which help protégés prepare for advancement (Noe, 1988:472). Noe contends that individuals who engage in career planning activities are likely to have a greater awareness of their strengths, weaknesses, and interests. Consequently, they may be more enthusiastic about participating in mentoring relationships and better prepared to effectively utilize the mentor (Noe, 1988:462). Mentorship is generally recognized as a critical tool for successful development of junior members of an organization and often provides senior members important benefits as well (Hunt, 1983:483).

The concept of mentoring, while not new, is quickly gaining exposure as an important aspect of career development in the Air Force, particularly for junior officers. The Air Force mentoring program was formally established in November 1996 through publication of Air

Force Policy Directive 36-34, *Air Force Mentoring Program*, and subsequently implemented by Air Force Instruction 36-3401, *Air Force Mentoring*. This program is intended to "infuse all levels of leadership with mentoring to effect a cultural change - one where senior officers can pass on the principles, traditions, shared values, and lessons of our profession" (AFPD 36-34, 1996:1). The policy directive states that mentoring is a fundamental responsibility of all Air Force supervisors, and that supervisors are accountable for the professional development of their people. Specifically, mentors are directed to address career development as part of their efforts to provide challenge and guidance to subordinates. The goal of Air Force mentoring is "to help all officers to reach their full potential, thereby enhancing the overall professionalism of the officer corps" (AFPD 36-34, 1996:1). Clearly, mentoring is potentially a vital driver in the development of officers, including those in contracting.

Questions

Based on previous research, the following outcomes are expected:

1. Experience. One set of experiences will not be preferred over others. There is not one "best" career path.

2. Professionalism. Technical skills and experiences will be viewed as more important than managerial skills.

3. Expectations. Most officers will expect to reach the grade of Lieutenant Colonel.

4. Mentoring. Individuals who are mentored more will be better performers.

5. Training. APDP courses will be considered useful and effective in providing job-related knowledge.

III. Methodology

Introduction

Often the most valuable source of data concerning a human resource topic such as career development is the population of individuals directly affected by the issue (Alreck, 1995:5). Their attitudes and perceptions regarding the various aspects of the subject matter may be the most germane inputs to the research effort.

Therefore, research for this effort was conducted through survey and analysis of the personal opinions and perceptions of contracting captains to determine those factors and attributes which they believe contribute significantly to their successful career development. These factors are presumed to include experience, professionalism, expectations, mentoring, and training. The instrument used in this research was developed as a two-part questionnaire designed to capture several types of information. The primary survey was directed at Air Force captains in the contracting career field, while the secondary survey was directed at the individuals' immediate supervisors.

Participants

The population of interest for this research effort consists of all Air Force officers serving in the

contracting career field with a specialty code of 64Px. As of 28 February 1997, there were 1,037 such officers serving on active duty (HQ AFPC, 1997). Of these, officers in the grade of captain were considered to hold a unique position in the career development process. While having at least four years of experience on active duty, often entirely spent in contracting, captains are at a station in their careers considered to be more flexible and where more options are generally available to them. A basic understanding of contracting career development coupled with knowledgeable insight into future career possibilities was considered important in establishing the sample segment (Alreck, 1995:55). The design of this research also required input from the supervisors of those in the primary sample group. Supervisor responses were used to investigate the research question regarding assigned mentoring. Consequently, the sample for this survey consisted of 348 active duty Air Force captains with contracting specialty codes, and their immediate supervisors.

Instruments

The primary survey instrument (Appendix A) was directed at the sample set of contracting captains and consisted of six groups of questions generally addressing the topics of demographics, experience, skills, mentoring, and

performance. An additional group of questions regarding APDP courses, AFIT education, and EWI programs was included as well. The secondary survey instrument (Appendix B) was directed at the supervisors of these contracting captains and consisted of three main groups of questions primarily addressing the topics of performance, mentoring, and demographics.

The first group of items in the primary survey consisted of simple demographic items intended to establish the extent of the captains' experience and education levels. These questions also helped categorize respondents in terms of their previous duty specialties, academic education, time on active duty, time in the contracting career field, and current assignment. Month and year responses were recoded into total months. Similar items were included in the secondary instrument to establish the levels of supervisory experience, time in contracting, time supervising the captain, and number of subordinates.

The second and third groups of questions in the primary survey addressed the individuals' attitudes regarding the importance of particular experience factors to their career development and the importance of mastering certain skills for career progression. Items within these groups included questions about such factors as job and assignment history, career broadening, academic and professional military

education, and professional affiliations. These items utilized a forced ranking scale constructed of five reasonable alternatives within each factor category. Because the items are presented as possible alternatives or choices, the forced ranking scale indicates what the captains' choices are likely to be within each category (Alreck, 1995:121). Responses were transformed into proportion-selected scores that summed to 100 percent within each category. All five choices were required to be ranked, and ties were not allowed.

The fourth group of questions in the primary survey attempted to measure the extent to which the captain is provided with mentoring activities by his or her immediate supervisor. These items will help determine whether current mentoring activities are perceived to be useful for career development, and measure the overall frequency of mentoring currently employed in the contracting community. This group was composed of 15 items developed by previous mentoring research which included seven psychosocial mentoring functions and eight career-related mentoring functions (Tepper, 1996:850). The items utilized a 6-point response scale ranging from 0=*Does Not Apply* to 5=*To A Very Large Extent*. Chrombach's Alpha for these scales are .86 (N=140) for psychosocial and .88 (N=141) for career-related

mentoring. Also included in this group were two items addressing the quantity of mentoring the individual received each month. These responses were recoded as total hours per month and times per month. A single item in this group requested the captains' opinions of the usefulness of the mentoring provided by their current supervisor. The 5-point response scale utilized was adapted from a behavioral and social sciences questionnaire construction manual where 1=*Not Useful At All* and 5=*Extremely Useful* (ARI, 1989:134). All of the mentoring items are paralleled in the secondary survey to measure the supervisors' perceptions of the mentoring relationship.

The fifth group of questions addressed the individuals' self-reporting of job performance. These items were designed to evaluate the captains' perception of their own job performance as an indicator of their potential for further career advancement. These ratings can also be compared to those of the individuals' supervisors to measure the realism of the captains' expectations of career development. The questions in this group included 11 items requiring the actual number of times specific performance-related events occurred, and two items regarding the individuals' long-term career goals. Like the mentoring group, the performance items are duplicated in the secondary

instrument to provide a method for further evaluating the supervisor-captain relationship.

Finally, the sixth group of questions targeted professional continuing education (APDP) courses, AFIT graduate education, and the 10-month Education With Industry program. Twenty of these questions, corresponding to the twenty APDP courses evaluated, asked participants to rate the effectiveness of the courses in providing knowledge required in the job. The six-point scale used for these items was consistent with that adapted for mentoring items where 0=*Does Not Apply* and 5=*Extremely Useful* (ARI, 1989:134). This scale was applied to two questions designed to evaluate the 10-month EWI program through ratings of both effectiveness in providing job knowledge and contribution to improving job performance. One question in this group, again using the same scale, targeted AFIT's in-residence master's degree program and its contribution to improving job performance.

Validity

The survey instruments were validated through analysis by experts in the fields of contracting, survey research, and behavioral science. Subject matter and research experts included members of the SAF/AQC staff, members of the AFPC contracting officer career counseling team, professors of

the AFIT Graduate School of Logistics and Acquisition Management, and members of the AFPC Survey Branch. Students of the AFIT Graduate Contract Management Program and intermediate level Professional Continuing Education contracting courses also evaluated the survey instruments for content validity. Several iterations of expert reviews and draft revisions culminated in the final version of the survey instruments used in this study. In accordance with AFI 36-2601, *Air Force Personnel Survey Program*, both questionnaires were approved by the AFPC Survey Branch and received Air Force Survey Control Numbers prior to release.

