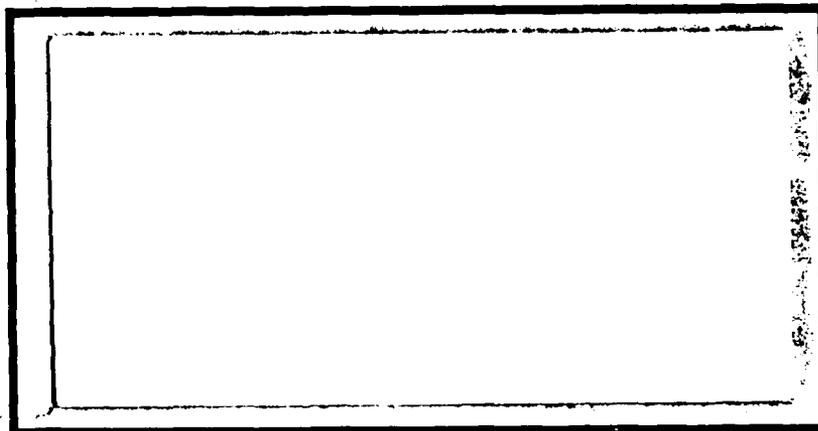


AD-A201 516



DTIC
 ELECTE
 DEC 21 1988
 S H D



DEPARTMENT OF THE AIR FORCE
 AIR UNIVERSITY

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

DISTRIBUTION STATEMENT A

Approved for public release;
 Distribution Unlimited

88 12 21 041

AFIT/GSM/LSY/88S-18

IMPACT OF AIR FORCE SYSTEMS
COMMAND REGULATION 36-5 ON
THE 27XX CAREER FIELD

THESIS

Reed J. McConnell, B.S.
Captain, USAF

AFIT/GSM/LSY/88S-18

DTIC
ELECTE
DEC 21 1988
S H D

Approved for public release; distribution unlimited.

The contents of the document are technically accurate, and no sensitive items, detrimental ideas, or deleterious information is contained therein. Furthermore, the views expressed in the document are those of the author and do not necessarily reflect the views of the School of Systems and Logistics, the Air University, the United States Air Force, or the Department of Defense.

AFIT/GSM/LSY/88S-18

IMPACT OF AIR FORCE SYSTEMS
COMMAND REGULATION 36-5 ON
THE 27XX CAREER FIELD

THESIS

Presented to the Faculty of the School of Systems
and Logistics of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Systems Management

Reed J. McConnell, B.S.

Captain, USAF

September 1988

Approved for public release; distribution unlimited.

Acknowledgements

In the accomplishment of this thesis, a number of individuals provided guidance and support to which I am greatly indebted. In the absence of this assistance, the task would have been quite unbearable. First, I would like to thank my friend and advisor, Major Mike Farr. Your guidance and ideas, as well as the free rein you gave me made the experience more enjoyable. Next, I would like to thank my wife, Gina, and two daughters Jenna and Kristin for all their love and understanding during my labors. Finally, and most importantly, I want to thank God for giving me the ability and opportunity to make this great achievement.



| | |
|--------------------|-------------------------------------|
| Accession For | |
| NTIS GRA&I | <input checked="" type="checkbox"/> |
| DTIC TAB | <input type="checkbox"/> |
| Unannounced | <input type="checkbox"/> |
| Justification | |
| By _____ | |
| Distribution/ | |
| Availability Codes | |
| Dist | Special |
| A-1 | |

Table of Contents

| | Page |
|--------------------------------------|------|
| Acknowledgements | ii |
| List of Tables | v |
| Abstract | vii |
| I. Introduction | 1 |
| Background | 2 |
| Problem Statement | 5 |
| Investigative Questions | 5 |
| Justification | 6 |
| Scope | 6 |
| Definition | 7 |
| II. Literature Review | 8 |
| Introduction | 8 |
| Research Results | 8 |
| Recent AM Policies | 10 |
| Development of AFSCR 36-5 | 12 |
| Conclusion | 14 |
| III. Methodology | 16 |
| Introduction | 16 |
| Survey Approach | 16 |
| Test Instrument | 17 |
| Population of Interest | 19 |
| Sample Size | 19 |
| Method of Selection | 20 |
| Data Analysis | 21 |
| IV. Results | 23 |
| Introduction | 23 |
| Preliminary Findings | 24 |
| Investigative Question 1 | 25 |
| Investigative Question 2 | 27 |
| Investigative Question 3 | 30 |
| Investigative Question 4 | 31 |
| Investigative Question 5 | 33 |
| Qualitative Survey Results | 38 |
| Summary | 39 |

| | Page |
|--|------|
| V. Recommendations | 43 |
| Introduction | 43 |
| Research Recommendations | 43 |
| Recommendations for Further Research | 45 |
| Appendix A: Survey on Career Development Program | 47 |
| Appendix B: Summary Tables | 59 |
| Appendix C: SAS Computer Program | 77 |
| Bibliography | 84 |
| Vita | 86 |

List of Tables

| Table | Page |
|--|------|
| 1. Results of Cross-Tabulation of Survey Question 1: Experience with AFSCR 36-5 | 59 |
| 2. Results of Cross-Tabulation of Survey Question 2: A Formal Acquisition Management Program is Necessary | 60 |
| 3. Results of Cross-Tabulation of Survey Question 3: An Acquisition Management Program Will Improve Career Development | 61 |
| 4. Results of Cross-Tabulation of Survey Question 37: Specialty Training is Critical to Career Development of 27XX Officers | 62 |
| 5. Results of Cross-Tabulation of Survey Question 38: SAS/Systems 100 Provides an Effective Foundation for Career Development | 63 |
| 6. Results of Cross-Tabulation of Survey Question 13: The Undergraduate Degree Providing the Best Foundation for Effective Career Development | 64 |
| 7. Results of Cross-Tabulation of Survey Question 16: A Non-Technical Graduate Degree is a Necessary Follow-on to a Technical Undergraduate Degree | 65 |
| 8. Results of Cross-Tabulation of Survey Question 18: A Non-Technical Graduate Degree is a Necessary Follow-on to a Non-Technical Undergraduate Degree | 66 |
| 9. Results of Cross-Tabulation of Survey Question 30: PME is critical to the Career Development of 27XX Officers | 67 |
| 10. Results of Cross-Tabulation of Survey Question 31: SOS is Critical to the Career Development of 27XX Officers | 68 |
| 11. Results of Cross-Tabulation of Survey Question 14: ISS is Critical to the Career Development of 27XX Officers | 69 |
| 12. Results of Cross-Tabulation of Survey Question 27: Operational Experience is Critical to the Career Development of 27XX Officers | 70 |

| Table | Page |
|--|------|
| 13. Results of Cross-Tabulation of Survey Question 28: The Total Operational Experience Required for Effective Career Development | 71 |
| 14. Results of Cross-Tabulation of Survey Question 19: System Program Office Experience is Critical to the Career Development of 27XX Officers | 72 |
| 15. Results of Cross-Tabulation of Survey Question 21: SPO Project Manager Experience is Critical to the Career Development of 27XX Officers | 73 |
| 16. Results of Cross-Tabulation of Survey Question 23: AFSC/AFLC Other-Type Experience is Critical to the Career Development of 27XX Officers | 74 |
| 17. Results of Cross-Tabulation of Survey Question 25: Headquarters Experience is Critical to the Career Development of 27XX Officers | 75 |
| 18. Results of Cross-Tabulation of Survey Question 29: Total Acquisition Experience required for Effective Career Development of 27XX Officers | 76 |

Abstract

The purpose of this research was to determine if the attitudes of acquisition managers have changed over the past year, with respect to the Acquisition Manager Career Development Program, set forth by Air Force Systems Command Regulation (AFSCR) 36-5. A survey approach was used to compare the attitudes of junior (Air Force Specialty Code 2724) and senior (Air Force Specialty Code 2716) officers in relation to the criteria specified in the regulation. The results were then compared to the results of a previous survey to measure changes over time. Both surveys found generally a positive relationship between the attitudes of acquisition management personnel and career development in all areas investigated. These areas include: 1) specialty training, 2) academic background, 3) professional military education, 4) operational experience, and 5) different types of acquisition management experience. Not only were the responses from the previous survey to the current survey similar, the attitudes of junior and senior personnel were also comparable. The only exception to the above was a dramatic drop in the importance placed on Systems 400 and DSMC from the previous research to the current effort.

IMPACT OF AIR FORCE SYSTEMS
COMMAND REGULATION 36-5 ON
THE 27XX CAREER FIELD

I. Introduction

This research is a follow-on to a thesis completed by Captain Kevin Lopez, AFIT class 87S. The purpose is to see if the attitudes of acquisition managers have changed during the past year, with respect to the Acquisition Manager Career Development Program, set forth by Air Force Systems Command Regulation (AFSCR) 36-5 (since this writing, the name of the program has been changed from Career Development to Professional Development). This effort is necessary because the initial study, which examined attitudes toward the program, was done during the infancy of AFSCR 36-5. During the time period between release of the initial survey and the start of the current study, HQ AFSC conducted a series of informational briefs in the field about the regulation and its consequences. An increased knowledge and awareness about career development and AFSCR 36-5 may have changed the attitudes of the population significantly in the last year. This thesis will examine whether Acquisition Managers believe the criteria set forth in the AFSCR 36-5 are useful in career development.

Background

In recent years the Department of Defense and its management of weapon systems development have come under close scrutiny. A perception exists in the public that weapon systems management by the Department of Defense is highly ineffective. Reports of cost overruns, spare parts overpricing, contractor fraud, and conflict of interest throughout the news media have driven a major campaign by the President and Congress to determine the causes of and solutions to these problems (9:1-10).

A number of studies have been performed resulting from concern over the quality of the acquisition management force. A General Accounting Office (GAO) study entitled DOD Acquisition: Strength of Key Personnel in Systems Acquisition (12) pointed out selection of program managers does not necessarily consider appropriate acquisition experience and training. Consequently, the problem of poor management of weapon systems may result from inadequate career development of acquisition managers (12:68). Supporting this finding was a report generated by the Center for Strategic and International Studies. This report stated that

the military personnel system does not provide adequate incentives for officers to seek assignments in acquisition management...The result is that the overall experience levels and training of uniformed personnel in acquisition is inadequate (11:68).

Confounding the problem of inadequate career development is the increasing complexity of today's weapons. An Air

Command and Staff College (ACSC) student report by Major Randall Ray states that "systems have become increasingly complex as technological advances in electronics, engines, airframes, and composite materials have been incorporated into aircraft" (10:1). Former Deputy Secretary of Defense David Packard adds that "We unfortunately have a system where we do not train and put the best management people in charge of major weapon systems" (13:68). The effect is the DOD's ability to manage programs is decreasing at the very times these programs are getting more and more complex.

A different problem with career development was noted by J. Ronald Fox in his article "Revamping the Business of National Defense," in the Harvard Business Review. Fox argued that

Military chiefs of staff are highly capable, dedicated officers. They are likely, however, to have little if any training or experience in running large programs that deal with the research, development and production of defense weapons and equipment. Most believe that the weapons acquisition process can be managed by military officers like themselves, whose primary training and experience has been in military field operations unrelated to the complex tasks of procurement and program management that the process involves. In practice, top brass oversees a system in which the people assigned to program offices often have little training and have experience that may include only one or two brief assignments in procurement or program administration. Most military chiefs see little need to give program managers more specialized training and development [6:69].

To correct this problem a system must be put in place which not only provides adequate training, but requires it for career development.

The Air Force Systems Command (AFSC) Working Group was another body convened to determine the causes of poor acquisition management. They determined that there is "an acute shortage of experienced military officers, although fully manned in acquisition personnel" (8:1). The Working Group concluded that the current "acquisition management development program is deficient, and that military development has not been institutionalized and needs structure" (8:2). In conjunction, the President's Blue Ribbon Commission on Defense Management states

The defense acquisition workforce mingles civilian and military expertise in numerous disciplines for management and staffing of the world's largest procurement organization. Each year billions of dollars are spent more or less efficiently, based on competence and experience of these personnel. Yet, compared to its industry counterparts, this workforce is undertrained, underpaid, and inexperienced. Whatever other changes may be made, it is vitally important to enhance the quality of the defense acquisition workforce--both by attracting qualified new personnel and by improving the training and motivation of current personnel (9:66-67).

Recognizing the need for effective career development of acquisition managers, the Air Force Systems Command established AFSCR 36-5, Acquisition Management Career Development Program. Its purpose was maximizing "the professional development and mission capability of the AM (Acquisition Management) officer force by setting forth a definitive and viable career management plan that produces broad-based acquisition managers capable of assuming middle management and senior leadership roles" (3:4). This was accomplished by breaking an AM's career into four distinct,

progressive areas. Each area, or level, would have its own requirements for education, training, and experience. A formal certification process was established to ensure each officer met the criteria for the subsequent level and to maintain records of which officers were at each level. The highest two levels would provide a pool of officers from which the individuals to manage major weapon systems could be selected.

Problem Statement

This research examines whether the criteria of AFSCR 36-5 adequately addresses the true career development and progression needs of military officers in the acquisition career field.

Investigative Questions

To determine if the criteria set forth in AFSCR 36-5 are directly related to the career development of program managers, the following questions, relative to those criteria, will be researched:

1. Is there an association between career development of acquisition personnel and specialty training gained from Professional Continuing Education (PCE) courses?
2. Is there an association between career development of acquisition personnel and academic background?
3. Is there an association between career development of acquisition personnel and Professional Military Education?

4. Is there an association between career development of acquisition personnel and operational experience?
5. Is there an association between career development of acquisition personnel and different types of acquisition experience?

