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## Streamlining the Acquisition Process: Systems Analysis for Improving Army Acquisition Corps Officer Management

Shawn Chu-Quinn  
*University of Central Florida*

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STREAMLINING THE ACQUISITION PROCESS:  
SYSTEMS ANALYSIS FOR IMPROVING ARMY ACQUISITION CORPS OFFICER  
MANAGEMENT

by

SHAWN CHU-QUINN  
B.S. Creighton University, 2001  
M.P.A. Troy University, 2011

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master in Science  
in the College of Engineering and Computer Science  
at the University of Central Florida  
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2015

Major Professor: J. Peter Kincaid

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## **ABSTRACT**

The Army Acquisition Officer lacks proficient experience needed to fill key leadership positions within the Acquisition Corps. The active duty Army officer is considered for the Acquisition Corps functional area between their 5<sup>th</sup> and 9<sup>th</sup> years of service as an officer – after completing initial career milestones. The new Acquisition Corps officer is the rank of senior Captain or Major when he arrives to his first acquisition assignment with a proficiency level of novice (in acquisition). The Army officer may be advanced in his primary career branch, but his level decreases when he is assigned into the Acquisition Corps functional area. The civilian grade equivalent to the officer is a GS-12 or GS-13 whose proficiency level is advanced in his career field. The purpose of this study is to use a systems analysis approach to decompose the current acquisition officer professional development system, in order to study how well the current active duty officer flow works and how well it interacts or influences an acquisition officer's professional development; and to propose a potential solution to assist in the management of Army acquisition officers, so they gain proficiency through not only education and training, but also the hands-on experience that is needed to fill key leadership positions in the Army Acquisition Corps. An increased proficiency and proven successful track record in the acquisition workforce is the basis to positively affect acquisition streamlining processes within the Department of Defense by making good decisions through quality experience.

For my mom, Beverly Ann Kamomiala Chu. You are gone, but not forgotten. You have stressed the importance of an education and was a living example of what you believed in. I am forever grateful.

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Last, but not least, thank you to my family. To my husband, Patrick Quinn for his love, support and patience throughout my military career and graduate studies. Without his continued encouragement, I may have not been able to finish writing my thesis within two semesters. A big hug and thank you to my children, Lilia and Zander for their love and unique ability to motivate me to finish my graduate studies. To be a positive role model in their lives is a challenge that I look forward to facing every day. To my dad, Ronald “Singie” Chu, for his incredible sense of humor that kept me laughing, especially during the rough times. He always knows how to put a smile on a person’s face without trying.

This research project does not necessarily reflect the perspective(s) of the Department of Defense and the U.S. Army.

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## LIST OF ACRONYMS/ABBREVIATIONS

AABC	Army Acquisition Basic Course
AC	Acquisition Corps
ACC	Army Contracting Command
ACF	Acquisition Career Field
ACS	Advanced Civil School
AICC	Acquisition Intermediate Contingency Contracting
AICL	Acquisition Intermediate
AIPM	Acquisition Intermediate Program Management
ARFORGEN	Army Forces Generation
ASA(ALT)	Assistant Secretary of the Army (Acquisition, Logistics, and Technology)
BCT	Brigade Combat Team
Bde	Brigade
Bn	Battalion
BQC	Basic Qualification Course
CAD	Computer-aided Design
CAPPMIS	Career Acquisition Personnel and Position Management
CCC	Captain's Career Course
CCT	Contingency Contracting Team
Cdr	Commander
CEO	Chief Executive Officer
CFD	Career Field Designation
CRS	Congressional Research Service
CPT	Captain
COL	Colonel
CSL	Command Select List
DA	Department of the Army
DAE	Defense Acquisition Executive
DAU	Defense Acquisition University
DAWIA	Defense Acquisition Workforce Improvement Act
DES	Discrete Event Simulation
DoD	Department of Defense
DFARS	DoD FAR Supplement
ECC	Expeditionary Contracting Command
FA	Functional Area
FAR	Federal Acquisition Regulation

GO	General Officer
ILE	Intermediate Level Education
IQC	Intermediate Qualification Course
JRMB	Joint Requirements and Management Board
KD	Key Developmental
KO	Contracting Officer
LT	Lieutenant
LTC	Lieutenant Colonel
MAJ	Major
MAPL	Military Acquisition Position List(ing)
MOS	Military Occupational Specialty
MTOE	Modified Table of Organization and Equipment
PARC	Principal Assistant for Contracting
PCC	Pre-Command Course
PEO	Program Executive Officer
PM	Program Manager
PMILDEP	Principal Military Deputy
SAE	Service Acquisition Executive
SCCT	Senior Contingency Contracting Team
SSC	Senior Service College
TDA	Table of Distribution and Allowances
TIG	Time in Grade
TOPMIS	Total Officer Personnel Management Information System
TWI	Training With Industry
USACE	United States Army Corps of Engineers
VTIP	Volunteer Transfer Incentive Program

## **CHAPTER 1: INTRODUCTION**

According to the U.S. House of Armed Services Committee Hearing No 113-66 (2013), the Department of Defense (DOD) has undergone various amounts of Acquisition reform over the course of 25 years, in order to streamline its processes. These reformations focused on policies and procedures, improving the workforce, and the acquisition system performance as a whole. For example, increased educational requirements for military and civilian acquisition personnel in the 1990s; capabilities-based approach vice threat-based in 2003; appointments of personnel in 2009 to report to or advise the Secretary of Defense or to report to Congress; and a multitude of policy and procedure changes.

According to Kerber et al. (2009), it typically takes 10-15 years to acquire a major system while the commercial sector takes one-third to one-half of that time. And, the acquisition of information technology for defense systems takes three to four times as long, which also exceeds the commercial sector's development time (p. 1). The Defense Science Board identified four critical elements for creating a strategic acquisition platform to address the DOD acquisition process: (1) buy the right things, (2) select an effective leadership team, (3) reform and streamline the acquisition process, and (4) improve acquisition execution. Two of these four elements focused on the need for experienced personnel in the workforce and in leadership positions (pp. 5-7). The board made a point that "acquisition improvements are not enabled by policy and process reforms alone" (p. 7). It is viable to have experienced acquisition personnel and leaders with a proven acquisition success for management and leadership positions, so as to make decisions based on "judgment through experience" (p. 14).

According to Thompson (2011), one of the top five reasons for the cancellation of weapons programs is managerial incompetence. That is not to say that military program managers and supervisors are (just) mentally incompetent to manage programs or products. The argument in the article for managerial incompetence is the level of understanding and experience in technology and business processes that military officers lack when they transition into program or product management positions based on the current officer professional development process. This article echoed the findings of the Defense Science Board report conducted in April 2009 – lack of experienced leaders with proven acquisition success.