Procedures

Survey packages were mailed directly to the supervisors of 321 captains in the sample group. Each package contained the two survey instruments with cover letters, the current career development pyramid published by AFPC, and return envelopes. The cover letter requested that the supervisor complete the secondary questionnaire and forward the primary questionnaire to the subordinate captain for completion. Survey instrument pairs were marked with the captain's name so returns could be paired for each supervisor-captain relationship. The remaining 21 captains were assigned to academic duties without immediate military supervision and

did not receive the supervisor survey. Their packages were otherwise identical to those described above.

After the packages were released, a period of approximately six weeks was allowed for responses. All responses received by the pre-established deadline were manually entered into digital form using a popular spreadsheet software program. The digital file was then transferred to a statistical software program for evaluation and analysis. This process allowed for the grouping of data in supervisor-captain pairs, the elimination of all names from the database, and the generation of a final data set consisting only of numerical responses.

Analysis

Responses to both survey instruments were matched for each individual so that the relationship between individual and supervisor, where one existed, could be evaluated. Responses were manually entered into electronic format for use with a personal computer statistical analysis software program. This process also removed identities of participants to preserve their anonymity. The grouped data were analyzed to test for relationships predicted by this study's research questions.

Limitations

The assumptions made in this study are:

1. With respect to career development issues, the sample of contracting captains is representative of the population of officers in the contracting career field.

2. The data obtained are representative of the true relationships that exist between the variables examined and the real world; the measurements are reliable and valid.

3. The self-reported answers are obtained from participants who understand the survey items and have responded accurately and truthfully.

The limitations of this study are:

1. Both survey instruments contain qualitative response items for further identification of attitudes and perceptions of participants. These responses are not included in the quantitative analysis.

2. Time and other resource constraints prevented an exhaustive evaluation of the entire contracting community and all relevant career development issues. This study examines only the data received through the voluntary responses of survey participants.

3. As survey research, this study is limited by the number and representativeness of respondents who elected to participate. Further, the survey instrument cannot determine the causality of any relationships reported.

IV. Data Description and Analysis

Responses

Responses to the two research instruments varied slightly between the individual and supervisor versions. A total of 143 primary surveys were received before the cut-off date, providing a 41% rate of return from the captains surveyed. A total of 149 secondary surveys were received before the deadline, equating to a return rate of 46% from the supervisors contacted. The total of 292 instruments returned represents an overall return rate of 43% for the entire research effort. Of the surveys returned, 100 pairs successfully matched supervisor and captain responses, establishing a 31% rate of return for matched pairs of instruments.

Participants

Evaluation of responses revealed demographic information about the characteristics of the individuals participating in this study. At the time of their response, the captains answering this survey averaged 9.4 years on active duty, and served in contracting 4.8 years on average. They reported 1.3 years, on average, as the time they have been in their current assignment. Approximately 49% of those responding described their undergraduate degree as

business-related, and 57% reported having a prior officer AFSC other than contracting.

Supervisors reported an average of 21.6 years of total active duty and federal service time, of which 15.3 years, on average, was spent in the contracting career field. Their average reported time in their current assignment was 2.2 years, and the average time spent as supervisor of the relevant captain was about 1 year. The approximate average number of personnel directly supervised was 14 people.

Experience

With regard to whether contracting officers perceive one best set of assignment alternatives or one best career path, a test of correlation among answers to the second group of questions was administered. Among the general experience categories of Contracting Organizations, Contracting Jobs, Senior Leadership, Other Fields, Career Broadening, and Experience, virtually no correlation was found to exist at the .01 level of significance. This statistic indicates that among the items presented, there appeared to be no relationship or trend to responses at the group level.

Table 1 presents the overall relative rankings by percentage chosen within each item group.

Table 1. Experience Rankings

Item Group	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice	Sample Size
Contracting Organizations	Systems 33.0	Operational 27.5	MAJCOM 19.4	SAF or OSD 11.5	DLA or DCMC 8.7	141
Contracting Jobs	PCO or ACO 29.3	Systems 28.1	Operational 23.2	ALC 12.9	R&D 6.7	141
Senior Leadership	Center Div. Chief 26.7	Center PK 26.2	MAJCOM PK 20.9	SAF or OSD 14.7	DCMC CC 11.5	137
Other Fields	Acquisition 28.2	Non-Rated Ops 23.3	Rated Ops 20.6	Ops Support 17.7	Mission Support 10.1	140
Career Broadening	AFIT or EWI 28.8	Logistics Broadening 28.0	Logistics Crossflow 23.0	Special Duty 12.5	Mission Support 7.8	140
Experience	Different Contracting 35.7	HQ Staff 17.9	Career Broadening 17.7	Other Field 17.1	Graduate Education 11.6	141

Within the Contracting Organizations group respondents generally ranked "experience in a systems acquisition contracting office" as most important for their career development, giving it 33.0% of the total possible rank scores, followed by "experience in an operational/base support contracting office" at 27.5% of the available scores. However, when contracting captains were categorized according to their current assignment, the forced ranks of these items differed. Operational and Major Command (MAJCOM) participants ranked operational experience as most important. Systems, Defense Logistics Agency (DLA), and Air

Logistics Center (ALC) respondents ranked systems experience as most important.

Overall, "experience as a PCO/ACO" was ranked the most important job experience and received 29.3% of the Contracting Job category rank scores. This item was followed in importance by "experience in major systems acquisition" at 28.1% and "experience in operational/base support contracting at 23.0% of the possible rank scores. Within assignment categories, operational and MAJCOM respondents ranked operational experience as most important, followed by PCO/ACO experience. Systems, DLA, and ALC captains ranked PCO/ACO experience first, and systems acquisition experience second most important for their career development.

Participants generally ranked "experience as a Center Contracting Division Chief" as the most important Senior Leadership experience for career development and "experience as a Center Director of Contracting" as the second most important experience, giving them 26.7% and 26.2%, respectively, of the total rank scores. When ranked by assignment category, the scores again differed. Operational, MAJCOM, and ALC respondents ranked Center Division Chief most important, and Center Director of Contracting second most important. Captains in DLA ranked Center Director of Contracting as the most important senior

leadership experience, but ranked MAJCOM Director of Contracting second most important.

Contracting captains consistently ranked "experience in another acquisition career field" as the most important Other Field career development factor, giving this item 28.2% of the total rank scores. The second most important item overall was "experience in non-rated operations (e.g., Space and Missile)" and received 23.3% of the total scores. However, operational contracting respondents ranked experience in operations support career fields as the second most important experience in this category.

As a whole, participants ranked "experience in AFIT master's degree or EWI contracting programs" as the most important career broadening experience for their development, at 28.8% of the available scores. The item "experience in AF Logistics Career Broadening Program (acq. logistics)" at 28.0% was closely ranked as next most important. Operational, MAJCOM, and DLA captains rated the Logistics Career Broadening Program most important, followed by the Logistics Officer Crossflow Program.

Overall, "experience in different types of contracting" was consistently ranked as the most important experience for career development of captains in contracting at 35.7% of the total available rank scores. Although all assignment groups agreed on this item, MAJCOM respondents rated

Headquarters Staff experience as second most important, and operational contracting participants ranked career broadening assignments as second most important for career development.

Correlations of items in the six forced ranking Experience categories with other information regarding survey respondents revealed significant statistical relationships with two other factors. First, the most common relationships observed were those related to the length of time the individual has served in the contracting career field. This factor was positively correlated with the ranking of operational contracting organizations (.22), operational contracting assignments (.26), and experience in different types of contracting (.28). Length of time in contracting was negatively correlated with the ranked importance of systems contracting assignments (-.23), career broadening through AFIT or EWI programs (-.31), and experience in another career field (-.31). In general, this indicates that captains with more reported contracting time tended to rank operational contracting experience and varied contracting experience higher than systems jobs, AFIT and EWI programs, and experience in another career field. Second, total time on active duty was positively correlated with importance ratings of experience in another mission

support field (.23). Each of these correlations was observed at the .01 significance level.