Justification

AFSC Regulation 36-5 has a great impact on the careers of acquisition managers. It affects job selection, and perhaps promotion, of these personnel. As such, many officers will use the criteria to set career goals and establish a career path. It is, therefore, very important to ensure the proper criteria are set forth in the regulation. It is also prudent to determine whether these officers believe that the criteria are relevant to their career development.

Scope

Relative to similar civilian career fields, acquisition managers in DOD have an extremely high level of responsibility with respect to the national interest of the United States of America. This responsibility holds them accountable for their actions to the general public. Due to the importance and uniqueness of their positions, DOD acquisition managers have career development requirements unlike many others. As a result, very little information exists regarding career development of DOD Acquisition Managers. Consequently, only journal articles and Air Force

directives pertaining to acquisition manager career development could be referred to in evaluating the impact of AFSCR 36-5 on the acquisition management career field.

Definition

Acquisition Manager--Air Force officers with duty Air Force Specialty Code 27XX.

The development of AFSCR 36-5 was necessary to ensure adequate career development of acquisition managers. This study wishes to determine if the criteria used by the regulation are effective. The following chapter will review the literature and events leading to the development of AFSCR 36-5. Chapter 3 will detail the research methodology, which involves a survey of acquisition officers in the field for their opinions. An analysis of the data gathered with the survey instrument will be made in chapter 4. Finally, chapter 5 will conclude with recommendations.

II. Literature Review

Introduction

This review highlights the historical events leading to the introduction of AFSCR 36-5. Department of Defense directives as well as journal articles on the subject of acquisition career development programs will be reviewed.

Research Results

Past Acquisition Management (AM) Policies. To provide a framework for AM career development, the DOD published Directive 5000.23, Systems Acquisition Management Careers (11:69). The purpose was to delineate guidelines for selecting, training, and developing the careers of major weapon systems managers (11:68). The gist of the directive was to reward AMs with the best experience and performance in the acquisition field by offering them career opportunities (11:70). Further, the Directive states "that opportunities for advancement be equivalent with those officers in operational, line, and command positions" (11:70). This equity in promotion and advancement opportunities between the acquisition and operational career fields was a major step in developing qualified acquisition managers.

In conjunction with DOD Directive 5000.23, various groups have investigated and identified standards around which a career development program could be

implemented. The standards identified were educational background, experience, and training (11:71).

There were varying opinions on the education requirements for AMs. The optimum educational background, according to a General Accounting Office (GAO) report on DOD Acquisition was an undergraduate degree in engineering and a masters degree in management (11:71). A consensus among the study groups existed about the need for a broad experience base. It was felt this broad base produced a quality acquisition manager (11:71). A tri-service panel, convened to discuss the topic of AM career development, concluded that management of a major weapon system was equivalent to command of an operational unit and, therefore, required similar types of preparation (11:72). Management experience that could provide this type of preparation would include assignments such as systems engineering, test, government laboratories, logistics, headquarters staff work, and multiple program office assignments (11:72).

An acquisition manager development program should also emphasize training (11:74). The most comprehensive and effective training program is the Defense Systems Management College's (DSMC) 5-month Program Management Course supplemented by other specialized courses (11:74). J. Ronald Fox, in his article "Revamping the Business of National Defense" states that supplemental training courses should "focus on the day-to-day problems facing individuals assigned to government program offices (6:70). Professional

military training was also stressed because it prepares "officers for higher level command and staff duties" (11:74).

Recent AM Policies. "The DOD Authorization Act of 1986 required regulations be issued establishing experience and training for those assigned as program managers of major programs" (11:106). Acquisition managers must, as a minimum, have attended the DSMC Program Management Course and have at least eight years of acquisition experience (11:106). The President's Blue Ribbon Commission on Defense Management highly supported this formalization of the AM career field (9:67).

The Army currently employs a program called Material Acquisition Management (MAM) (2:3). According to Colonel Larry J. Bramlette, USA, in his article "Preparing and Directing Program Managers", the MAM program breaks an acquisition manager's career into three phases. The first phase is the initial six years consisting of operational assignments. The purpose is to build experience in a particular field. The second phase, the MAM development phase, involves application, by the officer, for acquisition management training. If selected, the officer is then expected to pursue the training and experience requirements called for by the program. If the criteria for this phase are met, upon selection to lieutenant colonel, MAM officers are eligible for entry into the certified manager phase (2:3).

The MAM program is well intended, but according to Bramlette (2:4) there are some weaknesses that need to be addressed (2:4). For example the Army has no acquisition specialty code and, therefore, no central management of that career field. This is really a weakness with the Army system in general. Another weakness, in a very broad sense, is the vagueness of the terms used in the MAM program. One example is the requirement for a "MAM-related undergraduate degree", which is undefined and open to interpretation (2:4). In the area of training, only one acquisition course along with the DSMC Program Management Course is mandated, the rest are recommended (2:4). The author best describes another deficiency:

The MAM program as outlined does not go far enough to ensure a cadre of highly trained professional program managers. It is a step in the right direction, but it fails to recognize the number of disciplines in which a project manager must be knowledgeable to perform properly and, therefore, does not provide for his required training [2:3].

An Air Force program would need to have a distinct focus from the Army's because of dissimilar specialty code structures and inherent differences in officer placement. The Air Force, unlike the Army, has a specialty code for acquisition managers (2:3). Air Force officers will move in and out of this speciality throughout their career. For this reason, the acquisition career field in the Air Force is separately managed. An inherent difference is that "officers may enter directly into the acquisition field or transfer into it after an initial assignment in an

operational command" (11:82). The Army system requires officers to serve the first six years of service in operational assignments (2:3). Therefore, definite guidelines for officers of all ranks, rated and non-rated must be established in any Air Force acquisition career development program (11:82).

Development of AFSCR 36-5. To cope with the specific needs of an Air Force acquisition career development program, General Lawrence Skantze, Commander, AFSC, established an Acquisition Manager Career Development Task Force (7:21). The purpose of this task force was to develop "a cogent plan for training and keeping good acquisition managers" (7:21). The task force determined that improvements in career development were needed (7:21). According to the task force, the problem with career development of acquisition managers "did not stem from a lack of motivation but, rather, from lack of a cohesive plan/program to train acquisition managers" (7:21).

A career development model was then developed by the task force to "produce an acquisition manager with a broad experience base and allow for transition into the AM career field, e.g., 26XX, 28XX, 29XX, 49XX, 65XX, 673X, 674X, and individuals from the rated force" (7:22). The model was meant for use by acquisition managers (or potential ones) as a guide to enhance capabilities critical to career development of the acquisition force (7:22). The model breaks an acquisition manager's career into four phases

encompassing the first 16 years (7:22). Each level corresponds to a set of education, training, and experience criteria essential to proper career development (7:22). The basic requirements of each of the four development levels are as follows:

1. Level One: Attained within the first six months of an officer's career. Requirements include a bachelor's degree, 6 months experience in a systems program office (SPO), and completion of the Systems Acquisition School's Introduction to Systems Command Acquisition Management course at Brooks Air Force Base (or equivalent).
2. Level Two: Occurs at about the 6-year point. Criteria include Squadron Officer's School, 2 years experience in a SPO, completion of the Air Force Institute of Technology (AFIT) Systems 200 course (or equivalent), and a year of operational experience or 2 years experience in a non-acquisition area with AFSC or the Air Force Logistics Command.
3. Level Three: Occurs at about the 12-year point. Requirements would include completion of Intermediate Service School, a masters degree, other job experience (e.g., headquarters assignments, joint assignments, work in other SPOs, other AFSC/AFLC jobs), at least 3 years experience in a SPO, and completion of the AFIT Systems 400 course (or equivalent).
4. Level Four: Occurs at about the 16-year point. Criteria are completion of Senior Service School, 8 years of acquisition experience, the DSMC Program Management Course, and 2 years experience as a SPO project manager. Additionally, AFSC/CC approval is required to attain this level (7:22).

The model insures that upon reaching the fourth level, the acquisition manager will have obtained the experience, training, and education necessary to handle the complex demands of today's weapon systems development.

A formal selection process would then choose the best of those certified at level three and level four. These selections would comprise the Acquisition Manager List (AML) and the Senior Acquisition Manager List (SAML) (7:23). The purpose of the AML is "to define a pool of officers who are qualified to fill key middle management positions and who will receive selective career management by the Headquarters AFSC Career Development Branch (HQ AFSC/MPROC)" (3:17). The SAML will "provide a pool of officers qualified to assume senior program management positions, including Selected Acquisition Review (SAR) and Air Force Systems Acquisition Review Council (AFSARC) program management responsibilities" (3:19).

Air Force Systems Command Regulation 36-5 (still in draft form as of this writing), implements the model program the Acquisition Manager Career Development Task Force developed. The objective of the regulation "is to maximize the professional development and mission capability for the AM officer force by setting forth a definitive and viable career management plan that produces broad-based acquisition managers capable of assuming middle management and senior leadership roles" (3:4).

Conclusion

The unique requirement of a career development program for DOD acquisition managers is reflected by the immense responsibility associated with acquiring weapon systems to

defend the United States. This responsibility has often been vested in relatively young, inexperienced managers. Programs formalizing career development of DOD acquisition managers have been instituted because of recent public amplification of acquisition problems. These programs, in their infancy, need to be honed so their output is the best it can be. This accomplished, the purpose of developing personnel with the experience base and knowledge necessary to manage the development of complex weapons will have been served.

III. Methodology

Introduction

This chapter outlines the design and methodology of the research, which is a direct follow-on to the efforts of Capt. Kevin Lopez, Air Force Institute of Technology, Graduate Systems Management (87S). The results of the two studies will be compared to see if the attitudes of the acquisition workforce have changed over the past year. The initial study found a direct relationship between the attitudes of acquisition managers (AM) toward career development and the criteria set forth in AFSCR 36-5. If there is no significant difference between the results of the two studies, then it can be inferred that the acquisition community believes the criteria in the regulation has a strong positive relationship to career development.

Survey Approach

Information for this study will be obtained through the use of an attitudinal survey. The importance of the criteria used for career development, hence job selection, in AFSCR 36-5 to junior and senior acquisition managers (AM) will be measured by the survey. Due to the nature of this research the primary variable will be time (longitudinal), therefore, the survey used in the previous research will be used again.

One of the reasons for doing this follow-on is to determine what the attitudes of the AM workforce toward career development are, given full benefit of what AFSCR 36-5 implies. During the previous research many of the personnel surveyed were unaware of the regulation. Because of this, these individuals could not respond with their perceptions of AM career development with regard to AFSCR 36-5. Therefore, a filtering question was placed in the survey to discriminate between those who were familiar with the regulation and those who were not. Because this situation may still exist to some extent, the filtering question will be used again. It is expected that the number of individuals unfamiliar with the regulation will decrease dramatically with the passage of a year.

Test Instrument

An attitudinal survey was used to accumulate data regarding the perceptions of junior and senior acquisition personnel (Air Force Specialty Codes 2716 and 2724, respectively) toward AFSCR 36-5, Acquisition Management Career Development Program. Operationally defined, junior acquisition personnel are Air Force officers, first lieutenant through major, meeting the minimum requirements of the 2724 career field. AFR 36-1, Officer Classification System, states the specialty qualification for this field include an engineering or management undergraduate degree, a minimum of 18 months experience as a 2721, and completion of Systems 100/Systems Acquisition School (3:A10-34).

Likewise, senior acquisition personnel are Air Force officers, major through colonel, who meet the minimum requirements of the 2716 career field. In addition to the requirements for the 2724, the individual must have at least 6 months experience as a 2711 and completed either the Defense Systems Management School (DSMC) or Systems 400 (3:A10-31). Note that majors can belong to either the senior or junior category. Although majors are generally considered to be senior officers, for the purposes of this study, all majors with duty AFSC 2724 will be considered junior officers.

The survey in the prior research is considered to be highly valid and will be used in this research. It was pre-tested by a Systems 200 class and the Graduate Systems Management (87S) section. This pre-test allowed for early evolution of the test instrument by clearing up any vague or misunderstood questions, expanding the Likert scale, and providing definitions of ambiguous terms. By pre-testing the survey, its validity was enhanced and was made more effective. The purpose of the survey was to determine: 1) the familiarity of the acquisition force with AFSCR 36-5, 2) the attitudes of the current acquisition force toward career development, and 3) the certification level of each respondent.

Population of Interest

The population of interest is all AM officers (27XX) with duty Air Force Specialty Code 2716 or 2724 stationed within the continental United States.

Sample Size

From the above population, two stratified random samples will be drawn. The purpose of the sub-population sampling technique is to ensure proper representation of both junior and senior personnel. In addition, an attempt was made to ensure an equal number of responses from officers with Level I to Level IV certification.

The Air Force ATLAS Database had 878 officers with duty AFSC 2724 and 646 with duty AFSC 2716. A sample size for each of the finite sub-population populations was drawn to achieve a 95 percent confidence level. The following equation was used

$$n = [N(z^2)(1-p)p] / [(N-1)(d^2) + (z^2)(1-p)p]$$

where:

n= sample size

N= population size

p= maximum sample size factor (.50)

d= desired tolerance (.05)

z= factor of assurance (1.96) for
95 percent confidence level (1:12).

The confidence level means for every sample of the same size and format drawn, there is a 95 percent chance the sample hooks the true population statistic in question. Said

another way, there is a 95 percent chance the sample accurately represents the population as a whole.

The sample sizes calculated were 284 and 248 for AFSCs 2724 and 2716, respectively. A 50 percent margin of safety was then added for nonresponsiveness to the survey yielding sample sizes of 568 and 496.