According the U.S. House of Armed Services Committee Hearing No 113-66 (2013), some analysts argued that the fundamental problems within acquisition lie not in policy, but the execution and expectations - a good workforce is the key to acquisition success (p. 9). In November 2012, the Under Secretary of Defense, Frank Kendall (2012), published *Better Buying Power 2.0: Continuing the Pursuit for Greater Efficiency and Productivity in Defense Spending through a memorandum for the Defense Acquisition Workforce*. One of the initiatives he had emphasized was the importance to improve the professionalism of the total acquisition workforce through higher standards for key leadership positions and recognition of excellence in acquisition management. Kendall also noted that leaders must have the qualification to fill their position, not just certifications. These qualifications include relevant experience, education, and training; and the current qualification standards do not have enough hands-on experience that is truly needed to become proficient enough to handle the responsibilities of a key leader (Kendall, 2012, p. 6).

This paper uses a systems analysis approach to decompose the acquisition officer professional development system, in order to study how well the current active duty officer flow works and

interacts or influences an acquisition officer's professional development; and to propose a potential solution to assist in the management of Army acquisition officers, so they gain proficiency through not only education and training, but also the hands-on experience that is needed to fill key leadership positions in the Army Acquisition Corps. This is in the scope with Secretary Kendall's initiative to improve the acquisition workforce. If the workforce have experienced personnel and leaders, then their good acquisition decisions may positively affect streamlining processes.

The primary research question is: Is the current U.S. Army active duty officer professional development model adequate to develop an acquisition officer whose primary career field designation is program management? In order to answer this question, the thesis will review the improvements that have been made to improve military acquisitions - organization, policy, modeling and simulation, education, training; the current professional development career path that an active duty Army acquisition officer undergoes; competency-based career planning and development; and presents an alternate professional development career path for acquisition officers that will improve their acquisition proficiency level to expert by the time they are in a key developmental acquisition assignment. This research can be used as supportive literature to develop a functional discrete event simulation model with confirmed stakeholder input and output performance variables to further analyze Army acquisition officer personnel management, in order to improve the professional development of acquisition officers so that they are on a path that leads them to the highest proficiency in their career field and at least equivalent to their civilian counterpart after their first acquisition assignment; and as a building block for continued refinement of the overall acquisition personnel management process.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 Army Acquisition Streamlining

Acquisition has become an “umbrella” for the cradle-to-grave defense life cycle system that encompasses procurement, logistics, science and technology, research, development, engineering, contracting, sustainment, and maintenance (Stark, 2014). Acquisitions within the U.S. Army have undergone incremental changes to streamline its activities, chains of command, and education and experience requirements. According to Fox (2011), in the 1960s, Senator McNamara promoted centralized decision-making to the Office of the Secretary of Defense (OSD) which allowed for a new planning, programming, and budgeting system where its systems analysis would be used to make informed decisions by the secretary of defense and other decision makers in the Pentagon (p. 38). Senator McNamara also testified, in 1964, before the House Appropriations Committee that “ a point of central control and information in the form of a program manager for each weapon system...This is a key position in our military departments, demanding the best managerial talents on which I want to place full reliance for our future weapons inventories.” (p. 39). Senator McNamara’s recommendations to changes within military acquisitions clearly identified the need for reform.

This chapter will provide a background of acquisition reformation that have taken place within DoD and the Army. It lays the foundation of “why” the military, particularly the Army, needs to focus their efforts on the professional development of an active duty Army acquisition officer to offer more hands-on experience, as another step to streamline the acquisition process.



### 2.1.1 Organization and Policy

In 1986, the President's Blue Ribbon Commission on Defense Management presented their final report to the President of the United States of their year-long study which includes findings and recommendations for national security planning and budgeting, acquisition organization, military organization and command, and government-industry accountability (p. xvii). The commission's findings and recommendations for the acquisition organization were based on their observations and research of acquisition management procedures within the Department of Defense (DoD) compared to successful programs in private industry, which took half the time to develop and cost less. Although both defense and civil programs had their own bureaucratic challenges to overcome, they noted six management features that were reflected in successful commercial programs:

1. Clear command channels – no unambiguous chain of command. The program manager (PM) reports directly to the chief executive officer (CEO).
2. Stability – the PM enters into an agreement with the CEO on cost, performance, and schedule; and the CEO does not authorize full development until he receives support from the board of directors and funding is approved.
3. Limited reporting requirements – PM to CEO.
4. Small, high-quality staffs – highly-qualified personnel hand-selected by the PM who focuses on managing the program rather than defending it.
5. Communications with users – PM establishes and maintains communication with the users to include mutual understanding of initial trade-offs, so that the PM is motivated to address problems and challenges instead of hide them.

6. Prototyping and testing - Unproven technology is tested under simulated conditions before final design approval and production (pp. 50-51).

Recognizing these successful management features within programs in private industry, the President's Blue Ribbon Commission (1986) recommended the following nine (9) actions to be implemented within defense acquisitions:

1. Streamline acquisition organization and procedures – appoint an Under Secretary of Defense (Acquisition) who serves as Defense Acquisition Executive (DAE) responsible for the management of the defense acquisition system; each military service establishes a Service Acquisition Executive (SAE) responsible for executing policy and procedures from the DAE and reportable to the DAE for all programs within his service; each SAE appoints Program Executive Officers (PEO) that are responsible for a defined number of acquisition programs; streamline acquisition procedures into a single, simplified procurement statute; and DoD should reduce the number of acquisition personnel in order to eliminate duplicative efforts, lengthy chains of command, and establish an environment for PMs and staff to concentrate on operating as centers of excellence.
2. Use technology to reduce cost – prototyping and testing should be done earlier in research and development to determine whether new technology can improve a military capability and provide realistic cost estimates prior to full-scale production.
3. Balance cost and performance – restructure the Joint Requirements and Management Board (JRMB) to be responsible for recommending trade-off decisions for non-developmental items.
4. Stabilize programs – determine and institutionalize a baseline for weapon systems at the initiation of full-scale engineering development and expand the use of multi-year procurement for high-priority systems.

5. Expand the use of commercial products – apply commercial products as seen fit and reduce the amount military specifications as required.
6. Increase the use of competition – eliminate legal and regulatory provisions.
7. Clarify the need for technical data rights – adopt technical data rights policy to define the need for technical data rights based on private funds, government funds, or a mix of both; and implement this guidance in the federal acquisition regulation (FAR) and supplemented in the DoD FAR supplement (DFARS).
8. Enhance the quality of acquisition personnel – expand on and improve the education and experience criteria for civilian acquisition personnel in order to attract and retain high caliber professionals.
9. Improve the capability for industrial mobilization – plan for surge and industrial mobilization in case of a change in threat (pp. 52-71).