Professionalism

An analysis of responses to the forced rank items relevant to professionalism in contracting indicates that captains participating in the survey tended to agree on the technical skills and professional backgrounds they believe are more important to their career development. Respondents ranked items in the groups of Education, Professionalism, Communication Skills, Interpersonal Skills, and Leadership Skills. Table 2 presents the overall relative ranking by percentage chosen within each item group. Values in each cell represent the percentage of the sample size selecting the cell's item as the nth choice within each category.

Table 2. Professionalism Rankings

Category	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice	Sample Size
Education	Business Master's 31.9	PME in Residence 26.1	Master's at AFIT 16.7	Technical Master's 14.0	PME non Residence 11.3	141
Professionalism	Contracting Certification 35.9	Multiple Certification 26.7	Professional Certification 19.0	Professional Activity 14.7	Civic Leadership 3.7	140
Communication Skills	Job-Related Information 29.6	Letters or Messages 23.2	Complex Situations 22.1	Informal Speaking 13.7	Formal Briefing 11.5	142
Interpersonal Skills	Maintaining Relationships 29.7	Respect for Others 24.9	Cooperating With Others 22.3	Helping Others 12.3	Considering Others 10.9	142
Leadership Skills	Setting the Example 31.3	Productive Atmosphere 26.6	Motivating Subordinates 26.1	Coordinating Subordinates 9.7	Monitoring Subordinates 6.3	142

Overall, respondents consistently ranked "completing a masters degree in a business field" as the most important for career development of the education-related backgrounds presented. Completing a masters degree in business received 31.9% of the total possible Education rank scores and showed positive correlation of .22 at the .01 significance level with the length of time served on active duty. Contracting captains ranked "completing professional military education in residence" as the second most important education item for their development. This item received 26.1% of the overall Education score, and was positively correlated at .30 with the Professionalism item "holding APDP

certifications in contracting" at the .01 significance level. This relationship may be attributable to an understanding of PME and APDP certifications as standard requirements of the job by contracting officers.

Participants were similarly consistent in their ranking of professionalism-specific items. Overall, "holding APDP certifications in contracting" ranked highest with 35.9% of the total *Professionalism* score. This item showed negative correlation with the communication skill "speaking before a group informally" at -.23, and positive correlation with the communication skill "writing letters or messages" at .28, both at the .01 significance level. Perhaps captains, while recognizing the importance of APDP certification, do more writing than informal speaking in their duties, or the perceived value of writing skills is simply higher. Second only to contracting certification, "holding APDP certifications in multiple acquisition areas" was ranked second most important for career development, receiving 26.7% of the available score. This item exhibited negative correlation of -.26 at the .01 significance level with the length of time served on active duty, indicating that senior captains tended to rank this item lower than junior captains.

The communication skill ranked by participants as most important for career development was "communicating job-

related information" and received 29.6% of the *Communication Skills* total score. Both "writing letters and messages" and "explaining complex situations" were ranked similarly with 23.2% and 22.1%, respectively, of the total rank scores. Rankings of the item "writing letters or messages" was negatively correlated at the .01 significance level with both the length of time the respondent has been on active duty (-.24) and the length of time served in the contracting career field (-.25). Senior captains seem to assign less value to the importance of writing as a communication skill. These officers may do less writing in their jobs or may simply value writing skills less than formal briefings, for example. There was no discernible relationship between the captains' rankings of the communication skills items and their supervisors' ratings of their performance in these areas.

In rating *Interpersonal Skills* items, respondents generally ranked "maintaining good working relationships" as the most important interpersonal skill for career development, giving the item 29.7% of the category's score. Both "showing respect for others" and "cooperating with others were ranked next at 24.9% and 22.3%, respectively. There was no discernible relationship between the captains'

rankings of the interpersonal skills items and their supervisors' ratings of their performance in these areas.

The *Leadership Skills* item ranked most important to development was "setting the example for subordinates" and received 31.3% of the total rank scores possible. In general, participants rated "creating a productive atmosphere" at 26.6% as the second most important item, followed closely by "motivating subordinates to do their best" at 26.1% of the available rank scores. Rankings of the item "motivating subordinates to do their best" exhibited a positive correlation of .23 at the .01 significance level with the length of time the respondent served in the contracting career field. There was no discernible relationship between the captains' rankings of the leadership skills items and their supervisors' ratings of their performance in these areas.

To help determine whether officers in contracting believe a particular set of skills or backgrounds is more important than another to their career development, a test of correlation between responses to the group of professionalism-related items and additional information about the respondents was administered. Some items within the background categories exhibited a relationship to the individual's length of time on active duty and in contracting at the .01 significance level. Senior captains

tended to rank a masters degree in business higher, and writing skills lower. Captains with more contracting experience also ranked writing skills lower, and motivating subordinates higher. Also, among the ranked items within the Professionalism constructs, there exists no evident pattern to the manner in which these items were ranked by participants based on their current assignment.

Expectations

Analysis of the career expectations of the captains participating in this study was accomplished by evaluating responses to the items directly inquiring of the individual's personal long-term career goal, then comparing these answers to the supervisor's performance descriptors of the individual. Table 3 provides response percentages.

Table 3. Career Expectations

Grade	Percentage of Captains' Goals	Supervisors' Goals for Captains
Brig General	15.6	9.0
Colonel	57.4	49.3
Lt Colonel	16.3	25.7
Major	4.3	10.4
Captain	1.4	5.6
Other	5.0	N/A

Most individuals (57.4%) selected the grade of colonel (O-6) as their long-term career progression goal, followed by lieutenant colonel (O-5) and brigadier general (O-7) at 16.3% and 15.6%, respectively. While bivariate correlation could not establish a relationship between supervisor performance ratings of the individual and the individual's career progression expectations, a relationship was observed between the captain's long-term grade expectation and the supervisor's grade expectation for that captain. Individual and supervisor expectations of grade were positively correlated at .32 at the .01 significance level.

Mentoring

The issue of mentoring was specifically studied with regard to its unique influence on career and professional development processes. With respect to whether contracting officers assign value to the supervisor-captain mentoring relationship, several variables were tested for statistical frequency and correlation.

As a measure of the quantity of mentoring activities occurring in the contracting community, individuals answered that their supervisor engaged in mentoring activities with them an average of 8.4 times per month, for 16.4 hours per month on average. The supervisor responses for these items

scored an average of 14.3 times per month, and a total of 17.6 hours per month, on average. No significant relationship appeared between individuals' reported frequency of mentoring activities received and the supervisors' reported frequencies of mentoring provided.

The most direct mentoring item asked the individual to rate the usefulness of activities provided by their supervisor. This item was most often answered "useful" on a five point scale anchored by "not useful at all" and "extremely useful" at the ends. Supervisors' responses to the parallel question regarding the value of the mentoring they received early in their careers generated "very useful" as the modal response on the same scale.

An examination of the relationships among these variables reveals that the usefulness of mentoring provided by supervisors, as reported by the participating captains, is positively correlated with the number of times per month captains reported receiving mentoring activities, and with the extent to which captains reported their supervisors engaged in mentoring activities with them. This indicates that, in general, active involvement by the supervisor is considered useful. The correlations between usefulness and times per month ($r=.24$, $N=134$) and extent ($r=.73$, $N=137$) was significant ($p<.01$).

Further analysis of the mentoring construct examined theorized relationships between the perceived usefulness and frequency of mentoring received by contracting captains and other factors measured in this study. These factors include supervisors' performance measures of the individuals; length of time the individual served on active duty, in contracting, and in the current assignment; and supervisor descriptive data including number of subordinates supervised, usefulness of mentoring the supervisor received early in their career, and current grade of the supervisor. The relationships between organization type and the usefulness and frequency of mentoring were also included in the examination.