Method of Selection

A total of 1,064 names of those personnel with duty AFSC 2724 and 2716 were requested from the ATLAS data base. A random selection of these individuals was based on the last digit of the social security number. This assumed the last digit of the social security number was randomly distributed across each sub-population. An increment of 10 percent was then represented by each digit from 0-9. The goal was to draw random samples of sizes 568 and 496 or more from AFSCs 2724 and 2716 respectively. In addition to this, an attempt was made to have equal representation from each of the four certification levels. However, this information was not available in the ATLAS data base. Therefore, it was assumed that by taking a proportion of officers by rank within each stratified sample, this could be approximated. The following is a summary of the data retrieved from the ATLAS data base

| <u>AFSC 2724</u> | | <u>AFSC 2716</u> | |
|------------------|---------|------------------|---------|
| grade | percent | grade | percent |
| O-2 | 44.4 | O-4 | 36.2 |
| O-3 | 51.1 | O-5 | 52.8 |
| O-4 | 4.5 | O-6 | 11.0 |

The above percentages were then rounded up to the nearest ten to ensure an adequate number of individuals were drawn. For example, the AFSC 2724 percentage of Captains of 51.1 percent would be rounded up to 60 percent. Recall from above that each increment of 10 percent was represented by a single digit (0-9), therefore a random selection of 6 digits would be made to adequately represent 2724's in the total test sample. As a result, 1,217 names were drawn (655 2724s and 562 2716s) with 17 being deleted for inadequate addresses.

Data Analysis

The data analysis for this study consisted of a frequency count of responses per question and a cross-tabulation of responses by duty AFSC (sub-population). To accommodate comparisons between the two sub-populations, proportions were computed. The purpose of the frequency count analysis was to establish attitudinal trends. The cross tabulations allowed for analysis of the five investigative questions.

To accomplish these analyses, a Statistical Analysis System (SAS) computer program was used. Each survey question was given a variable name and a range of possible responses. Labels were attached to each variable name representing the intent of each question. Using the SAS format for data files, the responses for each survey were entered into the computer in the form of a 1X42 row vector for each respondent (42 questions on the survey). The PROC

FREQ command and "tables" subcommand were then used to format the output of the accumulated data.

Once the data was accumulated and tabulated, the results were compared to the previous research. Recall that the earlier study showed the acquisition population strongly believed the criteria set forth in AFSCR 35-5 were effective in career development. If the comparison showed no significant difference between the studies, then these perceptions were unchanged over time and the regulation used good criteria for the career development of acquisition managers. Finally, recommendations for further study will be made for future students interested in the topic area. The following chapter shows the results of the survey including a comparison of the results of the previous survey.

IV. Results

Introduction

This chapter presents the results of the study described in Chapter 3. The analysis addresses each of the five investigative questions and a comparison of results between the two studies. Also, further analysis will determine the acquisition force's familiarity with AFSCR 36-5 and their general attitude toward career development. The analysis summarizes information from the tables in Appendix B. These tables were separated from the text for readability purposes, however, for continuity they will be referred to in the text.

Twelve hundred surveys were mailed out to two stratified samples of officers to accumulate data for this research study. From these, 746 questionnaires were returned within the allotted six week response time. This was equal to a response rate of approximately 62 percent. However, 77 surveys were rejected for one of the following reasons: 1) the respondent incorrectly coded the survey (ie. the appropriate likert scale was not used), or 2) the respondent failed to satisfactorily complete all questions pertaining to a specific investigative question. Therefore, 669 surveys were used in the final analysis (347 2724s and 322 2716s) and the statistical requirements for the 95 percent confidence interval were met.

A breakout of the respondents in terms of certification levels outlined in AFSCR 36-5 included 322 level I, 136 level II, 119 level III, and 44 level IV officers. Forty-eight participants did not indicate a particular certification level.

Preliminary Findings

As described in Chapter 3, the purpose of the preliminary analysis was two-fold: 1) to determine the acquisition force's familiarity with AFSCR 36-5, and 2) to establish general attitudes toward career development programs. Survey questions 1, 2, and 3 were used to address this part of the study. The first question asked for the respondent's level of experience with the regulation. Approximately 92 percent of all survey respondents were at least aware of the regulation's provisions (reference Table 1, Appendix B).

The preliminary analysis also showed the survey respondents strongly support both the need for and future potential of acquisition management development programs. Eighty-nine percent of participants in the current survey either strongly or moderately agreed that a formal acquisition management program was necessary (reference Table 2, Appendix B). Similarly, approximately 82 percent proposed that such a program would improve the career development and quality of 27XX officers (reference Table 3, Appendix B). In each case the findings in this study

closely mirrored the previous effort. The result of both studies overwhelmingly support Air Force Systems Command's decision to develop and implement AFSCR 36-5. The remaining analysis examines the specific criteria included in the career development program.

Investigative Question 1

The purpose of investigative question 1 was to establish if there is "an association between specialty training gained from Professional Continuing Education (PCE) courses and the career development of acquisition personnel." Survey questions 37-41 addressed this question. These questions focused on the general attitudes of specialty training, and specific attitudes toward Systems Acquisition School (SAS)/AFIT Systems 100, AFIT Systems 200, AFIT Systems 400, and Defense Systems Management College (DSMC), relative to career development.

Specialty training was supported by 94 percent of those surveyed as being critical to career development of 27XX officers (reference Table 4, Appendix B). Likewise, 80 percent of the survey participants feel strongly about the specific effect of SAS or Systems 100 on career development (reference Table 5, Appendix B). The responses to Systems 200 were similar to Systems 100 with 82 percent responding positively to the impact of Systems 200 on career development. Note that there is no table for the impact of Systems 200. This situation occurred several times during

this research because only part of the information from the previous research document was available to this author. All tables shown in the previous thesis were presented, with current survey results, in Appendix B. The above findings were very similar to those in the previous study. However, comparison of responses between Systems 400 and DSMC shows a different trend. The positive responses to Systems 400 fell from 78 percent in the earlier effort to 58 percent currently. Similarly, the responses to DSMC fell from 85 percent to 72 percent. This trend shows the acquisition force has lowered their perception of the importance of Systems 400 and DSMC, but not specialty training overall.

The general attitudes toward specialty training and career development between junior and senior officers was similar in both studies. Approximately 94 percent of all groups felt specialty training was critical to career development (reference Table 4, Appendix B). However, with respect to specific training programs, junior officers tended to favor SAS/SYS 100. For example, 88 percent of junior officers either strongly or moderately agreed that SAS/SYS 100 provided an effective foundation for career development. The perceptions of senior officers were somewhat lower with only 72 percent supporting SAS/SYS 100 (reference Table 5, Appendix B). Conversely, 84 percent of senior officers felt DSMC was critical to career development while only 60 percent of junior officers shared this belief. The results of the previous study were not significantly

different from these results. The difference was probably caused by the relative experience each group had with the respective specialty training courses.

Both theses found a high percentage of positive responses in all areas of specialty training. Although responses to specific programs were not as strong as specialty training in general, their positive response rate was still high enough to warrant their use. As such, the results of the survey support the inclusion of specialty training requirements in the career development program.

Investigative Question 2

The purpose of investigative question 2 was to determine if there is "an association between academic background and career development of acquisition management personnel." This question was addressed by survey questions 13 through 18. The survey was designed to accomplish the following: 1) determine whether a technical or non-technical undergraduate degree provides the best foundation for effective career development, 2) determine if a graduate degree or higher is critical to career development, and 3) determine if there is a relationship between specific undergraduate and graduate degrees and career development.

The best undergraduate degree for effective career development was sought in survey question 13. Eighty-seven percent of the officers surveyed, up four percent from the previous research, felt a technical background provided the

best foundation for effective career development (reference Table 6, Appendix B). The slight change was caused by an increase from 76 percent to 84 percent in junior officer attitudes. Senior officer attitudes remained constant. This change in junior officer attitudes may be attributed to the recent crossflow of non-technical acquisition officers into other career fields, due to over-manning. Selection of those with non-technical backgrounds to enter other career fields may have influenced the perception that a technical background is critical to career development.

Technical Orientation. Questions 14-16 were aimed at those selecting a technical background as providing the best foundation for career development in question 13. The survey revealed 64 percent of those officers preferring a technical undergraduate degree either strongly or moderately agreed that a graduate degree or higher is critical to career development. While junior officer attitudes dropped from 65 percent in the previous study to 61 percent currently, senior officer perceptions rose from 59 percent to 70 percent. This represents a fairly significant shift in senior officer attitudes on the need for a graduate degree, with the overall attitude remaining the same.

Another striking difference is the change in importance placed on a technical degree as a follow-on to a technical undergraduate degree. Earlier, 57 percent preferred a technical graduate degree, however the current research shows an increase to 69 percent. Concerning a non-technical

graduate degree as a follow-on to a technical degree, approximately 52 percent of the responses in both surveys were positive (reference Table 7, Appendix B). Note that some officers responded positively to both a technical and non-technical graduate degree as a follow-on to a technical undergraduate degree. Both studies found acquisition officers who were in favor of a technical undergraduate degree were slightly more in favor of a technical graduate degree over a non-technical one. However, most officers are split, feeling that either type of follow-on degree is adequate.

Non-Technical Orientation. For those officers who preferred a non-technical undergraduate degree (13 percent of the sample), approximately two-thirds responded positively to the need for some type of graduate degree. The responses mirrored the earlier survey with respect to the need for a non-technical graduate degree as a follow-on to a non-technical undergraduate degree. In both cases there was equal representation in the positive, negative, and neutral categories (reference Table 8, Appendix B).

Evaluation of the questions pertaining to investigative question 2 reflects strong support for a technical undergraduate degree as the best foundation for effective career development. Similarly, some type of graduate degree is also considered critical to career development. However, the evidence supporting either a technical or non-technical graduate degree is inconclusive. With the exception of the

increase in senior officers' perception of the importance of a technical graduate degree as a follow-on to a technical undergraduate degree, all findings between the two studies are similar.

Investigative Question 3

Investigative Question 3 was used to determine if there is "an association between professional military education (PME) and the career development of acquisition management personnel". This topic was dealt with in survey questions 30 through 36. These questions helped determine the general attitudes toward PME, and the specific attitudes towards Squadron Officer School (SOS), Intermediate Service School (ISS), and Senior Service School (SSS).

Generally, acquisition officers felt that PME is critical to the career development of 27XX officers. This perception was held by 63 percent of the officers surveyed, which is weaker than the responses to other criteria, yet still positive. This belief was commonly shared by junior and senior personnel in both studies.

The feelings on SOS were not as strong as PME in general, with only 52 percent of the responses being positive. The remaining responses were fairly split between negative and neutral opinions (reference Table 10, Appendix B). Both studies exhibited the same results in the area of ISS and SSS. Only 45 percent of the officers felt ISS was critical to career development. Similarly, 48 percent of

the officers believed SSS was critical to career development (reference Table 11, Appendix B). As noted in the previous thesis, these percentages were skewed by a large number of 'not applicable' answers. To get a better picture, these answers were thrown out and the percentages recalculated. This was done only in the current study since this information was not available from the previous study. For those having an opinion, 54 percent (compared with 45 percent, as stated above) of the officers felt ISS was critical to career development. Likewise, 52 percent (compared to 48 percent) felt the same about SSS. These percentages more accurately represented the feelings of the 27XX population. The results in each area of PME were similar in both studies.

There is a positive relationship between career development and PME, with a weaker, yet still positive relationship with specific types of PME. These findings, from both studies, support the use of PME requirements in the Acquisition Management Career Development Program.

Investigative Question 4

Investigative Question 4 was used to determine if there is "an association between operational experience (other than AFSC/AFLC) and the career development of acquisition management personnel." This question was addressed by survey questions 27 and 28. General attitudes toward the need for operational experience, as well as the total years

of operational experience needed for effective career development were investigated.

The analysis of survey question 27, which addressed whether operational experience is critical to career development, showed 73 percent of the officers felt operational experience is critical to career development (reference Table 12, Appendix B). A slight increase from the previous survey was caused by an increase in junior officer attitudes from 63 percent in the previous study to 70 percent currently. Senior officers proposed that operational experience is critical to career development 75 percent of the time in both surveys.

Question 28 attempted to determine the amount of operational experience necessary for effective career development over a 20-year career. The results are summarized below (reference Table 13, Appendix B):

| <u>Years of Experience</u> | |
|----------------------------|------------|
| 3 or less | 54% |
| 3-6 | 29% |
| none | <u>13%</u> |
| *Total= | 96% |

* No other individual category received significant support. Similar results were found in both studies, with over half of the respondents choosing three years or less of experience.

Overall, those surveyed supported the need for operational experience in career development of acquisition

officers. The result of both studies support this finding and, therefore, support the use of operational experience in the Acquisition Management Career Development Model.

Investigative Question 5

The purpose of investigative question 5 was to determine if there is "an association between different types of acquisition management experience and career development management personnel." This question was addressed by survey questions 19 through 26 and 29. The survey was designed to determine the attitudes toward system program office (SPO), SPO project manager, other types of AFSC/AFLC experience, and headquarters experience. Then, for each type of acquisition experience, the number of years required for effective career development was solicited. Finally, the survey was set up to determine the total years of acquisition experience required for effective career development. Each area will be examined separately.

Systems Program Office Experience. SPO experience is any assignment to a SPO within Air Force Systems Command. Examples of this type of assignment would be engineering, configuration and data management, program control, contracting, and project manager. The survey results show extremely strong support for SPO experience. Eighty four percent strongly agreed and an additional nine percent moderately agreed this type of experience is critical to career development (reference Table 14, Appendix B). The

responses of junior and senior personnel in both studies were identical.