Some of the findings and recommendations of the final report from the President’s Blue Ribbon Commission were reflected in Public Law (PL) 99-433, otherwise known as the Goldwater-Nichols Department of Defense Reorganization Act of 1986. In particular, reorganization within the DoD included streamlining the acquisition chains of command and limited outside influences in acquisition activities (see Figures 2.1 and 2.2). The results were a three-level acquisitions chain of command; and limited direct influence in the acquisition process from the chief and deputy chiefs of staff of the Army, Army Materiel Command, and its subordinate materiel commands. The chief and deputy chiefs of staff role changed to support and coordination with no direct reporting requirements. Prior to the Goldwater-Nichols Act, the acquisition chain of command was ambiguous with conflicting lines of authority (Nemfakos, Blickstein, McCarthy & Sollinger, 2010).

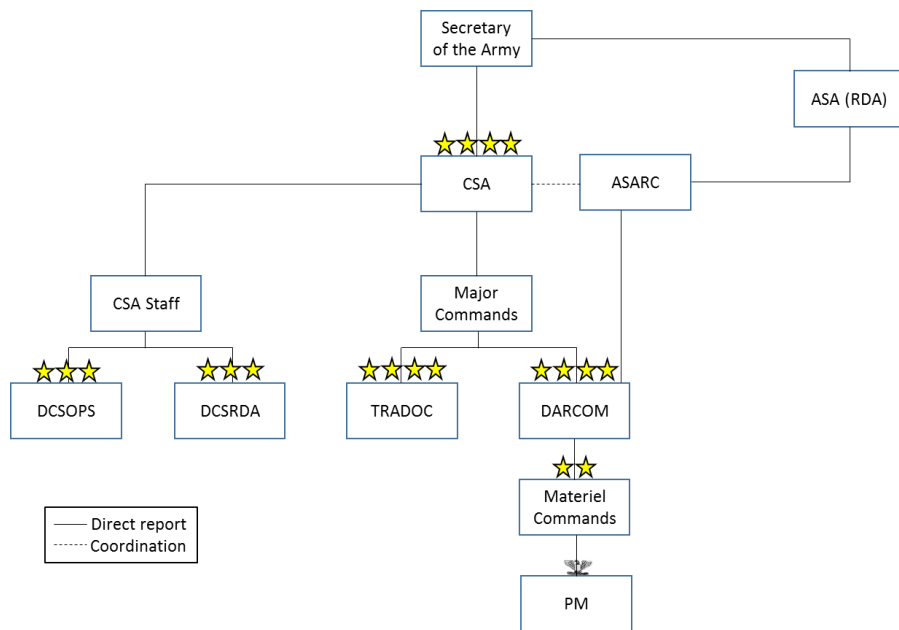


Figure 2-1: Army Acquisition Chain of Command Prior to Goldwater-Nichols

Note. Adapted from *The Perfect Storm: The Goldwater-Nichols Act and Its Effect on Navy Acquisition*, by Nemfakos, C., Blickstein, I., McCarthy, A.S., & Sollinger, J.M. (2010), Santa Monica, California: RAND Corporation.

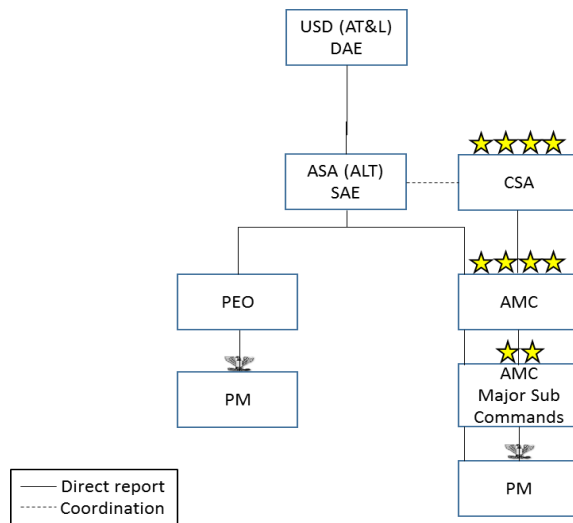


Figure 2-2: Army Acquisition Chain of Command 2014

Note. Adapted from *The Defense Acquisitions: Observations on Whether the Military Service Chiefs' Role in Managing and Overseeing Major Weapon Programs Should be Expanded*, by United States Government Accountability Office. (2014), Washington: GAO.

The reorganization of the acquisition management structure was questionable with regards to the change in the service chief's role in management and oversight of major weapon programs. The Senate Armed Service Committee mandated a GAO review in fiscal year 2014 to review the acquisition chain of command in DoD. To accomplish the review, GAO conducted a four-month study which included the analysis of six previous studies of acquisition reform dated 2005 through 2012 and interviewing those authors; DoD and military acquisition policies, procedures, and guideline; and interviewed acquisition officials in each service level within the military to gather information on how the policies were being executed and receive their views on the current acquisition chain of command. The GAO (2014) review revealed that service chiefs have the opportunity to be involved in the acquisition process with primary responsibility during requirements development and resourcing processes (p. 6); however, GAO did not have enough evidentiary support to determine whether the service chiefs were actively involved and influential in major programs (p. 17). In addition, not all six studies recommended an expanded role of service chiefs in acquisition management; however for those that made a recommendation to increase the service chiefs' involvement, the recommendations varied (p. 7). For example, one study recommended more service chief involvement in the Navy by making him a co-chair with the SAE during major program review, while another study recommended inserting the service chief over PEOs and PMs (p. 10). All six studies did agree that changes to the acquisition organization will not be adequate to address all of the challenges in major programs; and that additional improvements need to be made in the program level, which include: well-trained and experienced acquisition workforce, sufficient tenure in program assignments to allow for sufficient oversight; and incentives to attract and retain acquisition individuals (p. 12). Despite the limited evidence in their review, GAO did agree that the current acquisition process

is not efficient or function as planned, and more discipline and accountability is needed. GAO recognized that even though changes to the organization can be important, it should not be the priority to improve the acquisition process. More focus should be on building a robust acquisition workforce and fostering an environment where incentives are aligned with good acquisition practices (pp. 17-18). GAO did not make any recommendations following their review.

Although the GAO review to the U.S. Senate Armed Forces Committee did not produce any recommendations, it did recognize the need for building a stronger acquisition workforce. To build a stronger acquisition workforce we need the right education, training, and experience.

#### 2.1.2 Use of Technology for Simulation

Simulations-based design processes were used in the 1990s in major defense acquisition programs (MDAP) that demonstrated “how” to effectively streamline the design phase in the Acquisition Life Cycle Process. The use of simulations saved time, money, and manpower.

DoD supported the use of simulations-based acquisition throughout the lifecycle of the weapons system due to the evidence of solid results from both the military and civilian sectors that improved cost, schedule, productivity, and performance (Sanders, 1997, p. 75). The next generation Naval Amphibious Transport Dock Ship, known as LPD17, a major defense program, used (constructive) simulation in design modeling and discrete event simulation to analyze mission criteria and requirements provided by the U.S. Navy (Hugan, 2000, p. 1407).