The performance rating items provide individual performance and career potential information regarding participating captains. Among these factors, monthly frequency of mentoring reported by the individual showed virtually no correlation to the performance ratings given by their supervisor. Similarly, reported usefulness of mentoring the supervisor received did not appear to be related to the frequency with which supervisors engaged in mentoring activities with the individual. However, supervisors' reports of the extent to which they engaged in career-related mentoring activities with captains was positively correlated with the supervisors' ratings of the

individuals' technical skills (r=.27) and their communication skills (r=.24). Overall, supervisors reported providing more career-related mentoring activities to those captains for whom they provided higher performance ratings (r=.24). These relationships were observed at the .01 significance level.

The length of time the captains reported serving on active duty and the length of time they reported serving in the contracting career field showed no significant correlation to either usefulness or frequency of mentoring received. Likewise, the supervisors' reported total active duty and Federal service time, as well as their time in contracting, did not appear to be related to the usefulness or frequency of mentoring reported by their subordinate captains. However, at the .01 significance level, usefulness did exhibit a negative correlation of -.24 with the length of time the captain was assigned to the current organization.

When usefulness and frequency of mentoring were examined in relation to the number of subordinates assigned to the supervisor, the usefulness of mentoring the supervisor reported receiving early in his or her career, and the supervisor's grade, there appeared to be no significant relationships.

Finally, frequency of mentoring activity reported by the individual captains participating in this study revealed some differences among the different organization types considered. Captains assigned to systems, ALC, and DLA contracting offices tended to report total mentoring time per month at or above the overall average, with means of 16.8, 20.0, and 24.6 hours per month, respectively. Participants assigned to operational and MAJCOM contracting organizations reported means less than the overall average at 12.7 and 8.4 hours per month, respectively. Average usefulness of mentoring remained within a range of 3.1 to 3.6 on the five point scale.

However, usefulness of mentoring received a somewhat different response. The most common responses for ALC, DLA, and systems participants were "slightly useful" and "useful" as reported by the individuals, while captains assigned to operational and MAJCOM contracting offices most frequently responded "very useful" and "extremely useful" regarding the usefulness of mentoring they received from their supervisors. The highest averages of responses to mentoring usefulness were observed in the MAJCOM and DLA groups. These results are depicted in Table 4 and Figure 1 below.

Table 4. Mentoring Statistics

Assignment Category	Mean Times/Mo	Mean Hrs/Mo	Mean Usefulness	Sample Size
Overall	8.4	16.4	3.2	122
Systems	5.2	16.8	3.1	49
ALC	5.5	20.0	3.2	25
Operational	11.6	12.7	3.1	22
MAJCOM	7.3	8.4	3.6	15
DLA	24.1	24.6	3.6	11

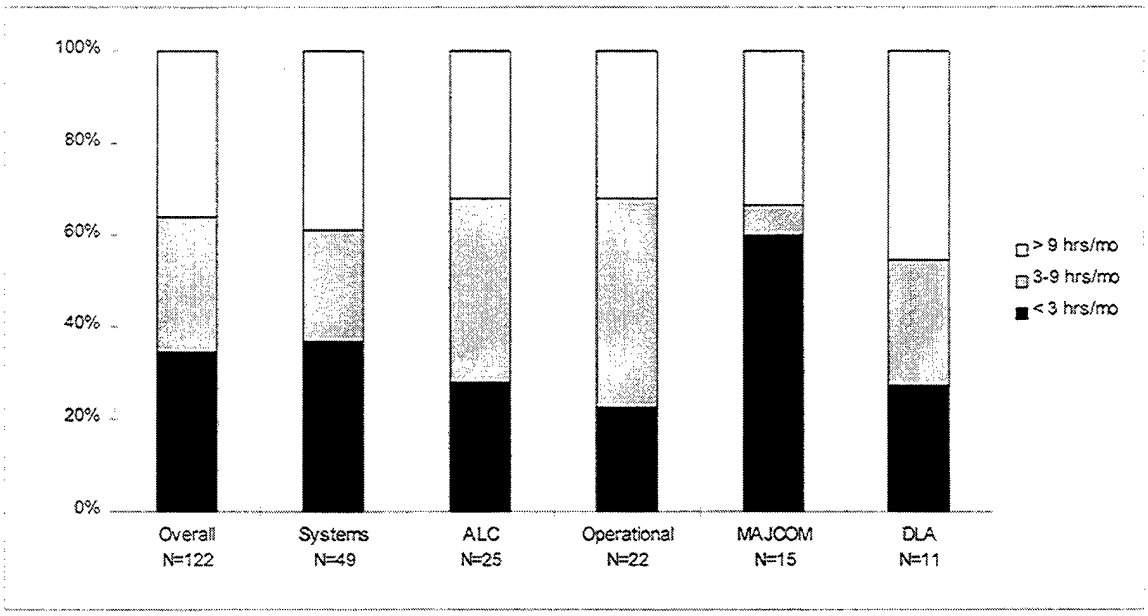


Figure 1. Mentoring Frequency

Training

In total, the ratings for all twenty APDP courses averaged 3.7, near "very useful" on the five-point scale. As the most common response, "very useful" was given for 38% of the answers to these items. The lowest rated individual courses tended to be those involving facilities contracting and averaged 2.33 or lower, although these items had very low sample sizes. The highest rated courses tended to be intermediate level and contingency contracting courses. In particular, CON 234 Contingency Contracting was rated very high with a mean response of 4.0 and a modal response of 5 on the five-point scale. A graphical presentation of these values is provided in Table 5.

The Education With Industry program generally received high marks for effectiveness and usefulness. The 4-week EWI initial course which participants attend before beginning the 10-month program received a mean rating of 3.7 for effectiveness in providing job knowledge, while a modal response of 4 was observed. Nearly three quarters (73.2%) of the program's participants rated its contribution to improving job performance as "very useful" or higher. In a parallel question for AFIT graduates, 66.7% of those who earned a master's degree in residence at AFIT rated its contribution to improving job performance as "very useful" or higher.

Table 5. Course Ratings

Course	Not Useful	Slightly Useful	Useful	Very Useful	Extremely Useful	Sample Size
L3QR63A1 EWI Initial Course	0.0	8.5	35.6	35.6	20.3	59
ACQ 101 Acquisition Fundamentals	1.7	12.1	37.9	22.4	25.9	58
ACQ 201 Intermediate Acquisition	3.7	0.0	25.9	40.7	29.6	27
CON 101 Contracting Fundamentals	0.0	10.0	30.9	37.3	21.8	110
CON 102 Operational Fundamentals	0.0	3.0	30.3	51.5	15.2	33
CON 103 Facilities Fundamentals	25.0	50.0	0.0	25.0	0.0	4
CON 104 Contract Pricing	1.8	13.3	44.2	32.7	8.0	113
CON 105 Operational Pricing	0.0	10.0	40.0	40.0	10.0	20
CON 106 Facilities Pricing	33.3	33.3	0.0	33.3	0.0	3
CON 201 Contract Law	0.0	6.1	34.8	38.3	20.9	115
CON 211 Intermediate	0.0	8.5	17.1	53.7	19.5	82
CON 221 Intermediate Administration	0.0	6.8	32.2	47.5	13.6	59
CON 222 Operational Administration	4.8	0.0	23.8	57.1	14.3	21
CON 223 Intermediate Facilities	33.3	33.3	0.0	33.3	0.0	3
CON 231 Intermediate Pricing	3.5	12.9	38.8	40.0	4.7	85
CON 232 Overhead Management	0.0	0.0	40.0	40.0	20.0	10
CON 233 CAS Workshop	0.0	22.2	44.4	22.2	11.1	9
CON 234 Contingency	0.0	7.7	19.2	34.6	38.5	26
CON 241 Information Technology	6.7	20.0	20.0	26.7	26.7	15
CON 301 Executive	3.0	9.1	18.2	39.4	30.3	33
CON 333 Management	3.3	10.0	26.7	16.7	43.3	30

The values in each cell represent the percentage of the sample size selecting that usefulness descriptor for the individual course. Interpretation of scores should be made with caution where course sample sizes are small.