The survey revealed that the amount of SPO experience desired by the respondents was supported by the following rankings:

| <u>Years of Experience</u> | |
|----------------------------|-----------|
| 3-6 | 37% |
| 7-9 | 32% |
| 10-12 | 18% |
| 3 or less | <u>7%</u> |
| *Total= | 94% |

* No other individual category received significant support. Although the ranking of the categories in the previous study were the same, the percentages for each category were unavailable.

SPO Project Manager Experience. Experience of this type is similar to the above, except it is limited to project management only. Functional support is excluded. A strong positive response was found for SPO project manager experience. Approximately 93 percent indicated that they either strongly or moderately agreed this type of experience is critical to career development (reference Table 15, Appendix B). Similar responses were found between junior and senior officers in both studies.

Again, concerning the amount of program manager experience needed, the following rankings were revealed:

Years of
Experience

| | |
|-----|------------|
| 3-6 | 56% |
| 1-3 | 23% |
| 7-9 | <u>13%</u> |

*Total= 92%

*No other individual category received significant support. Although the ranking of the categories in the previous study were the same, the percentages for each category were unavailable.

AFSC/AFLC Other-Type Experience. This type of experience was favored by 73 percent of the respondents in both surveys. Both junior officers (77 percent) and senior officers (69 percent) agreed AFSC/AFLC Other-Type experience was critical to career development (reference Table 16, Appendix B).

The amount of AFSC/AFLC Other-Type experience favored by the respondents is shown below:

| | |
|--------------------------------|------------|
| <u>Years of Experience</u> | |
| 3 or less | 48% |
| 3-6 | 36% |
| none | <u>10%</u> |

*Total= 94%

*No other individual category received significant support. Although the ranking of the categories in the previous study were the same, the percentages for each category were unavailable.

Headquarters Experience. Headquarters experience was favored by 72 percent of the officers surveyed (reference

Table 17, Appendix B). This view was shared by both junior and senior officers in both surveys. However, it is interesting to note that senior officers had stronger feelings than junior officers. Forty percent of senior officers were strongly in favor of headquarters experience, while only 25 percent of junior officers felt strongly about it. This difference is probably due to the exposure senior officers have had to this type of experience.

The amount of headquarters experience necessary for career development is detailed below:

| <u>Years of Experience</u> | |
|----------------------------|------------|
| 3 or less | 63% |
| 3-6 | 24% |
| none | <u>12%</u> |
| *Total= | 99% |

*No other individual category received significant support. Although the ranking of the categories in the previous study were the same, the percentages for each category were unavailable.

Total Acquisition Experience. Question 30 of the survey asked each respondent to choose the total amount of acquisition experience necessary for career development. This experience included all the different types of experience discussed earlier. The results are as follows (reference Table 18, Appendix B):

Years of
Experience

| | |
|------------|-----|
| 10-12 | 33% |
| 13-15 | 26% |
| 7-9 | 22% |
| 16 or more | 12% |

*Total= 93%

*No other individual category received significant support.

The selections between junior and senior officers were very close.

The findings of both studies strongly support the inclusion of various types of experience in the Acquisition Management Career Development Model. All four specific types of experience, SPO, SPO Project Manager, headquarters, and AFSC/AFLC Other-Type, received strong backing. There was tremendous support for SPO and SPO project manager requirements, probably due to the actual hands-on experience gained. While good support existed for headquarters and AFSC/AFLC Other-Type experience, it was not nearly as strong as the response to SPO experience. In all cases, both junior and senior officers had, generally, identical responses. Both studies shared the same findings in this area, therefore a definite association between acquisition experience and career development can be made. Solid support is, therefore, given to the requirement of various types of acquisition experience in AFSCR 36-5, Acquisition Management Career Development program.

Qualitative Survey Results

Many of the returned surveys included additional comments from the respondents. These comments focused on perceived weaknesses of the Acquisition Management Career Development Program. However, to a large degree, most officers are in favor of such a program and only wish to improve it.

A number of comments focused on the specialty training issue. Although the respondents felt this type of training was good, they felt that experience could compensate for it. One officer, with over 15 years experience, had an impressive list of acquisition assignments/jobs. However, he did not qualify for level one because he had never been to a specialty school. Another officer was not permitted to attend school and, therefore, had not qualified for level one. Generally, the comments from these and other survey participants centered on the inflexibility of the requirements with respect to specialty training for attaining various levels.

A second area of inflexibility the respondents pointed out was the definitions of SPO and headquarters assignments. A large number felt that SPO experience (as well as program management experience) could be attained outside of AFSC. Many other commands and defense agencies do development type of work. The experience gained in this type of environment, it is argued, is just as beneficial as AFSC SPO experience. Likewise, headquarters experience does not include

assignments to other command headquarters. Many respondents felt other headquarters provided experience just as useful as an assignment to headquarters AFSC, USAF, or DOD.

Last, a number of responses noted a need for a more proactive management of assignments, especially of junior officers. They recommended an assignment track so these individuals receive the right experience, training, and education at the right time. This would put more purpose in the program, while somewhat avoiding the 'filling in the squares mentality' that such a program might produce.

Summary

The analysis of the information gained from this survey, in comparison with the previous survey, has shown a strong positive relationship between the five investigative questions and the criteria set out in AFSCR 36-5. The preliminary findings were that the acquisition population is strongly in favor of a career development program. They also feel that such a program would improve the quality of 27XX personnel. The following is a summary of the findings for each of the five investigative questions:

1. Very strong support was found for the need for specialty training in a career development program. In both surveys, 94 percent of the officers were either strongly or moderately in favor of this. Although the response to specific types of specialty training (e.g. SAS/SYS 100) was not as strong as training in general, their support was

adequate enough to warrant their inclusion in the career development program. A significant deviation between surveys was found with respect to the level of importance placed on Systems 400 and DSMC. In both cases, the favorable responses fell drastically (78 percent to 58 percent for Sys 400 and 85 percent to 68 percent for DSMC). This finding may, perhaps represent a reevaluation of the impact of these programs on career development. Several informed discussions were held with AFIT and DSMC instructors to consider possible causes for this change. As these discussions revealed only personal speculation, Chapter 5 will recommend further research to determine if there is any serious implications for the Career Development Program.

2. A strong positive relationship was found between academic background and career development. With respect to the type of undergraduate degree, 87 percent of the officers felt a technical undergraduate degree provided the best foundation for career development. Some type of graduate degree was also considered necessary for career development by approximately 65 percent of the respondents. However, the type of degree (technical or non-technical) required could not be determined from the results. There were no significant differences between the surveys in this area.

3. The studies have shown a positive relationship between PME and career development of acquisition officers, but not as strong as the previous two areas. Approximately

63 percent of the survey participants perceived PME to be critical to career development. However, support for specific types of PME (SOS, ISS, SSS) was only slightly higher than 50 percent. The two surveys yielded similar results.

4. Operational experience was deemed critical to career development by approximately 70 percent of the respondents. Over half of the responses selected three years or less as the time period required to gain this type of experience. No change was observed from the previous results.

5. The strongest association was in the area of different types of acquisition experience. SPO and SPO project manager had the highest overall response level (approximately 95 percent and 93 percent, respectively). AFSC/AFLC other type and headquarters experience were favored by about 73 percent of the population. Concerning the total amount of acquisition experience needed for career development, approximately 31 percent chose 10 to 12 years. The 13 to 15 year category received 26 percent of the responses. Both studies shared these findings.

Aside from the strict responses to the survey questions, there were a number of comments made by the survey participants. In broad terms, two areas of inflexibility in the program concerned some of these participants. First, the requirement for specialty training was considered too stringent since, in some cases, experience can make up for this lack of training. Second,

some felt that SPO and headquarters experience could be gained outside of Air Force Systems Command. Currently, SPO experience is only given at a product division in AFSC. Headquarters experience is counted only at HQ AFSC and above. Last, a number of responses felt the Air Force should take a more proactive approach to ensuring that acquisition personnel receive the correct assignment at the right time.

This concludes the data analysis section of this paper. The following chapter will close with recommendations for AFSCR 36-5. Also, areas for further study will be suggested.

V. Recommendations

Introduction

Air Force Systems Command (AFSC) Regulation 36-5 has a tremendous potential to impact the careers of many Air Force officers. By reserving many highly visible, important management positions for those who reach the regulation's certification level three or four, AFSC has made participation in the program practically mandatory. Therefore, it is imperative that AFSCR 36-5 include the correct mix of factors which enhance professional development of acquisition officers. This study researched the acquisition population's perceptions of the effectiveness of the criteria set forth in AFSCR 36-5 on career development. These perceptions were then compared to a previous study with the same purpose. As a result, both studies revealed, with few exceptions, that the acquisition population strongly supported both the need for such a program, and the criteria called for in the regulation. This chapter concludes the research accomplished in this area. The chapter concludes with recommendations for further study.

Research Recommendations

This study identified a few deficiencies which need to be addressed. These include a drastic drop in the

perception that SYS 400 and DSMC effect career development in a positive way. Also, the issue of required specialty training versus experience should be investigated. Last, the definition of Systems Program Office (SPO) and headquarters experience should be investigated for possible expansion.

A dramatic drop in the perception of the value of SYS 400 and DSMC occurred from the previous research to the current research. For example, previously 78 percent of those surveyed either strongly or moderately agreed that SYS 400 positively effected career development. The current study showed this perception dropped 20 percentage points to 58 percent. Likewise, the response to DSMC fell from 85 percent to 72 percent. Although the current perceptions do not support removing SYS 400 or DSMC from the program, further study should investigate the cause of this drastic drop and evaluate any implications to AFSCR 36-5.

In the qualitative analysis it was noted that a number of officers were not qualified for any certification level because they were unable to attend specialty training. This was in spite of the fact they had excellent acquisition experience. Some process should be developed which takes into account these individuals who do not exactly fit the mold established in the regulation, but nevertheless, are qualified for these jobs set aside for the higher certification levels.

Another area highlighted by the qualitative analysis is the strict definition of headquarters and SPO experience. AFSCR 36-5 defines headquarters experience as an assignment to AFSC headquarters or higher. Other command headquarters are excluded. SPO experience is defined as an assignment to a Systems Program Office, within a product division of Air Force Systems Command. Many survey respondents felt these definitions were too strict and should be expanded to include other similar assignments. Further research should evaluate this possibility and the impact an expanded definition would have on the Acquisition Management Career Development Program.

Recommendations for Further Research

After analyzing the results of this research, the author believes there are other areas needing evaluation. One is the identification of other variables affecting career development. Also, the attitudes of officers in other career fields related to, or crossing over into acquisition should be explored. Finally, the revised Officer Evaluation System should be studied to identify similarities and conflicts, if any, between it and the Acquisition Manager Career Development Program.

Further research should look for other variables that may affect acquisition manager career development. Although this and the previous study found the criteria set forth in AFSCR 36-5 to be positively related to career development,

no effort was made to identify other criteria. This effort should be undertaken to ensure AFSCR 36-5 evolves into the best possible product.

Because many officers from other career fields will be indirectly effected by AFSCR 36-5, their perceptions and inputs should be sought. An example of this type of person is a pilot who accepts a rated supplement position or transitions completely into the acquisition career field. These officers should be surveyed to remove any unintended biases the regulation might have against them.

The last area recommended for further study is an analysis of the revised Officer Evaluation System (OES) and any implications it may have on the Acquisition Manager Career Development Program. The revised OES places job performance over all other factors, such as PME, advanced education, and breadth of experience. While the Acquisition Manager Career Development Program does not, on the surface, conflict with the goals of the revised OES, research should be undertaken to fully evaluate this possibility.

Due to the far reaching implications the Acquisition Manager Career Development Program has on many officer's careers, it should be continually evaluated. This will help to hone it into a product which best prepares officers for the challenges and responsibilities of acquiring major weapon systems. Reevaluation will also allow the program to change along with the evolving technological environment in which the acquisition manager operates.

Appendix A

Survey on Career Development Program



DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

26 APR 1983

REPLY TO
ATTN OF LSG (Capt McConnell)

SUBJECT: Survey on Acquisition Management Career Development Program

re Air Force 2724 and 2716 Series Personnel

1. Currently, Air Force Systems Command is in the process of implementing AFSCR 36-5 to formalize the career development of the acquisition force. The potential implications of this program for military officers, in particular the acquisition management (27XX) career field, are far ranging. Therefore, we are interested in your perceptions of those factors that influence the effective career development of 27XX officers. This study will be of invaluable assistance to the Air Force in developing the highest quality officers for the acquisition force.

2. This study builds on a previous effort. Its purpose is to measure changes in the perceptions of a population over time. All responses, regardless of involvement in the previous study, are important to the success of this effort.

3. Your participation is voluntary, and your responses will be anonymous. Please do not sign your name or organization anywhere on the survey. To complete the survey, either circle the appropriate response or write your numerical response in the space provided below the question. PLEASE MARK YOUR RESPONSES DIRECTLY ON THE SURVEY. Results will only be presented in terms of group averages of the "typical" 27XX officer's perception of effective career development. When the results of the survey are published, readers will in no way be able to identify specific individuals.

4. Please complete the survey and return it to AFIT/LSG in the enclosed envelope within five working days. If you have any questions, contact Capt Reed McConnell at AUTOVON 785-4437. Thank you for your cooperation and participation.