In 1995, The Secretary of Defense mandated the use of an integrated product and process development (IPPD) concept and integrated product teams (IPT) to be applied throughout the life cycle of acquisition process. This mandate forced military services to integrate multifunctional

teams into the acquisition process and use a systems engineering approach and common business practices to understand and identify technical challenges and provide solutions earlier in the life cycle rather than later. IPTs used virtual prototypes and computer simulation to the maximum extent, in order to analyze their design models and make changes as necessary (Sanders, 1997, pp. 74-75). Simulation analysts worked with ship designers to design a 3-dimensional ship, with the most current physical design, using computer-aided design (CAD) software for the LPD17 program. Kinematic and discrete event simulations (DES) were used to validate the physical design. For example, kinematic simulation validated the plausibility of access to cargo in a proposed arrangement on the ship or the physical design parameters to meet required dimensions for specific forklifts or the movement of cargo on and off the ship. Discrete event simulation was used to analyze mission complete times of five different missions consisting of various arrangements of cargo moves on/off the ship to evaluate potential challenges or conflicts that may occur on different decks and areas of the ship. The results of the kinematic simulation and DES analysis allowed for on-the-spot design modifications to the physical design of the ship and/or cargo arrangements to take place with the guidance of senior naval officers (Hugan, 2000, pp. 1407-1409).

According to Sanders (1997), the use of design modeling and analysis simulation earlier in the LPD17 program saved the U.S. Navy approximately \$6 million in design costs and improved the ship's performance by eliminating 100 tons in topside weight (p. 75). Not only was this program able to lower costs and improve performance, but the cooperation and communication between simulation analysts, ship designers and engineers, and naval leadership motivated all stakeholders towards a common goal and reduced the time that it would normally take to draw blueprints by hand.

LPD17 program is just one of the first examples of successful use of modeling and simulation and the use of IPPD and IPT. M&S continues to be used in the acquisition process of weapons systems in the military, especially during its test and evaluation to reduce cost and time and analyze the performance of the system from development to live fire test and evaluation (if required). For example, hardware-in-the-loop simulation was used to evaluate the effectiveness of the Javelin which has a cost avoidance of \$5 million (NTSA, n.d.); and simulated ship shock tests/ trials saves the Navy \$75,000 per test (Battista, 2014).

Simulations have proven to be successful in streamlining acquisition efforts within the technicalities of the systems acquisition life cycle, which positively affects the streamlining of the administrative efforts of the acquisition life cycle by reducing overall cost and time and ensuring all performance requirements are met prior to initial or full-rate production.

### 2.1.3 Acquisition Education and Training

The President's Blue Ribbon Commission final report and the Goldwater-Nichols DoD Reorganization Act in 1986 forced DoD to also reexamine their education and training within acquisition management. This resulted in the creation of the Defense Acquisition Workforce Improvement Act (DAWIA) and the Army Acquisition Corps in 1990; and the establishment of the Defense Acquisition University (DAU) in 1991.

DAWIA defined the roles of key leaders and provided the framework for required training, education, experience, and professional development guidance for the acquisition workforce (military and civilian). This includes available internships and fellowships for civilian personnel and required experience and assignment timeframes for both civilian and military acquisition personnel. This Act was introduced to Congress on June 28, 1990, and enacted through PL 101-



510 in November 1990. Since 1990, DAWIA has been amended six times as required by public law. DAWIA provided the guidance for the development of the DAU curriculum, in order to properly inform, educate, and train the acquisition workforce.

In the early 2000s, defense acquisition was experiencing the effects of its recent reformation during the Clinton Administration, of which over 60 acquisition reform initiatives were proposed and less than half of those initiatives were implemented within the DOD 5000-series documentation, Defense Acquisition System, in 2001. This series of documentation provide acquisition policy guidelines for the acquisition community to follow and is considered a handbook for program managers on how to do their jobs. Some of those initiatives included integrated process teams to improve communication between functional areas, modified integrated program summary to reduce program management reports, best-value contracting opposed to lowest cost, and the elimination of military specifications, reduced contract data requirements lists, and electronic processing to reduce the amount of “red tape” (Hanks, Axelband, Lindsay, Malik, & Steele, 2005, pp. 26-30).

Although not all of the reform initiatives were addressed in the 2001 publication of the DOD 5000-series, they were being covered in the DAU curriculum. DAU’s purpose was and continues to be to educate the acquisition workforce through an in depth curriculum. Its curriculum expanded from 15 subjects and 11 career field descriptions in 2001 to (currently) 23 subjects and 14 career field descriptions (see Tables 2-1 and 2-2). Each career field has requirements to achieve levels of certification. All acquisition personnel are encouraged to accomplish each certification level and to maintain knowledge proficiency in that (specific) career field through continuous learning modules.

Table 2-1: DAU Subjects (2001 and 2015)

2001	2015
Acquisition Management	Acquisition Management
Auditing	Auditing
Business, Cost Estimating, and Financial Management	Business, Cost Estimating, and Financial Management
Contemporary Approaches to Acquisition Reform	Contract Management - Air Operations
Contracting	Contract Management - Manufacturing
Grants	Contract Management - Quality
Industrial/Contract Property Management	Contract Management - Software
Information Resource Management	Contracting
Acquisition Law	Contracting Officer's Representative
Logistics	Engineering
Program Management	Facilities Engineering
Production, Quality, and Manufacturing	Grants
Software Acquisition Management	Industrial/Contract Property Management
Systems Planning, Research, Development and Engineering	Information Resource Management
Test and Evaluation	Logistics
	Program Management
	Production, Quality, and Manufacturing
	Requirements Management
	Software Acquisition Management
	Science and Technology Management
	Systems Planning, Research, Development and Engineering
	Test and Evaluation

Sources:

Note. List of 2001 DAU subjects. Adapted from *Defense Acquisition University 2001 Catalog* (p. iii-v), by Sondheimer, K., & Gonzalez, D. (Eds.), n.d., Fort Belvoir, Virginia: Defense Acquisition University Press.

Note. List of 2015 DAU subjects. Adapted from *Defense Acquisition University 2015 Catalog* (p. various), Fort Belvoir, Virginia: Defense Acquisition University Press.

Table 2-2: DAU Career Field Descriptions (2001 and 2015)

2001	2015
Acquisition Logistics	Auditing
Auditing	Business - Cost Estimating
Business, Const Estimating, and Financial Management	Business - Financial Management
Contracting	Contracting
Industrial and/or Contract Property Management	Engineering
Information Technology	Facilities Engineering
Manufacturing and Production	Industrial/Contract Property Management
Program Management	Information Technology
Purchasing	Life Cycle Logistics
Systems Planning, Research, Development and Engineering	Production, Quality and Manufacturing
Test and Evaluation	Program Management
	Purchasing
	Science & Technology Management
	Test and Evaluation

Sources:

Note. List of 2001 DAU subjects. Adapted from *Defense Acquisition University 2001 Catalog* (p. iii), by Sondheimer, K., & Gonzalez, D. (Eds.), n.d., Fort Belvoir, Virginia: Defense Acquisition University Press.