V. Findings and Recommendations

Introduction

This chapter provides a synopsis of the research findings relative to the investigative questions presented in this paper. A discussion of the outcomes observed is followed by a proposition of possibilities for further research in related areas of interest.

Experience

Participants responded to items addressing the question of whether contracting captains perceive one best set of career experiences or one best career path much the same as expected. Overall, officers disagreed on the rankings of specific experiences and possible career path alternatives. However, a level of polar disagreement was discernible when participants were grouped according to the organization to which they were currently assigned. When examined in this manner, officers within systems, ALC, and DLA organizations tended to choose career paths similar to each other, preferring systems experience over operational assignments. Conversely, respondents assigned to operational and MAJCOM contracting offices tended prefer operational experiences. It is likely that preferential scores where influenced by the individuals' current assignment.

However, all officers view experience as a PCO/ACO as desirable. This is understandable, since this represents a fundamental experience of officers in the contracting career field. Further, experience in different types of contracting was also consistently ranked by all as the most important experience for career development.

Based on their current assignment, respondents tended to disagree on which experiences and paths were more important to their career development, ranking their current assignment higher. However, as a whole, participants agreed that experience in different types of contracting was important to their development. These responses tend to indicate that, as expected, captains in contracting recognize the importance of breadth of experience and do not agree on one best career path. Therefore, respondents appear to understand and adhere to current guidance on this issue and significant changes are not recommended.

Professionalism

The answer to the question of whether captains in contracting agree on which technical skills and professional backgrounds are important to their career development generally agreed with theoretical expectation. With few exceptions, participants tended to disagree on which factors were more important, suggesting there is not a model set of

skills and attributes to which these officers aspire. Exceptions include completing a graduate degree in business and completing PME in residence, which were ranked closely on their value to contracting captains.

One item which was consistently given significantly higher rank than its competing choices, indicating its relatively higher value, was holding APDP certifications in contracting. This represents an understandable outcome since APDP certifications are technical requirements in the contracting community for placement in many assignments. As institutional requirements, APDP certification, professional military education, and graduate academic degrees were indeed ranked highly by the sample group of captains.

Within the Skills categories, responses to the specific choices provided in the survey exhibited a relatively flat distribution, indicating that no one skill or set of skills was clearly more important to the respondents than another.

Overall, respondents tended to disagree on which technical skills and professional backgrounds were most important to their career development. As expected, responses to this study reveal that beyond standard and well-known job requirements, a "checklist" of desirable attributes apparently does not exist. Therefore, no significant recommendation is necessary.

Expectations

With regard to the career expectations of the captains participating in this study, nearly 75% reported their career goal as colonel or higher. This may represent an unrealistic goal level, since there are presently fewer than 60 contracting officers in the grades of colonel and above. However, a test of correlation revealed that supervisor expectations of the individual's potential were related to that individuals' personal goals, indicating that supervisors' goals for their people may also be inflated. This relationship may represent a situation in which both supervisors and individuals have not tempered their expectations with realistic consideration, or have tended to set their goals excessively high. In either case, current guidance on realistic career expectations from AFPC should be disseminated to officers in contracting with parallel information provided to supervisors.

Mentoring

Mentoring is generally understood to be a critical factor in a comprehensive, effective career development program. This study investigated the status of the official Air Force mentoring program and the extent of its implementation within the contracting community.

Specifically, frequency of mentoring activities and usefulness of those activities provided to the contracting captain by their immediate supervisor were examined.

This study found that the expected responses did not materialize. With regard to frequency, responses were not consistent across contracting organizations, and nearly one third of the captains reported little or no mentoring provided to them by their supervisor. Further, there appeared to exist no correlation between the individuals' reports of frequency of mentoring received and the supervisors' reported frequency of mentoring provided. This relationship may indicate the definition of mentoring is not universally understood by mentors and protégés in the contracting community.

Usefulness of mentoring, as reported by the participating captains, exhibited similar trends. Ratings of usefulness varied when respondents were grouped according to current assignment. Again, this result may be explained in part by differing interpretations of the mentoring process.

Mentoring activity did seem to be related to individual performance. As a whole, supervisors tended to provide more mentoring to individuals whom they also provided higher performance ratings. Although this research could not determine causality, one explanation for this relationship

is that individuals tend to performer higher if they are mentored more.

Both frequency and usefulness were not correlated with the supervisors' length of time serving the Air Force, number of subordinates, and the usefulness of mentoring provided to the supervisor. However, an inverse relationship did exist with the captains' time in their current assignment. This suggests that mentoring may be effectively assignment-oriented, versus career-oriented, and that supervisors tend to support new subordinates only until they become self-sufficient in the organization. Mentoring activities seem to be used by supervisors primarily for socialization purposes and for integration of individuals new to the organization. In this regard, supervisors may be monitoring their subordinates, but not mentoring them. Overall, mentoring responses did not provide the expected outcomes regarding frequency and usefulness generated by a review of relevant literature.

Training

As a whole, APDP courses received good ratings for their effectiveness in providing job knowledge. In particular, the contingency contracting course scored very high, perhaps an indication of an increasing need for this type of contracting function. Intermediate level

contracting courses also scored well, which likely is attributable to an effective match between material presented and timing of attendance.

Among participants of the 10-month EWI program, this experience seems popular and received high marks for usefulness in contributing to job performance. Similarly, AFIT graduates tended to rate the academic education they received as very useful.

Summary

This research indicates that there is significant agreement about career development within subcategories of contacting captains; like officers gave like responses. Overall, however, their responses tend to indicate that they perceive there is not "one best" career path, nor a single "checklist" of desirable attributes. Current career expectations of contracting captains may be unrealistically high. The roles of mentor and protégé may not be well understood, as indicated by apparent unrealistic career expectations and a lack of correlation between supervisor and captain responses regarding mentoring activity. Finally, required professional continuing education courses, EWI experience, and AFIT graduate education tended to receive high ratings for effectiveness and usefulness.

Recommendations

The evolving nature of the contracting profession and the existence of Air Force procurement in a fluid environment dictate that this effort should not stand as the final and conclusive research on the matter of career development of officers in contracting. As recommendations for continued investigation of this vital subject, the following suggestions are presented as possible topics for further research.

Since officer development is unique to the military services, Army and Navy development programs may be useful tools for evaluating the various aspects of the Air Force contracting development process. Possible avenues for improvement may be found within the development structures of the other services, and may provide a relevant comparison of officer development programs specific to contracting.

Similarly, the career development programs designed for the civilian and enlisted members of the Air Force contracting workforce may prove to be beneficial instruments for evaluating the current officer development system. In general, the same may be true for private sector professional contracting training programs. Evaluation of these developmental processes in relation to the current

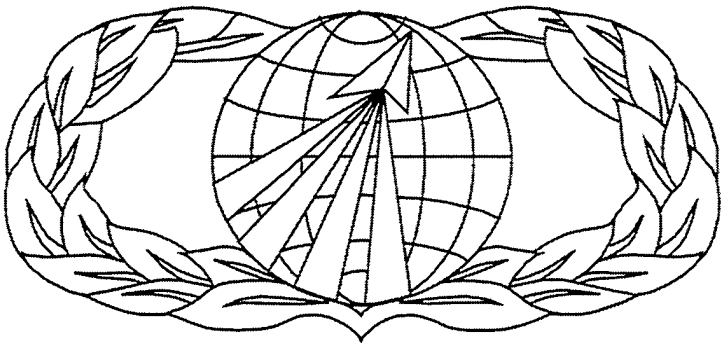
officer program may provide additional insight into possible improvements.