Charles M. Farr
CHARLES M. FARR, MAJ, USAF
Director, Graduate Contract Management Program
School of Systems and Logistics

2 Atch
1. Survey
2. Return Envelope

SURVEY
ON
ACQUISITION MANAGEMENT
CAREER DEVELOPMENT PROGRAM

Instructions

Answer all items by either circling the appropriate response to each question, or by writing your numerical response in the space provided below each question. Select only one response for each item and clearly erase any responses you change. If for any item you do not find a response that fits your situation exactly, use the one that is closest to the way you feel. Please answer each item as honestly and frankly as possible.

To ensure your response remains anonymous, please do not sign your name on this survey.

Acquisition Management Career Development Program

1. What has been your experience with respect to the Acquisition Management (AM) Career Development Program, outlined in AFSC Regulation 36-5?

(1) I have read AFSC Regulation 36-5, which outlines the AM Career Development Program

(2) I have not read the regulation, but I have attended the information briefings provided by the Systems Command Personnel Management office

(3) I have received general information regarding the AM Career Development Program from informal sources

(4) I am not aware of any new Systems Command regulation concerning an AM Career Development Program

PLEASE USE THE FOLLOWING RESPONSE SCALE FOR QUESTIONS 2 AND 3:

| (0) | (1) | (2) | (3) | (4) | (5) |
|-------------------|-------------------|---------------------|---------------------------------|------------------------|----------------------|
| NOT APPLICABLE | STRONGLY AGREE | MODERATELY AGREE | NEITHER AGREE OR DISAGREE | MODERATELY DISAGREE | STRONGLY DISAGREE |

2. I believe that a formalized AM Career Development Program for acquisition program management (27XX) personnel is necessary:

3. When instituted, I believe that a formalized AM Career Development Program will improve the career development and quality of officers in the 27XX career field:

Background Information

4. What is your current rank?

- (1) First Lieutenant
- (2) Captain
- (3) Major
- (4) Lieutenant Colonel
- (5) Colonel

5. What is your current duty AFSC?

- (1) 2724
- (2) 2716

6. Which major command are you assigned to?

- (1) AFSC
- (2) AFLC
- (3) TAC
- (4) MAC
- (5) SAC
- (6) AFCMD
- (7) ATC
- (8) AFCC
- (9) AU
- (10) Other _____

7. If you work in Air Force Systems Command, what product division are you assigned to?

- (0) Not Applicable
- (1) SD
- (2) ASD
- (3) ESD
- (4) AD

8. What is your primary academic background?

- (1) Technical (ie, engineering, or computer science-related)
- (2) Non-technical (ie, humanities, or business-related)
- (3) Both technical and non-technical (ie, two different undergraduate degrees)

9. What is the highest academic degree you have obtained?

- (1) Bachelor's
- (2) Bachelor's plus additional undergraduate or master's study
- (3) Master's
- (4) Master's plus additional graduate or doctoral study
- (5) Doctorate

10. What is the highest level of Professional Military Education that you have completed?

- (1) I have not completed any PME
- (2) Squadron Officer School
- (3) Intermediate Service School (ISS)
- (4) Senior Service School (SSS)

11. How many years of acquisition experience do you have?

(Throughout this survey, acquisition experience will be defined as experience in the acquisition, support, and maintenance of weapon systems. This may include SPO, SPO project management, AFLC/AFSC other, and headquarters acquisition assignments)

- (1) None
- (2) 3 years or less
- (3) 3 to 6
- (4) 7 to 9
- (5) 10 to 12
- (6) 13 to 15
- (7) more than 15

12. How many years of operational experience do you have?

(Throughout this survey, operational experience will be defined as experience in operating, supporting, or maintaining an operational system gained in an Air Force or joint command other than AFSC and AFLC)

- (1) None
- (2) 3 years or less
- (3) 3 to 6
- (4) 7 to 9
- (5) 10 to 12
- (6) 13 to 15
- (7) more than 15

Career Development

The intent of the AM Career Development Program is to "maximize the professional development and mission capability of the AM officer force by setting forth a definitive and viable career management plan that produces broad-based acquisition managers capable of assuming middle management and senior leadership roles". Given the certification requirements outlined in the regulation, I would like to establish your perception of those requirements that are critical to the effective career development of an acquisition program management (27XX) officer. To help you answer these questions, AFSCR 36-5's definition of the different types of experience have been provided.

Academic Background

13. I believe that the following undergraduate degree provides the best foundation for effective career development of 27XX officers:

- (1) Technical (i.e., engineering, computer science, math, chemistry)
- (2) Non-technical (i.e., history, english, accounting, economics)

(If you selected the non-technical option for Question #13, please go to Question #17. If not, please continue on to Question #14)

PLEASE USE THE FOLLOWING RESPONSE SCALE FOR QUESTIONS 14 THRU 19:

| (0) | (1) | (2) | (3) | (4) | (5) |
|-------------------|-------------------|---------------------|---------------------------------|------------------------|----------------------|
| NOT APPLICABLE | STRONGLY AGREE | MODERATELY AGREE | NEITHER AGREE OR DISAGREE | MODERATELY DISAGREE | STRONGLY DISAGREE |

14. I believe that a graduate degree or higher is critical to the career development of 27XX officers.

15. For effective career development, I believe that a technical graduate degree is a necessary follow-on to a technical undergraduate degree.

16. For effective career development, I believe that a non-technical graduate degree is a necessary follow-on to a technical undergraduate degree.

(Please skip Questions #17-18, and go to Question #19)

17. I believe that a graduate degree or higher is critical to the career development of 27XX officers.

18. For effective career development, I believe that a non-technical graduate degree is a necessary follow-on to a non-technical undergraduate degree.

Acquisition Experience

19. I believe that experience in a System Program Office (SPO) is critical to the career development of 27XX officers.

PLEASE USE THE FOLLOWING RESPONSE SCALE FOR QUESTIONS 20 THRU 23:

| (0) | (1) | (2) | (3) | (4) | (5) |
|-------------------|-------------------|---------------------|---------------------------------|------------------------|----------------------|
| NOT APPLICABLE | STRONGLY AGREE | MODERATELY AGREE | NEITHER AGREE OR DISAGREE | MODERATELY DISAGREE | STRONGLY DISAGREE |

20. For effective career development, I believe that the total SPO experience for a 27XX officer should be:

- (1) SPO experience is unnecessary
- (2) 3 years or less
- (3) 3 to 6
- (4) 7 to 9
- (5) 10 to 12
- (6) 13 to 15
- (7) more than 15

21. I believe that experience as a SPO project manager is critical to the career development of 27XX officers.

(A SPO project manager is defined as any person who is responsible for the technical performance, schedule, cost, or R&M of a system or some configuration item (or integration thereof) being developed or produced by the SPO, or a person in the direct supervisory chain of the same)

22. For effective career development, I believe that the total SPO project manager experience for a 27XX officer should be:

- (1) SPO project management experience is unnecessary
- (2) 3 years or less
- (3) 3 to 6
- (4) 7 to 9
- (5) 10 to 12
- (6) 13 to 15
- (7) more than 15

23. I believe that experience in a AFLC/AFSC other-type assignment is critical to the career development of 27XX officers.

(Any assignment within AFLC or any non-SPO assignment with AFSC (excluding HQ AFSC). Qualifying AFSC tours include product division staff, test organizations, laboratories, Arnold Engineering Development Center, Foreign Technology Division, Space Technology Center, AFPRO, or any other equivalent organization)

PLEASE USE THE FOLLOWING RESPONSE SCALE FOR QUESTIONS 24 THRU 28:

| (0) | (1) | (2) | (3) | (4) | (5) |
|-------------------|-------------------|---------------------|---------------------------------|------------------------|----------------------|
| NOT APPLICABLE | STRONGLY AGREE | MODERATELY AGREE | NEITHER AGREE OR DISAGREE | MODERATELY DISAGREE | STRONGLY DISAGREE |

24. For effective career development, I believe that the total AFLC/AFSC other-type experience for a 27XX officer should be:

- (1) AFLC/AFSC other-type experience is unnecessary
- (2) 3 years or less
- (3) 3 to 6
- (4) 7 to 9
- (5) 10 to 12
- (6) 13 to 15
- (7) more than 15

25. I believe that experience in a headquarters assignment is critical to the career development of 27XX officers.

(Any assignment to HQ AFSC, the Air Staff (HQ USAF), Office of the Secretary of the Air Force, DoD Agencies or Activities, OSD, JCS, or to an Air Force Separate Operating Agency (SOA) or Direct Reporting Unit (DRU))

26. For effective career development, I believe that the total headquarters experience for a 27XX officer should be:

- (1) headquarters experience is unnecessary
- (2) 3 years or less
- (3) 3 to 6
- (4) 7 to 9
- (5) 10 to 12
- (6) 13 to 15
- (7) more than 15

27. I believe that operational experience is critical to the career development of 27XX officers.

28. For effective career development, I believe that the total operational experience for a 27XX officer should be:

- (1) operational experience is unnecessary
- (2) 3 years or less
- (3) 3 to 6
- (4) 7 to 9
- (5) 10 to 12
- (6) 13 to 15
- (7) more than 15

PLEASE USE THE FOLLOWING RESPONSE SCALE FOR QUESTIONS 29 THRU 36:

| (0) | (1) | (2) | (3) | (4) | (5) |
|-------------------|-------------------|---------------------|---------------------------------|------------------------|----------------------|
| NOT APPLICABLE | STRONGLY AGREE | MODERATELY AGREE | NEITHER AGREE OR DISAGREE | MODERATELY DISAGREE | STRONGLY DISAGREE |

29. After responding to Questions 19-28, I believe that effective career development of 27XX officers is dependent upon a total acquisition experience background of:

- (1) 3 years or less
- (2) 3 to 6
- (3) 7 to 9
- (4) 10 to 12
- (5) 13 to 15
- (6) more than 15

Professional Military Education (PME)

30. I believe that PME is critical to the career development of 27XX officers.

31. I believe that Squadron Officer School (SOS) is critical to the career development of 27XX officers.

32. I believe that the information presented in SOS is useful to 27XX officers.

33. I believe that Intermediate Service School (ISS) training is critical to the career development of 27XX officers.

34. I believe that the information presented in ISS is useful to 27XX officers.

35. I believe that Senior Service School (SSS) training is critical to the career development of 27XX officers.

36. I believe that the information presented in SSS is useful to 27XX officers.

PLEASE USE THE FOLLOWING RESPONSE SCALE FOR QUESTIONS 37 THRU 41:

| (0) | (1) | (2) | (3) | (4) | (5) |
|-------------------|-------------------|---------------------|---------------------------------|------------------------|----------------------|
| NOT APPLICABLE | STRONGLY AGREE | MODERATELY AGREE | NEITHER AGREE OR DISAGREE | MODERATELY DISAGREE | STRONGLY DISAGREE |

Specialty Training

(Specialty training consists of acquisition-related courses in program management, financial management, contracting, technical management, production management, logistics, or quality assurance.)

37. I believe that specialty training is critical to the career development of 27XX officers.

38. I believe that the Systems Acquisition School (SAS), Introduction to Systems Command Acquisition Management, or Systems 100 provides an effective foundation for the development of 27XX officers.

39. I believe that AFIT Systems 200, Acquisition Planning and Analysis, is critical to the career development of 27XX officers.

40. I believe that AFIT Systems 400, Intermediate Program Management, is critical to the career development of 27XX officers.

41. I believe that the Defense System Management College (DSMC), Program Management Course, is critical to the career development of 27XX officers.

Certification Level

The career development program outlined in AFSCR 36-5 establishes four distinct certification levels. These certification levels are cumulative; that is, requirements for any lower level must be met before an individual may apply for certification at a higher level. At this time, I would like to determine your certification level. Attachments 1 and 2 to this survey, taken directly from AFSCR 36-5, outline the requirements for each level. Using these attachments and the definitions of the different types of experience (presented in the survey), determine your current certification level.

40. What is your current certification level?

- (1) Level I
- (2) Level II
- (3) Level III
- (4) Level IV

PLEASE RETURN THIS QUESTIONNAIRE IN THE RETURN ENVELOPE PROVIDED. THANKS
FOR YOUR HELP AND HAVE A NICE DAY !

ATTACHMENT I

| LEVEL I | LEVEL II |
|---|--|
| <ul style="list-style-type: none">- Bachelor's degree- 6 months in SPO or fully qualified acquisition AFSC- SAS 001 or equivalent | <ul style="list-style-type: none">- SOS or higher- 2 yrs experience in SPO- Either operational experience (1 yr) or AFSC/AFLC other (2 yrs) or headquarters (2 yrs)- Sys 200 or equivalent- Two additional acquisition related specialty courses |
| LEVEL III | LEVEL IV |
| <ul style="list-style-type: none">- Master's degree or higher- ISS or higher- SPO experience (3 yrs cum)- Total experience (SPO + 2 others)<ul style="list-style-type: none">- SPO- AFSC/AFSC other (AFPRO encouraged)- HQ assignment- operational experience- SYS 400 or equivalent | <ul style="list-style-type: none">- Senior service school- 8 yrs acquisition experience- DSMC (PMC) or equivalent- 2 yrs experience as SPO project mgr- AFSC/CC approval |

(2.10a)

Figure 3. Certification Requirements for each Level

ATTACHMENT 2

Specialty Training Courses

| Level of Certification | Requirement | Equivalents |
|-------------------------------|--|---|
| I | SAS 001, Introduction to Systems Command Acquisition Management | AFIT SYS 123, Fundamentals of Acquisition Management AFIT SYS 100, Introduction to Acquisition Management (Note #1) Any Level II, III, or IV required or equivalent course |
| II | AFIT SYS 200, Acquisition Planning and Analysis | AFIT SYS 223, Systems Program Management DSMC, Business Management Course DSMC, Management of the Systems Acquisition Process Any Level III or IV required or equivalent course |
| | Two Additional Acquisition-related | Courses in program management, financial management, contracting, quality assurance, or logistics |
| III | AFIT SYS 400, Intermediate Program Management | DSMC, Systems Acquisition Management for General/Flag officers DSMC, Executive Refresher Course DSMC, Program Managers Workshop DSMC, Business Managers Advanced Workshop Any Level IV required or equivalent course |
| IV | DSMC, Program Management Course (Note #2) | None |

NOTE 1: Applies only to those officers who entered any of the eligible acquisition specialties before 1 October 1986.