Note. List of 2015 DAU subjects. Adapted from *Defense Acquisition University 2015 Catalog* (p.various), Fort Belvoir, Virginia: Defense Acquisition University Press.

The change(s) that DAU experienced was in response to the mandates set by law; customer and stakeholder expectations; and the value that knowledge has in the acquisition spectrum.

According to Layton, E. (2007), balancing three distinct elements are required for a properly functioning acquisition system: (1) policy, procedures, and processes governing the system; (2) the organization that executes the policy, procedures, and processes; and (3) personnel that make the system work (p. 3). DAU is the driving force in acquisition training and an important aspect to ensure that personnel receive the proper training in their (acquisition) career field and maintain training proficiency through continuous learning modules so that acquisition personnel can achieve Defense Acquisition Workforce Improvement Act (DAWIA) certifications.

Certification does not necessarily mean qualification. A well-rounded acquisition leader has education, training, and EXPERIENCE and the current standards do not meet the required hands-on experience required to be a proficient key leader in the acquisition workforce. For example, the certification standards for DAWIA Level III certification focuses on functional training provided by DAU and four years in program management with cost, schedule, and performance responsibilities of which at least two years shall be working in a program office or similar organization that directly support a Program Manager (PM), Program Executive Office (PEO), Defense Contract Management Agency (DCMA) program integrator, or supervisor of shipbuilding. Furthermore, the program management experience need not be cumulative ([icatalog.dau.mil](http://catalog.dau.mil)). Appendix A provides more depth information on the required DAWIA core certification standards for program management.

#### 2.1.4 Acquisition Experience and Officer Professional Development

When the Army Acquisition Corps (AAC) was established in 1990, it was a single-track career field for officers in the following functional areas: research, development, and acquisition (FA51); system automation (FA53); and contracting and industrial management (FA97). To build the AAC, a selection and accession board was developed to screen officers who had acquisition experience, military schooling, a civil education degree, and distribution of quality based on their evaluation reports. The selected officers were afforded the opportunity of obtaining a master's degree through the Advanced Civil School (ACS) program, followed by a nine-week Materiel Acquisition Management (MAM) course prior to the first acquisition assignment which is coded to the appropriate functional area primacy that he holds. Following the first acquisition assignment, the officer attends the Command and General Staff College

(C&GSC) program for ten months or complete via correspondence before promotion to Lieutenant Colonel (LTC). Upon completion of C&GSC, the officer enters the second acquisition assignment based on his functional area. At this time, the officer is between his 15<sup>th</sup> and 17<sup>th</sup> year of service. After his second assignment, he attends a 20-week Program Management course. If the officer entered the zone of eligibility for promotion to LTC, his records were reviewed to determine compliance with acquisition certification criteria. If he met all criteria, then he was identified as a certified acquisition manager, if not, but could be qualified within two years, then he would be retained in the AAC. If he was unable to meet certification standards by the end of the two-year period, then he was disenrolled from AAC and returned to his branch and functional area career fields. If the officer was promoted to the rank of LTC and met all certification standards for an acquisition manager, then he served either as a program manager selected by a board or another critical acquisition assignment that required a certified officer. The officer is considered for additional military schooling at the senior service college if being considered for the rank of Colonel (COL), followed by a program manager position selected by a board (Huffman, 1991, pp. 24-26).

Under the initial model of an AAC officer, the officer was afforded at least two acquisition assignments before being considered for program manager selection. According to Lieutenant General (Retired) William Phillips (2011), former Military Deputy ASA(ALT) at U.S. Army, it takes a minimum of five years and up to 10 years to be highly qualified as a contracting officer (p.iii). Although he was speaking from a personal experience perspective for contracting, nevertheless as the senior military representative in AAC he realized that experience is essential to gain expert efficiency in a primary acquisition career field (ACF). Does a 20-week program management course qualify an officer to be a program manager?

Since the establishment of the AAC in the 1990s, it has significantly expanded and improved its organization and education and training for its workforce, especially considering the Commission on Army Acquisition and Program Management in Expeditionary Operations Report (2007) which revealed the requirement of urgent reform in Army expeditionary contracting due to the lack of experienced military contracting personnel. In 2011, Honorable Decker and General (Retired) Wagner, Jr., submitted their report on the Army Acquisition Review where they formed a panel of experts to develop recommendations on improving the Army acquisition processes. The panel developed 63 recommendations for improving Army acquisitions from restructuring the acquisition organization to funding, education, and experience. One of the recommendations that the Army agreed to implement was that program, project and product manager should possess a broad range of experience and assignments that reflect their qualifications because assignment of personnel with extensive experience could improve the management of Army programs (p. 17). A Defense News article by Tilghman & Weisgerber (2011), echoed the panel's recommendation for experienced personnel in program, project, and product manager positions. The article had urged DoD to rethink their strategy on selecting program managers due to the inexperience of some program managers in making cost, schedule, and performance decisions.

DoD realized that continuous changes were necessary to ensure a robust acquisition workforce. Some of the changes to the officer career timeline since the inception of the AAC were:

1. No required master's degree program. Each officer is allowed to complete for ACS slots to obtain a scholarship for his master's degree and encouraged to obtain a required number of

business management semester hours or equivalent to be viable for the AAC membership. This allowed for time to be spent on broadening assignments if no ACS was required.

2. FA51 Basic Qualification Course (BQC) covered contracting and program management over the period of 14-16 weeks which replaced the nine-week MAM course and increased education requirements in both contracting and program management. First-time acquisition officers are required to attend the series of consecutive courses offered during FA51 BQC prior to their first acquisition assignment.

3. An overall Army change from C&GSC to an Intermediate Level Education (ILE) course that allows officers (prior to their promotion eligibility to LTC) to attend via 10-month residency, 15-week short course, or online correspondence; however AAC officers are only afforded the opportunity to attend via short-course or online considering their career timeline.

4. Following the officer's first or second acquisition assignment and prior to their promotion to LTC, he shall attend a 3-week intermediate qualification course (IQC) specific to AAC. This is a broadening opportunity to learn from peers and colleagues of current and previous assignments as well as different areas of the acquisition community.

5. Once the officer is selected for the AAC, he is no longer released back to his primary branch.

6. Acquisition now encompasses five ACFs with a human resources code of FA51 followed by its appropriate ACF letter: program management (A), contracting (C), information technology (R), testing and evaluation (T), and systems planning, research, development, and engineering (S).