Finally, the importance of mentoring to the continuing development of Air Force officers in contracting cannot be overstated. Given that the official mentoring program is currently less than one year old, continued investigation of the mentoring function is recommended. Further evaluation of this and other aspects of the developmental process should provide valuable information for future development of Air Force officers in the contracting career field.

Appendix A: Primary Survey

USAF Survey Control No.: 97-23B
Expiration Date: 31 Jul 97

SAF/AQC SPONSORED
CAREER DEVELOPMENT EVALUATION STUDY
FOR
OFFICERS IN CONTRACTING



ABOUT THIS STUDY

This study is being conducted by researchers at the Air Force Institute of Technology with sponsorship from SAF/AQC. Our goal is to evaluate the career development opportunities available to officers in the contracting career field and determine the importance of particular factors to the overall development of quality contracting officers. This survey is designed to measure a variety of experience, education, and other factors that may contribute to the effectiveness of officers in the contracting career field.

We value your privacy, and your responses will be kept completely confidential. Without your voluntary participation, this project will not be successful. Your input is important!

PRIVACY ACT STATEMENT
In accordance with Paragraph 3.2, AFI 37-132, *Air Force Privacy Act Program* (11 Mar 94), the following statement is provided as required by the Privacy Act of 1974. **Authority:** (1) 5 USC 301, Departmental Regulations; and (2) 10 USC 8012, Secretary of the Air Force, Powers, Duties, Delegation by Compensation; and (3) DoD Instruction 1100.13, *Surveys of Department of Defense Personnel* (9 Nov 78); and (4) AF Instruction 36-2601, *Air Force Personnel Survey Program* (1 Feb 96) **Purpose:** This survey is being conducted to collect information for use in research intended to improve understanding of Air Force officer professional and career development. Responses will be combined to provide information on career development patterns to SAF/AQC. **Routine Uses:** Research based on grouped data may be included in published articles, reports, and texts. Distribution of the results of this research will be unlimited. **Disclosure:** Participation in this survey is voluntary. No adverse action may be taken against any individual who elects not to participate.

INDIVIDUAL DATA

Please verify the information below, correct any errors you find, and fill in the blanks.

Mailing Label

Time on Active Duty: _____ year(s) _____ month(s)

Time in Contracting: _____ year(s) _____ month(s)

Time in Current Assignment: _____ years(s) _____ month(s)

Current Duty Title: _____

Previous AFSC(s): _____

Type of Undergraduate Degree(s):

- ☐ business
- ☐ technical
- ☐ liberal arts

Program(s) Completed:

- ☐ master's degree in residence at AFIT
- ☐ master's degree at another university
- ☐ 10-month Education With Industry

IMPORTANT NOTE

Many of the questions in this survey use a *rank-order* format. For these questions, rank the items as instructed, assigning a different rank (1 through 5) to each item. No ties are allowed. Every item must be ranked. For example:

Please rank each of the following aircraft components in order of its importance for safe, controlled flight where 1 = most important and 5 = least important.

Aircraft Components	
Order of Importance for Safe, Controlled Flight:	
2	engine
5	nose art
4	avionics
1	wing
3	landing gear

Please rank each type of experience in order of its importance for your career development as an Air Force officer in contracting.

Put a 1 next to the most important type of experience, a 2 next to the second most important type of experience, and so on, for all five items in each group.

Ties are not allowed. You must assign a different rank (1 = most important, 5 = least important) to each type of experience.

Contracting Organizations	
Order of Importance for Career Development:	
_____	experience in an operational/base support contracting office
_____	experience in a systems acquisition contracting office
_____	experience in a DLA/DCMC administrative contracting office
_____	experience in a SAF or OSD contracting staff office
_____	experience in major command level contracting office

Contracting Jobs	
Order of Importance for Career Development:	
_____	experience in major systems contracting
_____	experience in ALC/depot contracting
_____	experience as a PCO/ACO
_____	experience in operational/base support contracting
_____	experience in research and development contracting

Senior Leadership	
Order of Importance for Career Development:	
_____	experience as a DCMC Commander
_____	experience in a SAF or OSD contracting staff position
_____	experience as a Center Director of Contracting
_____	experience as a Major Command Director of Contracting
_____	experience as a Center Contracting Division Chief

Please rank each type of experience in order of its importance for your career development as an Air Force officer in contracting.

Put a 1 next to the most important type of experience, a 2 next to the second most important type of experience, and so on, for all five items in each group.

Ties are not allowed. You must assign a different rank (1 = most important, 5 = least important) to each type of experience.

Other Fields	
Order of Importance for Career Development:	
_____	experience in operations support (e.g., Intelligence, Weather)
_____	experience in non-rated operations (e.g., Space and Missile)
_____	experience in another acquisition career field
_____	experience in rated operations
_____	experience in another mission support career field (e.g., Personnel)

Career Broadening	
Order of Importance for Career Development:	
_____	experience in AF Logistics Career Broadening Program (acq. logistics)
_____	experience in AFIT master's degree or EWI contracting programs
_____	experience in Logistics Officer Crossflow Program (operational)
_____	experience in another mission support career field (e.g., Personnel)
_____	experience in a special duty assignment (e.g., instructor, exec. officer)

Please rank each type of background in order of its importance for your career development as an Air Force officer in contracting.

Put a 1 next to the most important type of experience, a 2 next to the second most important type of experience, and so on, for all five items in each group.

Ties are not allowed. You must assign a different rank (1 = most important, 5 = least important) to each type of background.

Education	
Order of Importance for Career Development:	
_____	completing a master's degree in a technical field
_____	completing a master's degree in a business field
_____	completing professional military education in residence
_____	completing a master's degree in residence at AFIT
_____	completing professional military education by other means

Professionalism	
Order of Importance for Career Development:	
_____	being active in a professional contracting organization (e.g., NCMA)
_____	taking a leadership position in a civic organization (e.g., Rotary, Lions)
_____	holding APDP certifications in contracting
_____	holding APDP certifications in multiple acquisition areas
_____	holding certifications from a professional contracting organization

Experience	
Order of Importance for Career Development:	
_____	experience in another career field
_____	experience in different types of contracting
_____	experience in a headquarters staff position
_____	experience in a career broadening assignment
_____	experience in graduate academic education

Please rank each type of competency in order of its importance for your career progression as an Air Force officer in contracting.

Put a 1 next to the most important type of competency, a 2 next to the second most important type of competency, and so on, for all five items in each group.

Ties are not allowed. You must assign a different rank (1 = most important, 5 = least important) to each competency.

Communication Skills	
Order of Importance for Career Progression:	
_____	explaining complex situations
_____	communicating job-related information
_____	speaking before a group informally
_____	writing letters or messages
_____	delivering formal briefings

Interpersonal Skills	
Order of Importance for Career Progression:	
_____	cooperating with others
_____	maintaining good working relationships
_____	showing respect for others
_____	helping someone who needs it
_____	considering others' needs

Leadership Skills	
Order of Importance for Career Progression:	
_____	motivating subordinates to do their best
_____	monitoring subordinates' performance
_____	setting the example for subordinates
_____	coordinating subordinates' efforts
_____	creating a productive atmosphere

Please take a moment to rate the extent to which your current supervisor has provided to you the activities described below. Use the following scale to answer the questions in this section.

0	1	2	3	4	5
Does Not Apply	Not At All	To A Slight Extent	To Some Extent	To A Large Extent	To A Very Large Extent

To what extent has your current supervisor...

_____ encouraged you to try new ways of behaving on the job?

_____ assigned responsibilities to you that have increased your contact with people who will judge your potential for future advancement?

_____ discussed your questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers and supervisors or work/family conflicts?