NOTE 2: Completion of the DSMC Program Management Course satisfies all specialty training requirements.

Appendix B

Summary Tables

Table 1

Results of Cross-Tabulation of Survey Question 1: Experience with AFSCR 36-5

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| READ AFSCR 36-5 | 75 12.6 46.0 22.7 | 88 14.7 54.0 33.1 | 80 12.4 40.4 24.1 | 118 18.3 59.6 37.9 |
| ATTENDED INFO BRIEFING | 142 23.8 68.3 42.9 | 66 11.1 31.7 24.8 | 156 24.2 66.4 47.0 | 79 12.3 33.6 25.4 |
| RECEIVED GENERAL INFO | 84 14.1 51.2 25.4 | 80 13.4 48.8 30.1 | 71 11.0 43.8 21.4 | 91 14.1 56.1 28.9 |
| UNAWARE OF REGULATION | 30 5.0 48.4 9.1 | 32 5.4 51.6 12.0 | 25 3.9 50.0 7.5 | 25 3.9 50.0 7.7 |
| TOTAL | 331 55.4 | 226 44.6 | 332 51.5 | 313 48.5 |

Table 2

Results of Cross-Tabulation of Survey Question 2: A Formal Acquisition Management Program is Necessary

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 169 27.4 57.5 49.1 | 125 20.3 42.5 45.8 | 183 27.5 52.6 53.2 | 165 24.7 47.4 51.4 |
| MODERATELY AGREE | 132 21.4 54.6 38.4 | 110 17.8 45.4 40.3 | 129 19.4 53.3 37.5 | 113 17.0 46.7 35.4 |
| NEITHER AGREE/ DISAGREE | 12 1.9 52.2 3.5 | 11 1.8 47.8 4.0 | 18 2.7 58.1 5.2 | 13 2.0 41.9 4.1 |
| MODERATELY DISAGREE | 17 2.8 47.2 4.9 | 19 3.1 52.8 7.0 | 6 0.9 18.8 1.7 | 26 3.9 81.2 8.2 |
| STRONGLY DISAGREE | 14 2.3 63.6 4.1 | 8 1.4 36.4 2.9 | 8 1.2 66.7 2.3 | 4 0.5 33.3 0.9 |
| TOTAL | 344 55.8 | 273 44.3 | 344 51.7 | 321 48.3 |

Table 3

Results of Cross-Tabulation of Survey Question 3: An Acquisition Management Program Will Improve Career Development

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 144 23.4 59.3 41.9 | 99 16.1 40.7 36.4 | 134 20.2 50.8 39.0 | 130 19.6 49.2 40.4 |
| MODERATELY AGREE | 128 20.8 51.6 37.2 | 120 19.5 48.4 44.1 | 151 22.7 53.9 43.9 | 129 19.4 46.1 40.4 |
| NEITHER AGREE/ DISAGREE | 42 6.8 67.7 12.2 | 20 3.3 32.3 7.4 | 37 5.6 53.6 10.8 | 32 4.8 46.4 10.0 |
| MODERATELY DISAGREE | 17 2.8 41.5 4.9 | 24 3.9 58.5 8.8 | 13 2.0 35.1 3.8 | 24 3.6 64.9 7.5 |
| STRONGLY DISAGREE | 13 2.1 59.1 3.8 | 9 1.5 40.9 3.3 | 9 1.4 60.0 2.6 | 6 0.8 40.0 1.6 |
| TOTAL | 344 55.8 | 272 44.2 | 344 51.7 | 321 48.3 |

Table 4

Results of Cross-Tabulation of Survey Question 37: Specialty Training is Critical to Career Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 252 39.3 57.8 70.8 | 184 28.7 42.2 64.6 | 238 35.6 53.2 69.0 | 209 31.3 46.8 64.8 |
| MODERATELY AGREE | 83 13.0 50.9 23.3 | 80 12.5 49.1 28.1 | 91 13.6 49.7 26.4 | 92 13.8 50.3 28.4 |
| NEITHER AGREE/ DISAGREE | 15 2.3 57.7 4.2 | 11 1.7 42.3 3.9 | 8 1.2 47.1 2.3 | 9 1.4 52.9 2.8 |
| MODERATELY DISAGREE | 4 0.6 28.6 1.1 | 10 1.6 71.4 3.5 | 3 0.5 25.0 0.9 | 9 1.4 75.0 2.8 |
| STRONGLY DISAGREE | 2 0.3 100.0 0.6 | 0 0.0 0.0 0.0 | 4 0.6 57.1 1.2 | 3 0.5 42.9 0.9 |
| TOTAL | 356 55.5 | 285 44.5 | 344 51.7 | 321 48.3 |

Table 5

Results of Cross-Tabulation of Survey Question 38: SAS/Systems
100 Provides an Effective Foundation for Career Development

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| NOT APPLICABLE | 9 1.4 52.9 2.5 | 8 1.6 47.1 2.8 | 4 0.6 22.2 1.2 | 14 2.1 77.8 4.4 |
| STRONGLY AGREE | 176 27.5 65.4 49.4 | 93 14.5 34.6 32.6 | 182 27.3 58.3 52.8 | 130 19.5 41.7 40.5 |
| MODERATELY AGREE | 122 19.0 51.3 34.3 | 116 18.1 48.7 40.7 | 120 18.0 53.8 34.8 | 103 15.3 46.2 31.5 |
| NEITHER AGREE/ DISAGREE | 27 4.2 34.2 7.6 | 52 8.1 65.8 18.3 | 12 1.8 19.1 3.5 | 51 7.6 80.9 15.9 |
| MODERATELY DISAGREE | 18 2.8 58.1 5.1 | 13 2.0 41.9 4.6 | 17 2.5 46.0 4.9 | 20 3.0 54.0 6.2 |
| STRONGLY DISAGREE | 4 0.6 57.1 1.1 | 3 0.5 42.9 1.1 | 10 1.5 66.7 2.9 | 5 0.8 33.3 1.6 |
| TOTAL | 356 55.5 | 285 44.5 | 345 51.7 | 323 48.3 |

Table 6

Results of Cross-Tabulation of Survey Question 13: The Undergraduate Degree Providing the Best Foundation for Effective Career Development

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|--------------------|------|-------------------|------|
| | 2724 | 2716 | 2724 | 2716 |
| TECHNICAL | 269 | 259 | 290 | 292 |
| | 42.2 | 40.6 | 43.5 | 43.8 |
| | 51.0 | 49.0 | 49.8 | 50.2 |
| | 75.6 | 91.8 | 84.3 | 90.7 |
| NON-TECHNICAL | 87 | 23 | 54 | 30 |
| | 13.6 | 14.5 | 8.1 | 4.5 |
| | 79.1 | 20.9 | 64.3 | 35.7 |
| | 24.4 | 8.2 | 15.7 | 9.0 |
| TOTAL | 356 | 282 | 344 | 323 |
| | 55.8 | 44.2 | 51.6 | 48.4 |

Table 7

Results of Cross-Tabulation of Survey Question 16: A Non-Technical Graduate Degree is a Necessary Follow-on to a Technical Undergraduate Degree

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|----------------------------|----------------------------|-----------------------------|----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 63 12.0 55.8 23.7 | 50 9.6 44.2 19.5 | 42 7.2 45.2 14.4 | 51 8.8 54.8 17.5 |
| MODERATELY AGREE | 94 18.0 53.1 35.3 | 83 15.9 46.9 32.3 | 117 20.1 55.7 40.2 | 92 15.8 44.3 31.6 |
| NEITHER AGREE/ DISAGREE | 55 10.5 48.7 20.7 | 58 11.1 51.3 22.6 | 68 11.7 50.4 23.4 | 67 11.5 49.6 23.0 |
| MODERATELY DISAGREE | 39 7.5 44.3 14.7 | 49 9.4 55.7 19.1 | 49 8.4 47.1 16.8 | 55 9.4 52.9 18.9 |
| STRONGLY DISAGREE | 15 2.9 46.9 5.6 | 17 3.3 53.1 6.6 | 15 2.6 37.5 5.2 | 25 4.3 62.5 8.6 |
| TOTAL | 266 50.0 | 257 49.1 | 291 49.9 | 291 50.1 |

Table 8

Results of Cross-Tabulation of Survey Question 18: A Non-Technical Graduate Degree is a Necessary Follow-on to a Non-Technical Undergraduate Degree

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|----------------------------|--------------------------|----------------------------|----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| | ----- | | | |
| STRONGLY AGREE | 16 14.7 76.2 18.6 | 5 4.6 23.8 21.7 | 10 11.8 62.5 18.2 | 6 7.1 37.5 20.7 |
| ----- | | | | |
| MODERATELY AGREE | 18 16.5 90.0 20.9 | 2 1.8 10.0 8.7 | 9 10.6 69.2 16.4 | 4 4.7 30.8 13.8 |
| ----- | | | | |
| NEITHER AGREE/ DISAGREE | 29 26.6 80.6 33.7 | 7 6.4 19.4 30.4 | 15 17.7 55.6 27.3 | 11 12.9 44.4 37.9 |
| ----- | | | | |
| MODERATELY DISAGREE | 17 15.6 70.8 19.8 | 7 6.4 29.2 30.4 | 14 16.5 73.7 25.5 | 5 5.9 26.3 17.2 |
| ----- | | | | |
| STRONGLY DISAGREE | 6 5.5 75.0 6.9 | 2 1.8 25.0 8.7 | 7 8.2 77.8 12.7 | 2 2.4 22.2 6.9 |
| ----- | | | | |
| TOTAL | 86 78.9 | 23 21.1 | 55 64.7 | 29 35.3 |

Table 9

Results of Cross-Tabulation of Survey Question 30: PME is
Critical to the Career Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 113 17.7 57.6 31.9 | 83 12.9 42.3 29.1 | 64 9.6 43.5 18.6 | 83 12.4 56.5 25.6 |
| MODERATELY AGREE | 120 18.8 56.1 33.9 | 94 14.7 43.9 33.0 | 152 22.8 55.9 44.1 | 120 18.0 44.1 37.1 |
| NEITHER AGREE/ DISAGREE | 57 8.9 57.6 16.1 | 42 6.6 42.4 14.7 | 60 9.0 52.6 17.4 | 64 8.1 47.4 16.8 |
| MODERATELY DISAGREE | 49 7.7 58.3 16.1 | 35 5.5 41.7 12.3 | 50 7.5 52.6 14.5 | 45 6.7 47.4 14.0 |
| STRONGLY DISAGREE | 15 2.3 32.6 4.2 | 31 4.8 67.4 10.9 | 17 2.5 46.0 4.9 | 20 3.0 54.0 6.2 |
| TOTAL | 354 55.4 | 285 44.6 | 345 51.7 | 322 48.3 |

Table 10

Results of Cross-Tabulation of Survey Question 31: SOS is Critical to the Career Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|----------------------------|-----------------------------|----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 102 15.9 57.3 28.7 | 76 11.9 42.7 26.7 | 63 9.4 45.0 18.3 | 77 11.5 55.0 23.7 |
| MODERATELY AGREE | 108 16.9 60.0 30.2 | 72 11.2 40.0 25.3 | 123 18.4 58.9 35.7 | 86 12.9 41.1 26.5 |
| NEITHER AGREE/ DISAGREE | 46 7.2 43.8 13.0 | 59 9.2 56.2 20.7 | 67 10.0 49.6 19.4 | 68 10.2 50.4 21.2 |
| MODERATELY DISAGREE | 69 10.8 63.3 19.4 | 40 6.2 36.7 14.0 | 57 8.5 47.5 16.5 | 63 9.4 52.5 19.6 |
| STRONGLY DISAGREE | 30 4.7 44.1 8.4 | 38 5.9 55.9 13.3 | 33 4.9 54.1 9.6 | 28 4.2 45.9 8.7 |
| TOTAL | 355 55.5 | 285 44.5 | 345 51.7 | 322 48.3 |

Table 11

Results of Cross-Tabulation of Survey Question 14: ISS is
Critical to the Career Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| NOT APPLICABLE | 101 15.8 99.0 28.4 | 1 0.2 1.0 0.3 | 104 15.6 96.3 30.1 | 4 0.6 3.7 1.3 |
| STRONGLY AGREE | 68 10.6 48.2 19.1 | 73 11.4 51.8 25.6 | 46 6.9 40.7 13.3 | 67 10.0 59.3 20.6 |
| MODERATELY AGREE | 74 11.6 43.8 20.8 | 95 14.8 56.2 33.3 | 80 12.0 42.1 23.2 | 110 16.5 57.9 34.0 |
| NEITHER AGREE/ DISAGREE | 79 12.3 64.2 22.2 | 44 6.9 35.8 15.4 | 89 13.3 57.1 25.8 | 67 10.0 42.9 20.9 |
| MODERATELY DISAGREE | 24 3.7 36.4 6.8 | 42 6.6 63.6 14.7 | 16 2.4 23.9 4.6 | 51 7.6 76.1 15.9 |
| STRONGLY DISAGREE | 9 1.4 23.1 2.5 | 30 4.7 76.9 10.5 | 10 1.5 29.4 2.9 | 24 3.6 70.6 7.5 |
| TOTAL | 355 55.5 | 285 44.5 | 345 51.7 | 323 48.3 |