7. AAC no longer focuses on a single career track in the acquisition community. Officers are expected to obtain DAWIA Level III certification in at least two ACFs; and one of the two shall be contracting or program management.

8. Officers in the ranks of LTC and COL who have been designated through a central selection list (CSL) for command positions shall attend a one-week Army contracting pre-command course prior to their command assignment.
9. AAC officers shall work with their rater to develop a five year acquisition career plan using the Career Acquisition Personnel and Position Management Information system (CAPPMIS). This is a great tool to track and/or approve education and training requirements of the AAC officer and submit for certification approval and AAC membership.
10. DAWIA certification required to meet education and training competency levels.
11. Continuous learning modules are encouraged to maintain proficiency in a specific ACF.

Prior to being accessed into the AAC as a functional area in an active duty officer's career, there are several assignments that he shall complete. This includes, military education in their basic branch and at least two 3-year tours (see Figure 2-4). In accordance with Department of the Army (DA) Pamphlet 600-3, Officer Professional Development (2014), about 80 to 120 active duty Army captains are accessed each year into the AAC between their 5<sup>th</sup> and 9<sup>th</sup> years of service as an officer (p. 16). This number varies based on AAC requirements to fill the Military Acquisition Position List(ing) (MAPL). The MAPL identifies all eligible acquisition officer positions for each rank grade and ACF. The MAPL undergoes a quarterly review and all AAC officer positions are updated and approved by the Principal Military Deputy (PMILDEP) and then uploaded into the Total Officer Personnel Management Information System (TOPMIS). According to the US Army Acquisition Support Center (n.d.), there are two methods of entry into the AAC – career field designation (CFD) board, which is also known as an accession, and the voluntary transfer incentive program (VTIP). The requirements for both methods of entry are:



1. Be in a grade of Captain (CPT) with demonstrated outstanding performance in the key developmental position for his basic branch.
2. Be a graduate of the Captain's Career Course (Branch Immaterial).

The CFD board is held annually prior to the officer's year group's functional designation board. For an officer to be considered for the Acquisition CFD board he shall submit his request through his (basic) branch manager. For example a Quartermaster Corps officer will submit his request for the Acquisition CFD to his Quartermaster Corps branch manager. The VTIP is conducted on a quarterly basis for officer's who missed the Acquisition CFD board for their year group. For an officer to be considered to transfer into the AAC through the VTIP, he shall submit his request through his (basic) branch manager. If the officer is selected via VTIP, then he incurs a three-year active duty service obligation.

Once the officer is selected for the AAC, he is placed in one of five DoD ACFs – program management; contracting; systems, planning, research, development and engineering – science and technology management; information technology, and test and evaluation – and attends 14 to 16 weeks of DAU training prior to his first acquisition assignment. The purpose of the training is to familiarize newly appointed Army acquisition officers with the AAC and its policies and procedures; and complete all required core acquisition and functional training in program management and contracting up to Level II DAWIA required education and training.

Upon successful completion of DAU training, the Army acquisition officer has a proficiency level of novice in the AAC. His civilian grade equivalent is a GS-12 or GS-13 with at least an advanced proficiency level in their primary acquisition career field (see Appendices B and C).

Figure 2-3 illustrates the current Army AAC officer development timeline and emphasizes the career milestones to be both competitive with both AAC and primary branch peers. These

milestones are required for promotion and nominative assignments, as well as steady progression as an Army officer. The competency gained during one acquisition assignment does not necessarily rollover to the next acquisition assignment. The figure below develops a broadened acquisition officer, not necessarily a master/ expert in one ACF prior to the zone of consideration for the rank of LTC.

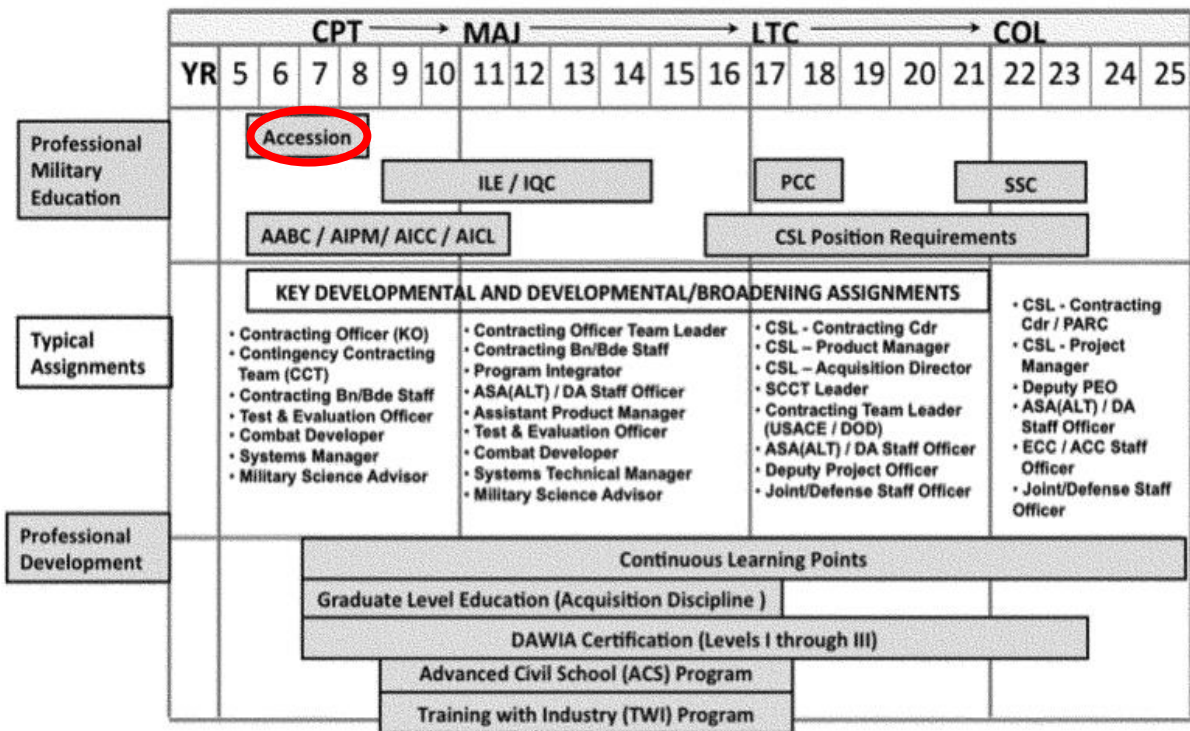


Figure 2-3: Army Acquisition Corps officer development timeline.

Note. Adapted from *Commissioned Officer Professional Development and Career Management*, by Department of the Army, p.442, 2014, Washington, DC: Headquarters, Department of the Army.