_____ reduced unnecessary risks that could have threatened your opportunities for promotion?

_____ served as a positive role model?

_____ helped you meet new colleagues?

_____ demonstrated good listening skills in your conversations?

_____ given you assignments or tasks that have prepared you for higher positions?

_____ conveyed feelings of respect for you as an individual?

_____ helped you finish assignments or tasks or meet deadlines that otherwise would have been difficult to complete?

_____ encouraged you to prepare for advancement?

_____ shared personal experiences as an alternative perspective to your problems?

_____ given you assignments that present opportunities to learn new skills?

_____ displayed attitudes and values similar to your own?

_____ given you assignments that have increased your contact with senior leaders?

On average, *how many times per month* has your current supervisor provided you with activities similar to those listed above? (write the actual number) _____ times per month

---

On average, *how much time per month* has your current supervisor provided you with activities similar to those listed above? (estimate hours and minutes) _____ hrs _____ mins

---

How would you rate the usefulness of the mentoring activities provided to you by your current supervisor? (check one)

Not Useful At All	Slightly Useful	Useful	Very Useful	Extremely Useful
☐	☐	☐	☐	☐

During your Air Force career, how many times has a supervisor...
(write the actual number in the space provided for each item)

_____ recommended you for an award (even if you didn't win the award)?

_____ offered you a more important job within your organization?

_____ put you in charge of a project?

_____ recommended you for a professional military education program (even if you were not selected)?

_____ recommended you for some other type of training (even if you were not selected)?

_____ nominated you for an Officer of the Quarter award (or a monthly or yearly award)?

_____ publicly recognized your good work at a Commander's Call or other group meeting?

_____ recommended you for a beneficial special duty assignment?

_____ tried to help you get an assignment that would help your career?

_____ recommended you for a medal or ribbon?

_____ given you more responsibility relative to your peers?

Which position below most closely reflects your personal long-term career goal? (check one)

- ☐ Major Command Director of Contracting
- ☐ Center Director of Contracting
- ☐ Deputy Assistant Secretary for Contracting
- ☐ AFMC Director of Contracting
- ☐ Commander of DCMC
- ☐ Other: _____

Which grade below reflects your personal long-term career goal? (check one)

- ☐ Brig General or higher
- ☐ Colonel
- ☐ Lt Colonel
- ☐ Major
- ☐ Captain
- ☐ No long-term career goal

Please rate the following acquisition training courses based on their effectiveness in providing you with the knowledge you need to do your job.

Rate each course using the scale provided, where 1 = least useful and 5 = most useful. If you have not taken a particular course, rate that course 0.

0	1	2	3	4	5
Does Not Apply	Not Useful At All	Slightly Useful	Useful	Very Useful	Extremely Useful

_____ L3QR63A1 Introduction to Acquisition Fundamentals (4 wk. EWI initial course)

_____ ACQ 101 Fundamentals of Systems Acquisition Management

_____ ACQ 201 Intermediate Systems Acquisition

_____ CON 101 Contracting Fundamentals

_____ CON 102 Operational Level Contracting Fundamentals

_____ CON 103 Facilities Contracting Fundamentals

_____ CON 104 Contract Pricing

_____ CON 105 Operational Level Contract Pricing

_____ CON 106 Facilities Contract Pricing

_____ CON 201 Government Contract Law

_____ CON 211 Intermediate Contracting

_____ CON 221 Intermediate Contract Administration

_____ CON 222 Operational Level Contract Administration

_____ CON 223 Intermediate Facilities Contracting

_____ CON 231 Intermediate Contract Pricing

_____ CON 232 Overhead Management for Defense Contracts

_____ CON 233 Cost Accounting Standards Workshop

_____ CON 234 Contingency Contracting Course

_____ CON 241 Information Technology Contracting

_____ CON 301 Executive Contracting

_____ CON 333 Management for Contracting Supervisors

Please add any specific recommendations you have for improving these courses.

_____

_____

_____

If you earned a master's degree in residence at AFIT, how would you rate its contribution to improving your job performance in contracting?

Does Not Apply	Not Useful At All	Slightly Useful	Useful	Very Useful	Extremely Useful
☐	☐	☐	☐	☐	☐

If you attended AFIT in residence, what improvements would you suggest?

_____

_____

If you attended the 10-month Education With Industry program, how would you rate its contribution to improving your job performance in contracting?

Does Not Apply	Not Useful At All	Slightly Useful	Useful	Very Useful	Extremely Useful
☐	☐	☐	☐	☐	☐

If you attended this EWI program, what improvements would you suggest?

_____

_____

Have you participated in an on-the-job training program? If yes, please describe.

_____

_____

What other types of training would help you do your contracting job better?

_____

_____

Thanks for taking the time to complete this questionnaire!

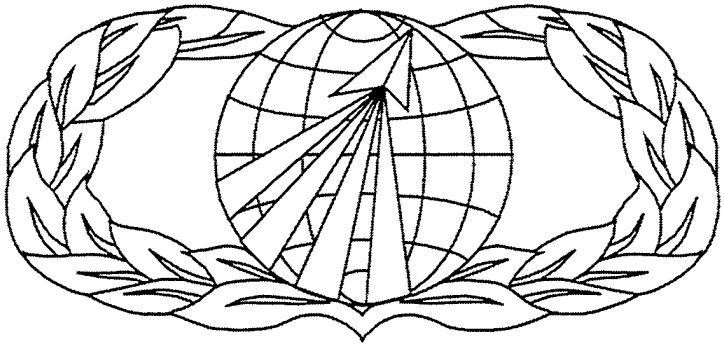
Please return the completed questionnaire to:

Contracting Research
Capt Martin Hamlin
AFIT/LAA
2950 P Street, Bldg 126
WPAFB OH 45433-7765

Appendix B: Secondary Survey

USAF Survey Control No.: 97-23A
Expiration Date: 31 Jul 97

SAF/AQC SPONSORED CAREER DEVELOPMENT EVALUATION STUDY FOR SUPERVISORS OF OFFICERS IN CONTRACTING



ABOUT THIS STUDY

This study is being conducted by researchers at the Air Force Institute of Technology with sponsorship from SAF/AQC. Our goal is to evaluate the career development opportunities available to officers in the contracting career field and determine the importance of particular factors to the overall development of quality contracting officers. This survey is designed to measure a variety of experience, education, and other factors that may contribute to the effectiveness of officers in the contracting career field.

We value your privacy, and your responses will be kept completely confidential. Without your voluntary participation, this project will not be successful. Your input is important!

PRIVACY ACT STATEMENT
In accordance with Paragraph 3.2, AFI 37-132, *Air Force Privacy Act Program* (11 Mar 94), the following statement is provided as required by the Privacy Act of 1974. **Authority:** (1) 5 USC 301, Departmental Regulations; and (2) 10 USC 8012, Secretary of the Air Force, Powers, Duties, Delegation by Compensation; and (3) DoD Instruction 1100.13, *Surveys of Department of Defense Personnel* (9 Nov 78); and (4) AF Instruction 36-2601, *Air Force Personnel Survey Program* (1 Feb 96) **Purpose:** This survey is being conducted to collect information for use in research intended to improve understanding of Air Force officer professional and career development. Responses will be combined to provide information on career development patterns to SAF/AQC. **Routine Uses:** Research based on grouped data may be included in published articles, reports, and texts. Distribution of the results of this research will be unlimited. **Disclosure:** Participation in this survey is voluntary. No adverse action may be taken against any individual who elects not to participate.

Please take a moment to tell us about the performance of this officer:

Mailing Label

Use this scale to answer the questions below.

0	1	2	3	4	5	6	7
Does Not Apply	Much Below Average	Below Average	Slightly Below Average	Average	Slightly Above Average	Above Average	Much Above Average

Compared with other Captains, how does this Captain compare in...