Table 12

Results of Cross-Tabulation of Survey Question 27:
Operational Experience is Critical to the Career Development
of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 117 18.5 48.9 33.1 | 122 19.3 51.0 43.7 | 130 19.5 47.6 37.8 | 143 21.5 52.4 44.4 |
| MODERATELY AGREE | 107 16.9 54.9 30.3 | 88 13.9 45.1 31.5 | 112 16.8 52.8 32.6 | 100 15.1 47.2 30.9 |
| NEITHER AGREE/ DISAGREE | 50 7.9 61.0 14.2 | 32 5.1 39.0 11.5 | 43 6.5 55.8 12.5 | 34 5.1 44.2 10.6 |
| MODERATELY DISAGREE | 55 8.7 67.1 15.6 | 27 4.3 32.9 9.7 | 38 5.7 55.9 11.1 | 30 4.5 44.1 9.4 |
| STRONGLY DISAGREE | 24 3.8 70.6 6.8 | 10 1.6 29.4 3.6 | 20 3.0 57.1 5.8 | 15 2.3 42.9 4.7 |
| TOTAL | 353 55.8 | 279 44.2 | 344 51.7 | 322 48.3 |

Table 13

Results of Cross-Tabulation of Survey Question 28: The Total Operational Experience Required for Effective Career Development

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| OPERATIONAL EXPERIENCE UNNECESSARY | 68 10.7 70.1 19.2 | 29 4.6 29.9 10.3 | 51 7.7 57.3 14.9 | 38 5.7 42.7 11.9 |
| 3 YRS OR LESS | 202 31.8 61.0 56.9 | 129 20.3 39.0 45.9 | 203 30.5 56.4 59.2 | 157 23.6 43.6 48.4 |
| 3 TO 6 YRS | 76 12.0 40.6 21.4 | 111 17.5 59.4 39.5 | 84 12.6 42.9 24.5 | 112 16.8 57.1 35.0 |
| 7 TO 9 YRS | 3 0.5 23.1 0.9 | 10 1.6 76.9 3.6 | 5 0.8 29.4 1.5 | 12 1.8 70.6 3.8 |
| 10 TO 12 YRS | 4 0.6 66.7 1.1 | 2 0.3 33.3 0.7 | 0 0.0 0.0 0.0 | 2 0.3 100.0 0.6 |
| TOTAL | 355 55.8 | 281 44.2 | 343 51.6 | 321 48.4 |

Table 14

Results of Cross-Tabulation of Survey Question 19: System
 Program Office Experience is Critical to the Career
 Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 310 48.8 56.6 57.6 | 238 37.5 43.4 84.7 | 192 44.0 52.3 85.1 | 265 40.1 47.7 83.0 |
| MODERATELY AGREE | 31 4.9 56.4 8.8 | 24 3.8 43.6 8.5 | 33 5.0 47.1 9.7 | 37 5.6 52.9 11.7 |
| NEITHER AGREE/ DISAGREE | 5 0.8 45.5 1.4 | 6 0.9 54.5 2.1 | 4 0.6 66.7 1.2 | 2 0.3 33.3 0.6 |
| MODERATELY DISAGREE | 3 0.5 27.3 0.9 | 8 1.3 72.7 2.9 | 6 0.9 33.3 1.8 | 12 1.8 66.7 3.8 |
| STRONGLY DISAGREE | 5 0.8 50.0 1.4 | 5 0.8 50.0 1.8 | 7 1.1 70.0 2.1 | 3 0.5 30.0 1.0 |
| TOTAL | 354 55.8 | 281 44.2 | 342 51.7 | 319 48.3 |

Table 15

Results of Cross-Tabulation of Survey Question 21: SPO
Project Manager Experience is Critical to the Career
Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 236 37.2 56.3 66.9 | 183 28.8 43.7 64.9 | 249 37.4 56.2 72.5 | 193 29.1 43.8 59.7 |
| MODERATELY AGREE | 101 15.9 57.4 28.6 | 75 11.8 42.6 26.6 | 79 11.9 44.9 23.1 | 97 14.6 55.1 30.3 |
| NEITHER AGREE/ DISAGREE | 6 0.9 35.3 1.7 | 11 1.7 64.7 3.9 | 8 1.2 44.4 2.3 | 10 1.5 55.6 3.1 |
| MODERATELY DISAGREE | 5 0.8 35.7 1.4 | 9 1.4 64.3 3.2 | 3 0.5 13.6 0.9 | 19 2.9 86.4 5.9 |
| STRONGLY DISAGREE | 5 0.8 55.6 1.4 | 4 0.6 44.4 1.4 | 3 0.5 50.0 0.9 | 3 0.5 50.0 0.9 |
| TOTAL | 353 55.6 | 282 44.4 | 342 51.5 | 322 48.5 |

Table 16

Results of Cross-Tabulation of Survey Question 23: AFSC/AFLC
Other-Type Experience is Critical to the Career Development
of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 112 17.7 54.4 31.8 | 94 14.9 45.6 33.6 | 112 17.0 51.4 32.8 | 106 16.1 48.6 33.1 |
| MODERATELY AGREE | 137 21.7 53.5 38.9 | 119 18.8 46.5 42.5 | 145 22.0 55.6 42.5 | 116 17.6 44.4 36.3 |
| NEITHER AGREE/ DISAGREE | 46 7.3 62.2 13.1 | 28 4.4 37.8 10.0 | 46 7.0 52.3 13.5 | 42 6.4 47.7 13.3 |
| MODERATELY DISAGREE | 38 6.0 54.3 10.8 | 32 5.1 45.7 11.3 | 30 4.6 39.0 8.8 | 47 7.1 61.0 14.8 |
| STRONGLY DISAGREE | 19 3.0 73.1 5.4 | 7 1.1 26.9 2.5 | 7 1.1 46.7 2.1 | 8 1.2 53.3 2.5 |
| TOTAL | 352 55.7 | 280 44.3 | 341 51.7 | 319 48.3 |

Table 17

Results of Cross-Tabulation of Survey Question 25: Headquarters Experience is Critical to the Career Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| STRONGLY AGREE | 112 17.8 48.7 31.6 | 118 18.7 51.3 42.8 | 87 13.0 40.3 25.2 | 129 19.3 59.7 40.0 |
| MODERATELY AGREE | 141 22.4 61.3 39.8 | 89 14.1 38.7 32.3 | 155 23.2 58.5 44.9 | 110 16.5 41.5 34.1 |
| NEITHER AGREE/ DISAGREE | 47 7.6 69.6 13.6 | 21 3.3 30.4 7.6 | 44 6.6 55.0 12.8 | 36 5.4 45.0 11.3 |
| MODERATELY DISAGREE | 41 6.5 53.3 11.6 | 36 5.7 46.7 13.0 | 44 6.6 57.9 12.8 | 32 4.8 42.1 10.0 |
| STRONGLY DISAGREE | 12 1.9 50.0 3.4 | 12 1.9 50.0 4.4 | 14 2.1 48.3 4.1 | 15 2.3 51.7 4.7 |
| TOTAL | 354 56.2 | 276 43.8 | 344 51.7 | 322 48.3 |

Table 18

Results of Cross-Tabulation of Survey Question 29: Total Acquisition Experience Required for Effective Career Development of 27XX Officers

| FREQUENCY PERCENT ROW PCT COLUMN PCT | PREVIOUS SURVEY | | CURRENT SURVEY | |
|---|-----------------------------|----------------------------|-----------------------------|-----------------------------|
| | 2724 | 2716 | 2724 | 2716 |
| 3 YRS OR LESS | 5 0.8 100.0 1.5 | 0 0.0 0.0 0.0 | 1 0.2 50.0 0.3 | 1 0.2 50.0 0.3 |
| 3 TO 6 YRS | 26 4.2 55.3 7.6 | 21 3.4 44.7 7.6 | 21 3.3 48.8 6.3 | 22 3.4 51.2 7.2 |
| 7 TO 9 YRS | 74 12.0 52.1 21.7 | 68 11.0 47.9 24.7 | 62 9.7 43.4 18.6 | 81 12.6 56.6 26.5 |
| 10 TO 12 YRS | 103 16.7 55.4 30.2 | 83 13.5 44.6 30.2 | 109 17.0 51.7 32.6 | 102 15.9 48.3 33.0 |
| 13 TO 15 YRS | 99 16.1 61.1 29.0 | 63 10.2 38.9 22.9 | 98 15.3 59.4 29.3 | 67 10.4 40.6 21.9 |
| 16 YRS OR MORE | 34 5.5 46.0 10.0 | 40 6.5 54.0 14.6 | 43 6.7 55.1 12.9 | 35 5.5 44.9 11.1 |
| TOTAL | 341 55.4 | 275 44.6 | 334 52.0 | 308 48.0 |

Appendix C

SAS Computer Program

```

OPTIONS LINESIZE=78;
PROC FORMAT;
  VALUE FILTER      1='READ REG 36-5'
                   2='ATTENDED INFO BRIEF'
                   3='RECEIVED GENRAL INFO'
                   4='UNAWARE OF REG';
  VALUE FORMAL      0='NOT APPLICABLE'
                   1='STRONGLY AGREE'
                   2='MODERATELY AGREE'
                   3='NEITHER AGREE/DISAGREE'
                   4='MODERATELY DISAGREE'
                   5='STRONGLY DISAGREE';
  VALUE INSTITU     0='NOT APPLICABLE'
                   1='STRONGLY AGREE'
                   2='MODERATELY AGREE'
                   3='NEITHER AGREE/DISAGREE'
                   4='MODERATELY DISAGREE'
                   5='STRONGLY DISAGREE';
  VALUE CURRENT     1='FIRST LIEUTENANT'
                   2='CAPTAIN'
                   3='MAJOR'
                   4='LIEUTENANT COLONEL'
                   5='COLONEL';
  VALUE DUTY        1='2724'
                   2='2716';
  VALUE COMMAND     1='AFSC'
                   2='AFLC'
                   3='TAC'
                   4='MAC'
                   5='SAC'
                   6='AFCMD'
                   7='ATC'
                   8='AFCC'
                   9='AU'
                   10='OTHER';
  VALUE DIVISIO     0='NOT APPLICABLE'
                   1='SD'
                   2='ASD'
                   3='ESD'
                   4='AD'
                   5='BMO';
  VALUE ACADEMI     1='TECHNICAL'
                   2='NONTECHNICAL'
                   3='BOTH TECHNICAL/NONTECHNICAL';
  VALUE DEGREE      1='BACHELORS'
                   2='BACHELORS PLUS'

```

3='MASTERS'
 4='MASTERS PLUS'
 5='DOCTORATE';
 VALUE MILITAR 1='NO PME COMPLETED'
 2='SQUADRON OFFICER SCHOOL'
 3='INTERMEDIATE SERV SCHOOL'
 4='SENIOR SERV SCHOOL';
 VALUE EXPERIE 1='NONE'
 2='3 YRS OR LESS'
 3='3 TO 6 YRS'
 4='7 TO 9 YRS'
 5='10 TO 12 YRS'
 6='13 TO 15 YRS'
 7='16 YRS OR MORE';
 VALUE OEXPERI 1='NONE'
 2='3 YRS OR LESS'
 3='3 TO 6 YRS'
 4='7 TO 9 YRS'
 5='10 TO 12 YRS'
 6='13 TO 15 YRS'
 7='16 YRS OR MORE';
 VALUE UNDERA 1='TECHNICAL'
 2='NONTECHNICAL';
 VALUE UNDERB 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE UNDERC 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE UNDERD 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE UNDERE 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE UNDERF 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'

VALUE ACQUIA 5='STRONGLY DISAGREE';
 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE ACQUIB 1='SPO EXPERIENCE UNNECESSARY'
 2='3 YRS OR LESS'
 3='3 TO 6 YRS'
 4='7 TO 9 YRS'
 5='10 TO 12 YRS'
 6='13 TO 15 YRS'
 7='16 YRS OR MORE';

VALUE ACQUIC 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE ACQUID 1='SPO PROJ MGT EXPER UNNECESSARY'
 2='3 YRS OR LESS'
 3='3 TO 6 YRS'
 4='7 TO 9 YRS'
 5='10 TO 12 YRS'
 6='13 TO 15 YRS'
 7='16 YRS OR MORE';

VALUE ACQUIE 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE ACQUIF 1='AFSC/AFLC EXPER UNNECESSARY'
 2='3 YRS OR LESS'
 3='3 TO 6 YRS'
 4='7 TO 9 YRS'
 5='10 TO 12 YRS'
 6='13 TO 15 YRS'
 7='16 YRS OR MORE';

VALUE ACQUIG 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE ACQUIH 1='HEADQTRS EXPER UNNECESSARY'
 2='3 YRS OR LESS'
 3='3 TO 6 YRS'
 4='7 TO 9 YRS'
 5='10 TO 12 YRS'
 6='13 TO 15 YRS'

VALUE ACQUII 7='16 YRS OR MORE';
 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE ACQUIJ 1='OPERA EXPER UNNECESSARY'
 2='3 YRS OR LESS'
 3='3 TO 6 YRS'
 4='7 TO 9 YRS'
 5='10 TO 12 YRS'
 6='13 TO 15 YRS'
 7='16 YRS OR MORE';

VALUE ACQUIK 1='3 YRS OR LESS'
 2='3 TO 6 YRS'
 3='7 TO 9 YRS'
 4='10 TO 12 YRS'
 5='13 TO 15 YRS'
 6='16 OR MORE';