According to the Acquisition Management Branch (2014), regionalization assignment have been officially rescinded as of the first quarter of fiscal 2015. Regionalization is a four-year assignment, which allows the officer to progress at one duty station within the program

management and/or contracting management organization associated with that duty assignment. Since rescinding, the AAC officer is assigned a two-year assignment with permanent change of station (PCS) availability upon completion of the assignment. This does little to assist with increasing the proficiency level of the AAC officer so he is at least equivalent to his civilian counterpart prior to promotion to LTC.

According to 10 U.S. code, Ch. 87, Sec. 1735 before assignment to a critical acquisition positions (CAP) in program management of increasing level, he shall:

1. Be in the grade of LTC or higher and
2. Agree to remain on active duty for a minimum period of three years while in a CAP or
3. At least until completion of a major milestone that occurs closest to the date where the officer has served in the program manager or deputy program manager position for a major defense acquisition program for four-years and
4. Complete the program management course at the Defense Systems Management College or an accredited institution determined to be comparable by the Secretary of Defense and
5. Shall have at least eight years of acquisition experience with at least two years in a systems program office or similar organization for a program manager position for a major defense acquisition program or
6. Shall have at least six years of acquisition experience for a program manager position for a non-major defense acquisition program or
7. Shall have at least six years of acquisition experience with at least two years in a systems program office for a deputy program manager position for a major defense acquisition program or

8. Shall have at least four years of acquisition experience for a deputy program manager position of a non-major defense acquisition program.

The major weakness to these requirements is acquisition experience is not well-defined in CAP requirements.

1. Experience can range between two different ACFs or number of years in the AAC since being transferred or accessed.

2. Experience may not necessarily be required in the program of consideration for the CAP assignment. For example, an acquisition officer may be assigned the deputy program manager of a non-major defense acquisition program that he knows nothing about.

Good work experience marries retention. In order for a person to master a task or set of task(s), he shall practice the task a number of times with the objective of being a master. According to Proctor & Van Zandt (2008), how a person practices a skill determines how quickly he is able to master the skill, how long he remembers the skill, and the extent to which the skill will result in an improved performance for other tasks (p. 383). This can be seen in professional athletes. They perfected skills that have taken years to master.

Proctor & Van Zandt (2008), explained that more practice equals an increase in retention and that an overlearning of a skill will result in better retention of those skills. The example that they had given referred to the assembly and disassembly of the M60 machine gun, which was a study of retention by Schendel and Hagman in 1982. There were three groups of soldiers – one control group and two other groups. All soldiers were told taught how to assemble and disassemble the weapon and were told to complete these tasks until no errors were made. The control group received no further training and was retested at the end of the study, approximately eight weeks later. The other two groups were over-trained at different time period during the

study. One group was over-trained the first day of training after the initial assemble and disassemble test, while the other group was over-trained halfway through the study period. Despite the different time periods of overtraining, the soldiers in both of these groups made additional assemblies equal to the amount of assemblies that they performed prior to their first error-free execution. The study concluded that overtraining leads to better retention of skills (pp. 383-384).

Hands-on experience is required for key leadership positions in the acquisition workforce and this can be further extended to all critical acquisition positions or lower. The change in the regionalization program does allow for more broadening opportunities, but does not allow for overtraining of mastered skills for increased retention.

## 2.2 Competency-Based Career Planning and Development

The Army has established an officer competency evolution timeline (see Figure 2.4) for the general (officer) population; however, it does not address specific competencies for the acquisition officer in program management.

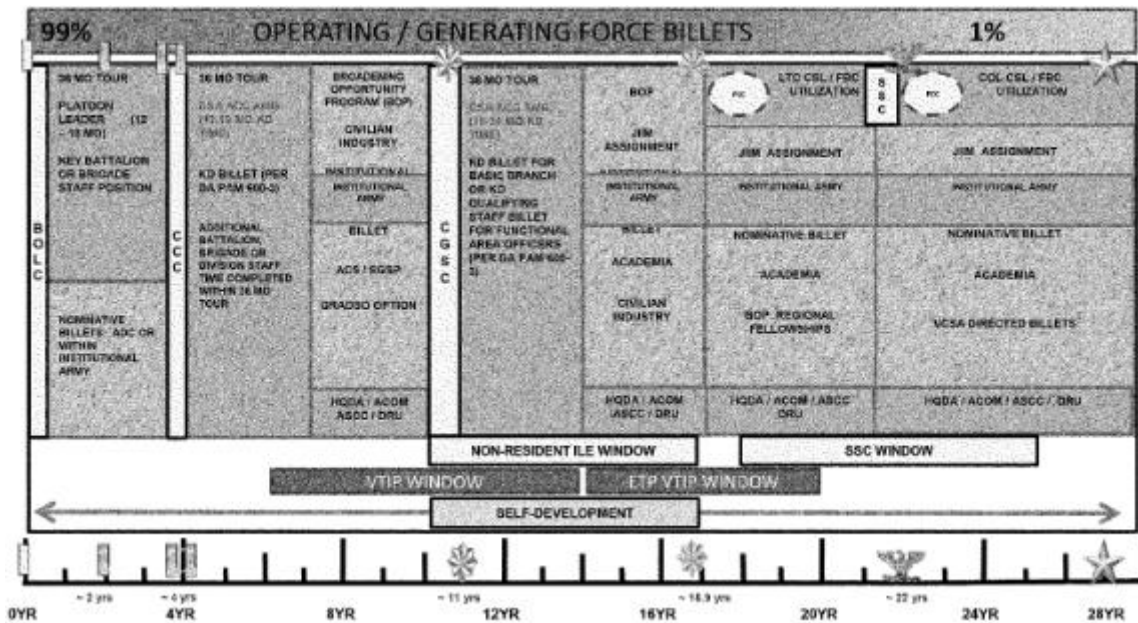


Figure 2-4: Officer Competency Evolution

Note. Adapted from *Commissioned Officer Professional Development and Career Management*, by Department of the Army, p.29, 2014, Washington, DC: Headquarters, Department of the Army.

Figure 2-4 shows assignment and civil or military education milestones from the first to 28<sup>th</sup> year in the active duty military. Assignments range between operational and non-operational assignments throughout the officer’s career with required military education in between or during assignments. The assignments that do not have a duty timeline are generally regarded as anything less than a 3-year duty assignment. The officer competency model produces a well-rounded talented officer that has a diversified work experience in both joint and non-joint assignments.

Competency goes beyond required education and training. It relies on work experience gained, in order to apply the knowledge received from education and training. Granted, each

acquisition position has accompanying responsibilities, but it does not have the associated competency matrix.

Dabkowski, Huddleston, Kucik, & Lyle (2011) presented a discrete event simulation model that explored the distribution of officer talent (operational versus non-operational) across the US Army through attrition, promotion, and the need for operational and non-operational personnel reflected in the Modified Table of Organization and Equipment (MTOE) and Table of Distribution and Allowances (TDA). They presented their findings during the 2011 Winter Simulation Conference. Their study resulted in recommending a three phase career path for all military officers – Learn (operational), Practice (mixture of operational and non-operational), and Lead (primarily non-operational).