_____ anticipating problems
_____ cooperating with others
_____ delivering formal briefings
_____ performing technical tasks
_____ maintaining good working relationships
_____ motivating subordinates to do their best
_____ explaining complex situations
_____ showing respect for others
_____ knowing what the priorities are
_____ monitoring subordinates' performance
_____ writing letters or messages
_____ speaking before a group informally
_____ setting the example for subordinates
_____ helping someone who needs it
_____ initiating improvements
_____ finding answers to difficult questions
_____ communicating job-related information
_____ considering others' needs
_____ coordinating subordinates' efforts
_____ leading subordinates

Based ONLY on his/her *present job performance*, how well prepared is this officer for a successful career in the contracting field? (check one)

Not at all Prepared	Somewhat Prepared	Well Prepared	Very Well Prepared	Extremely Well Prepared
☐	☐	☐	☐	☐

Based ONLY on his/her *previous assignments*, how well prepared is this officer for a successful career in the contracting field? (check one)

Not at all Prepared	Somewhat Prepared	Well Prepared	Very Well Prepared	Extremely Well Prepared
☐	☐	☐	☐	☐

Based on his/her *present job performance* AND *previous assignments*, how well prepared is this officer for a successful career in the contracting field? (check one)

Not at all Prepared	Somewhat Prepared	Well Prepared	Very Well Prepared	Extremely Well Prepared
☐	☐	☐	☐	☐

How often have you worked very closely with this officer? (check one)

Very Seldom	Seldom	Sometimes	Frequently	Very Frequently
☐	☐	☐	☐	☐

How often have you observed this officer's performance? (check one)

Very Seldom	Seldom	Sometimes	Frequently	Very Frequently
☐	☐	☐	☐	☐

How confident are you in the accuracy of your ratings of this officer? (check one)

Not at all Confident	Somewhat Confident	Moderately Confident	Very Confident	Completely Confident
☐	☐	☐	☐	☐

Please take a moment to rate the extent to which you have engaged in the activities described below with *this* subordinate. Use this scale to answer the questions below.

0	1	2	3	4	5
Does Not Apply	Not At All	To A Slight Extent	To Some Extent	To A Large Extent	To A Very Large Extent

To what extent have you...

_____ encouraged this officer to try new ways of behaving on the job?

_____ assigned responsibilities to this officer that have increased his/her contact with people who will judge his/her potential for future advancement?

_____ discussed his/her questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers and supervisors or work/family conflicts with this officer?

_____ reduced unnecessary risks that could have threatened this officer's opportunities for promotion?

_____ served as a positive role model for this officer?

_____ helped this officer meet new colleagues?

_____ demonstrated good listening skills in your conversations?

_____ given this officer assignments or tasks that have prepared him/her for higher positions?

_____ conveyed feelings of respect for this officer as an individual?

_____ helped this officer finish assignments or tasks or meet deadlines that otherwise would have been difficult to complete?

_____ encouraged this officer to prepare for advancement?

_____ shared personal experiences as an alternative perspective to this officer's problems?

_____ given this officer assignments that presented opportunities to learn new skills?

_____ displayed attitudes and values similar to this officer's attitudes and values?

_____ given this officer assignments that increased his/her contact with senior leadership?

On average, *how many times per month* have you been involved with this subordinate in activities similar to those listed above? (write the actual number) _____ times per month

On average, *how much time per month* have you spent with this subordinate on activities similar to those listed above? (estimate hours and minutes) _____ hrs _____ mins

How many times have you...
(write the actual number in the space provided for each item)

_____ recommended this officer for an award (even if he/she didn't win the award)?

_____ offered this officer a more important job within your organization?

_____ put this officer in charge of a project?

_____ recommended this officer for a professional military education program (even if he/she was not selected)?

_____ recommended this officer for some other type of training (even if he/she was not selected)?

_____ nominated this officer for an Officer of the Quarter award (or a monthly or yearly award)?

_____ publicly recognized this officer's good work at a Commander's Call or other group meeting?

_____ recommended this officer for a beneficial special duty assignment?

_____ tried to help this officer get an assignment that would help his/her career?

_____ recommended this officer for a medal or ribbon?

_____ given this officer more responsibility relative to his/her peers?

Which of the following is the most realistic long-term career goal for this officer?
(check one)

- ☐ Major Command Director of Contracting
- ☐ Center Director of Contracting
- ☐ Deputy Assistant Secretary for Contracting
- ☐ AFMC Director of Contracting
- ☐ Commander of DCMC
- ☐ Other: _____

Which of the following is the most realistic potential grade for this officer? (check one)

- ☐ Brig General or higher
- ☐ Colonel
- ☐ Lt Colonel
- ☐ Major
- ☐ Captain

How would you rate the usefulness of the mentoring activities you were provided early in your career? (check one)

Does Not Apply	Not Useful At All	Slightly Useful	Useful	Very Useful	Extremely Useful
☐	☐	☐	☐	☐	☐

Please answer a few questions about yourself so we can determine how well the supervisors participating in this study represent Air Force supervisors as a whole.

What is your current grade/rank? _____

What is your Total Active Federal/ Military Service time? _____ year(s) _____ month(s)

How long have you been in the contracting career field? _____ year(s) _____ month(s)

What is your current duty title? _____

How long have you been in your current position? _____ year(s) _____ month(s)

How long have you supervised this officer? _____ year(s) _____ month(s)

How many people do you directly supervise? _____

What improvements would you suggest for enhancing the career development process of officers in the contracting career field?

_____

_____

_____

What problems do you see in implementing mentoring in Air Force contracting?

_____

_____

_____

Thanks for taking the time to complete this questionnaire!

Please return the completed questionnaire to:

Contracting Research
Capt Martin Hamlin
AFIT/LAA
2950 P Street, Bldg 126
WPAFB OH 45433-7765

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Vita

Capt Martin P. Hamlin was born on 6 February 1966 in Mesa, Arizona. He graduated from Colonial High School in Orlando, Florida, in 1984 and entered undergraduate studies at the University of Central Florida. He graduated with a Bachelor of Science degree in Business Administration in December 1989. He is a Distinguished Graduate from ROTC and received his commission in May 1992. He completed graduate studies at the University of Central Florida with a Master of Business Administration degree in May 1993 and entered active duty the following month.

His first assignment in contracting was at Standard Systems Center, Maxwell AFB Gunter Annex. While at Gunter, he worked as a buyer for several information technology system programs including Wing Command and Control System, Cargo Movement Operations System, Base Level System Modernization II, and Desktop V. He entered the School of Logistics and Acquisition Management, Air Force Institute of Technology, in May 1996.

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13. ABSTRACT (*Maximum 200 Words*)
This research considered five factors deemed necessary for supporting career development, including experience, professionalism, expectations, mentoring, and training. The author studied the perceptions of captains in the contracting career field as a means of better understanding the unique career development challenges faced by contracting officers. This study concluded that captains in contracting do not perceive one best career path, nor one best set of professional and technical skills. Career expectations remain high and mentoring activity low, despite recent institutional emphasis directed at both. The value of current required formal training, as rated by contracting officers, seems to be high.

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AFIT RESEARCH ASSESSMENT

The purpose of this questionnaire is to determine the potential for current and future applications of AFIT thesis research. **Please return completed questionnaire** to: AIR FORCE INSTITUTE OF TECHNOLOGY/LAC, 2950 P STREET, WRIGHT-PATTERSON AFB OH 45433-7765. Your response is **important.** Thank you.

1. Did this research contribute to a current research project? a. Yes b. No

2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not researched it?
a. Yes b. No

3. **Please estimate** what this research would have cost in terms of manpower and dollars if it had been accomplished under contract or if it had been done in-house.

Man Years_____ $_____

4. Whether or not you were able to establish an equivalent value for this research (in Question 3), what is your estimate of its significance?

a. Highly Significant b. Significant c. Slightly Significant d. Of No Significance

5. Comments (Please feel free to use a separate sheet for more detailed answers and include it with this form):

_____ _____
Name and Grade Organization

_____ _____
Position or Title Address