VALUE EDUCAA 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE EDUCAB 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE EDUCAC 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE EDUCAD 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE EDUCAE 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';

VALUE EDUCAF 0='NOT APPLICABLE'
 1='STRONGLY AGREE'

2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE EDUCAG 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE TRAINA 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE TRAINB 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE TRAINC 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE TRAIND 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE TRaine 0='NOT APPLICABLE'
 1='STRONGLY AGREE'
 2='MODERATELY AGREE'
 3='NEITHER AGREE/DISAGREE'
 4='MODERATELY DISAGREE'
 5='STRONGLY DISAGREE';
 VALUE CERTIF 1='LEVEL I'
 2='LEVEL II'
 3='LEVEL III'
 4='LEVEL IV';

DATA INIT;
 INFILE TEST;
 INPUT RESPONSE 1 FORMB 2 CAREER 3 RANK 4 AFSC 5
 MAJOR 6-7 PRODU 8 BACKG 9 HIGH 10 PME 11
 YEARS 12 OYRS 13 BEST 14 GRAD 15 TECHN 16
 NONTECH 17 HGRAD 18 NTGRAD 19 SPO 20
 SPOEXP 21 SPOPM 22 PMEXP 23 AFSCLC 24
 AFSCEXP 25 HEADQ 26 HEADEXP 27 OPERA 28

OPEREXP 29 TOTAL 30 CRITC 31 SOS 32
USOS 33 ISS 34 UISS 35 SSS 36 USSS 37
TSPEC 38 SAS 39 SYSTWO 40 SYSFOUR 41
DSMC 42 LEVEL 43;

LABEL RESPONSE='EXPERIENCE WITH REGULATION 36-5'
FORMB='FORMAL AM PROGRAM IS NECESSARY'
CAREER='AM PROGRAM IMPROVES CAREER DEVELOPMENT'
RANK='CURRENT RANK'
AFSC='CURRENT DUTY AFSC'
MAJOR='MAJOR COMMAND ASSIGNED TO'
PRODU='AFSC PRODUCT DIVISION ASSIGNED TO'
BACKG='PRIMARY ACADEMIC BACKGROUND'
HIGH='HIGHEST ACADEMIC DEGREE OBTAINED'
PME='HIGHEST LEVEL OF PME COMPLETED'
YEARS='YEARS OF ACQUISITION EXPERIENCE'
OYRS='YEARS OF OPERATIONAL EXPERIENCE'
BEST='UNDERGRAD DEGREE - CAREER DEVELOPMENT'
GRAD='GRAD DEGREE/HIGHER - CAREER DEVELOPMENT'
TECHN='TECH GRAD - TECH UNDERGRAD DEGREE'
NONTECH='NONTECH GRAD - TECH UNDERGRAD DEGREE'
HGRAD='GRAD DEGREE/HIGHER - CAREER DEVELOPMENT'
NTGRAD='NONTECH GRAD - NONTECHN UNDERGRAD DEGREE'
SPO='SPO EXPERIENCE - CAREER DEVELOPMENT'
SPOEXP='TOTAL SPO EXPERIENCE REQUIRED'
SPOPM='SPO PROJ MGR EXPERIENCE IS CRITICAL'
PMEXP='TOTAL SPO PROJ MGR EXPERIENCE REQUIRED'
AFSCCLC='AFSC/AFLC TYPE EXPERIENCE IS CRITICAL'
AFSCEXP='TOTAL AFSC/AFLC EXPERIENCE REQUIRED'
HEADQ='HEADQUARTERS EXPERIENCE IS CRITICAL'
HEADEXP='TOTAL HEADQUARTERS EXPERIENCE REQUIRED'
OPERA='OPERATIONAL EXPERIENCE IS CRITICAL'
OPEREXP='TOTAL OPERATIONAL EXPERIENCE REQUIRED'
TOTAL='TOTAL ACQUISITION EXPERIENCE REQUIRED'
CRITC='PME IS CRITICAL TO CAREER DEVELOPMENT'
SOS='SOS IS CRITICAL TO CAREER DEVELOPMENT'
USOS='SOS IS USEFUL TO 27XX OFFICERS'
ISS='ISS IS CRITICAL TO CAREER DEVELOPMENT'
UISS='ISS IS USEFUL TO 27XX OFFICERS'
SSS='SSS IS CRITICAL TO CAREER DEVELOPMENT'
USSS='SSS IS USEFUL TO 27XX OFFICERS'
TSPEC='SPECIALTY TRAINING - CAREER DEVELOPMENT'
SAS='SAS/SYSTEM 100 - CAREER DEVELOPMENT'
SYSTWO='SYSTEMS 200 - CAREER DEVELOPMENT'
SYSFOUR='SYSTEMS 400 - CAREER DEVELOPMENT'
DSMC='DSMC IS CRITICAL TO CAREER DEVELOPMENT'
LEVEL='CURRENT CERTIFICATION LEVEL';

FORMAT RESPONSE FILTER. FORMB FORMAL. CAREER INSTITU.
RANK CURRENT. AFSC DUTY. MAJOR COMMAND.
PRODU DIVISIO. BACKG ACADEMI. HIGH DEGREE.
PME MILITAR. YEARS EXPERIE. OYRS OEXPERI.
BEST UNDERA. GRAD UNDERB. TECHN UNDERC.

NONTECH UNDERD. HGRAD UNDERE. NTGRAD UNDERF.
SPO ACQUIA. SPOEXP ACQUIB. SPOPM ACQUIC.
PMEXP ACQUID. AFSCLC ACQUIE. AFSCEXP ACQUIF.
HEADQ ACQUIG. HEADEXP ACQUIH. OPERA ACQUII.
OPEREXP ACQUIJ. TOTAL ACQUIK. CRITC EDUCAA.
SOS EDUCAB. USOS EDUCAC. ISS EDUCAD. UISS EDUCAE.
SSS EDUCAF. USSS EDUCAG. TSPEC TRAINA. SAS TRAINB.
SYSTWO TRAINC. SYSFOUR TRAIND. DSMC TRaine.
LEVEL CERTIF.;

PROC FREQ;

TABLES RESPONSE*LEVEL;
TABLES (TSPEC SAS SYSTWO SYSFOUR DSMC)*AFSC;
TABLES (BEST GRAD TECHN NONTECH HGRAD NTGRAD)*AFSC;
TABLES (CRITC SOS USOS ISS UISS SSS USSS)*AFSC;
TABLES (SPO SPOEXP SPOPM PMEXP AFSCLC AFSCEXP)*AFSC;
TABLES (HEADQ HEADEXP OPERA OPEREXP TOTAL)*AFSC;

Bibliography

1. "A Guide for the Development of the Attitude and Opinion Survey." Course materials distributed in COMM 630 Research Methods. HQ USAF/ACM, Pentagon. Washington DC, October 1974.
2. Bramlette, Larry J., Col, USA. "Preparing and Directing Program Managers," Program Manager, 16:2-8 (March/April 1987).
3. Department of the Air Force. Acquisition Management Career Development Program. AFSCR 36-5. Andrews AFB MD: HQ AFSC, June 1986.
4. Department of the Air Force. Officer Classification System. AFR 36-1. Washington: HQ USAF, 15 March 1985.
5. Devore, Jay L. Probability and Statistics for Engineering and the Sciences (Second Edition). Monterey CA: Brooks/Cole Publishing Co., 1987.
6. Fox, Ronald J. "Revamping the Business of National Defense," Harvard Business Review, 62:63-70 (September-October 1984).
7. Lohmeyer, Dan, Maj, USAF. "Acquisition Manager Career Development Initiatives," Program Manager, 25:21-23 (July/August 1986).
8. O'Connor, Paul B., Col. "Interim Report and Recommendations Command Focus an Resources (Part 1)" Staff Summary Sheet: Command Focus (FR-1) Working Group Recommendations. Andrews AFB MD: HQ AFSC, 25 June 1985.
9. President's Blue Ribbon Commission on Defense Management. A Quest for Excellence. Washington: Government Printing Office, June 1986.
10. Ray, Randall L., Maj., USAF. "Middle Management Experience in Systems Acquisition: Can it be Improved?" Research report report prepared at the Air Command and Staff College, Air University, Maxwell Air Force Base AL, 1986.

11. The Center for Strategic and International Studies. Toward a More Effective Defense: The Final Report of CSIS Defense Organization Project. Washington Georgetown University, 1985 cited in United States General Accounting Office. DOD Acquisition: Strengthening of key Personnel in Systems Acquisition. GAO/NSIAD-86-45. Washington: General Accounting Office, May 1986.
12. United States General Accounting Office. DOD Acquisition: Strengthening of Key Personnel in Systems Acquisition. GAO/NSIAD-86-45. Washington: General Accounting Office, May 1986.
13. U.S. Congress, United States Senate Hearings, Senate Armed Services Committee, 16 Nov 1983, cited in U.S. General Accounting Office. DOD Acquisition: Strengthening of Key Personnel in Systems Acquisition. GAO/NSIAD-86-45. Washington: General Accounting Office, May 1986.

VITA

Captain Reed J. McConnell [REDACTED]

[REDACTED] [REDACTED]
[REDACTED] he attended the United States Air Force Academy and graduated with a Bachelor of Science in Management in June 1983. His first duty assignment was to the Aeronautical Systems Division of Air Force Systems Command at Wright-Patterson Air Force Base, Ohio. There he was budget and cost analyst for a number programs in the Aeronautical Equipment Systems Program Office. These include Surface Contamination Protection System (SCPS), Standard Inertial Navigation Systems (STD INS), and Modular Automatic Test Equipment (MATE). In May 1987 he entered the AFIT School of Systems and Logistics.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

| | | | |
|---|--|--|--------------------------------|
| 1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED | | 1b. RESTRICTIVE MARKINGS | |
| 2a. SECURITY CLASSIFICATION AUTHORITY | | 3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited. | |
| 2b. DECLASSIFICATION/DOWNGRADING SCHEDULE | | | |
| 4. PERFORMING ORGANIZATION REPORT NUMBER(S) AFIT/GSM/LSY/88S-18 | | 5. MONITORING ORGANIZATION REPORT NUMBER(S) | |
| 6a. NAME OF PERFORMING ORGANIZATION School of Systems and Logistics | 6b. OFFICE SYMBOL (if applicable) AFIT/LSY | 7a. NAME OF MONITORING ORGANIZATION | |
| 6c. ADDRESS (City, State, and ZIP Code) Air Force Institute of Technology (AU) Wright-Patterson AFB OH 45433-6583 | | 7b. ADDRESS (City, State, and ZIP Code) | |
| 8a. NAME OF FUNDING/SPONSORING ORGANIZATION | 8b. OFFICE SYMBOL (if applicable) | 9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER | |
| 8c. ADDRESS (City, State, and ZIP Code) | | 10. SOURCE OF FUNDING NUMBERS | |
| | | PROGRAM ELEMENT NO. | PROJECT NO. |
| | | TASK NO. | WORK UNIT ACCESSION NO. |
| 11. TITLE (Include Security Classification) See Box 19. | | | |
| 12. PERSONAL AUTHOR(S) Reed J. McConnell, B.S., Captain, USAF | | | |
| 13a. TYPE OF REPORT MS Thesis | 13b. TIME COVERED FROM _____ TO _____ | 14. DATE OF REPORT (Year, Month, Day) 1988 September | 15. PAGE COUNT 97 |
| 16. SUPPLEMENTARY NOTATION | | | |
| 17. COSATI CODES | | 18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) | |
| FIELD | GROUP | *Careers, Officer Personnel, Management, Air Force Systems Command, Air Force Personnel, Acquisition, JES | |
| 05 | 09 | THESES. 7 | |
| 15 | 01 | | |
| 19. ABSTRACT (Continue on reverse if necessary and identify by block number) | | | |
| Title: IMPACT OF AIR FORCE SYSTEMS COMMAND REGULATION 36-5 ON THE 27XX CAREER FIELD. | | | |
| Thesis Advisor: Charles M. Farr, Major, USAF Director, Graduate Contract Management Program | | | |
| Approved for public release IAW AFR 190-1. | | | |
| WILLIAM A. MAUER <i>Maue</i> 17 Oct 88 Associate Dean School of Systems and Logistics Air Force Institute of Technology (AU) Wright-Patterson AFB OH 45433 | | | |
| 20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input checked="" type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS | | 21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED | |
| 22a. NAME OF RESPONSIBLE INDIVIDUAL Charles M. Farr, Major, USAF | | 22b. TELEPHONE (Include Area Code) 513-255-4845 | 22c. OFFICE SYMBOL AFIT/LSY |

UNCLASSIFIED

The purpose of this research was to determine if the attitudes of acquisition managers have changed over the past year, with respect to the Acquisition Manager Career Development Program, set forth by Air Force Systems Command Regulation (AFSCR) 36-5. A survey approach was used to compare the attitudes of junior (Air Force Specialty Code 2724) and senior (Air Force Specialty Code 2716) officers in relation to the criteria specified in the regulation. The results were then compared to the results of a previous survey to measure changes over time. Both surveys found generally a positive relationship between the attitudes of acquisition management personnel and career development in all areas investigated. These areas include: 1) specialty training, 2) academic background, 3) professional military education, 4) operational experience, and 5) different types of acquisition management experience. Not only were the responses from the previous survey to the current survey similar, the attitudes of junior and senior personnel were also comparable. The only exception to the above was a dramatic drop in the importance placed on Systems 400 and DSMC from the previous research to the current effort.

→ Flyover →

UNCLASSIFIED