The career model proposed developing non-operational experience earlier in an officer's midcareer, in order to shape and broaden senior ranks due to the fact that non-operational assignments increase as rank progresses (Dabkowski et al, 2011). Although this recommended path is a logical pattern for developing a broadened leader, considering the majority of acquisition positions being non-operational, it does not allow for early AAC officer career progression because there is no recommended change to the career field designation (CFD) timeline. The CFD still occurs around the officer's eighth year as an active duty officer (p. 2480).

The Defense Procurement and Acquisition Policy (2014) has developed a contracting competency assessment for the DoD contracting workforce to identify and address competency gaps in personnel, training, and development; define competencies required for the contracting workforce; and assess competences pertinent to the contracting workforce and identify gaps for

current and future requirements. This is a great effort to address challenges in the contracting workforce and highlights the importance of work experience, training, and education.

### 2.3 Summary

Acquisition streamlining has been ongoing since the President's Blue Ribbon Commission report in 1986. These streamlining efforts include restructuring the acquisition organization in the Army to streamline administrative processes; simulation-based acquisition to reduce cost, schedule and performance of a weapons system's life cycle; the establishment of DAU and the many faces of change that they have experienced in being the forefront in acquisition and training; and the past and current active duty acquisition officer professional development and required milestones and experiences currently required prior to being selected for a critical acquisition position. The Army had also recognized and used competency-based career planning and development to a general extent, but requires more efforts to ensure acquisition officers possess at least an equivalent proficiency level to their civilian counterparts through successful and extensive acquisition work experience in assignments that reflect their position.



## CHAPTER 3: METHODOLOGY

System analysis for improving the active duty Army acquisition officer personnel management is a problem solving technique that will decompose the active duty AAC officer professional development career path into components in order to study how well they work and interact to achieve their purpose. Once each component of the career path is studied, they will be reassembled into a proposed professional development system for an active duty AAC officer.

### 3.1 Define the Problem

The problem is to identify an active duty AAC officer professional development model that is applicable for a successful program management career. The primary research question for this thesis is: Is the current U.S. Army active duty officer professional development model adequate to develop an acquisition officer whose primary career field designation is program management? Army doctrine, primarily DA Pamphlet 600-3, Officer Professional Development (2014) and the most recent DAWIA (2013) were used to address the following:

1. What is the current active duty AAC officer professional development model?
2. Identify the strengths and weaknesses of the current active duty professional development model.
3. What changes should be made to the current active duty AC officer professional development model?
4. Identify the strengths and weaknesses of the proposed changes.

### 3.2 Assumptions

The assumptions used in the systems analysis include:

1. DA Pamphlet 600-3, Officer Professional Development, dated 2014, is the most recent guidance used by the U.S. Army.
2. DAWIA, amendment 2013, is the most recent amended DAWIA used to guide an AAC officer's professional development to include education, training, experience required, and length of duty assignments.
3. Studies of military officer professional development used to support this thesis and presented in the literature review is accurate and true.
4. The proficiency level after FA51 BQC remains novice in acquisition.
5. The current and proposed models do not take into consideration prior active duty service.
6. Competency standards are comprised of education, training, and experience.
7. Current education and training standards are efficient.
8. Acquisition work experience needs improvement.
9. Models do not take into account deployments and temporary duty during each acquisition assignment.

### 3.3 Current Model

The literature review provided a foundational knowledge to understand the motivation behind the research question and the persistent need for improving the acquisition workforce, primarily work experience. Let's look at the current officer model flow (see Figure 3-1) to identify its strengths and weaknesses. This model is generic in nature and does not reflect each individual active duty AAC officer's unique career path. The timeframes in each module are used in the

figure to illustrate an approximate timeframe based on information received from DA Pamphlet 600-3 and DAWIA.

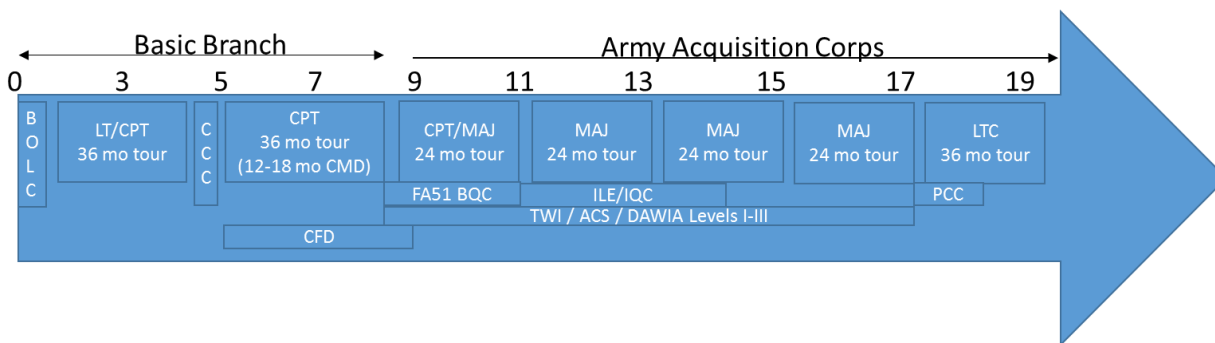


Figure 3-1: Current Active Duty AAC Officer Flow

Note. Adapted from *Commissioned Officer Professional Development and Career Management*, by Department of the Army, pp.17 and 442, 2014, Washington, DC: Headquarters, Department of the Army.

The numbers above the progression arrow is shown in years for an active duty officer. The current model takes into consideration varied timeframes of required military education and training, like basic officer leadership course (BOLC) and the captain’s career course (CCC), for all officers to remain competitive with their peer group. If the officer is selected by the AAC CFD, then he shall complete his current assignment in his basic branch unless granted an early release by his chain of command and basic branch to attend FA51 BQC prior to his permanent change of station eligibility.

The strengths of the current active duty AAC officer development timeline include:

1. Allows the AAC officer to gain more than four years of operational military experience prior to being accessed or transferred into the AAC, which allows the officer to be competitive with

their basic branch peers and achieve at least an intermediate level of proficiency in his branch depending on duty assignment.

2. Broadening opportunities to learn outside of the officer's primary ACF, if the officer's timeline allows for it.
3. The AAC officer maintains military education requirements in order to remain competitive with their peers across the Army.
4. The AAC officer receives required acquisition training throughout their acquisition career to gain educational proficiency.

The weaknesses of the current AAC officer development timeline include:

1. CFD board has a larger time of consideration zone.
2. The timeline does not address proficiency levels with civilian counterparts of equivalent rank who are currently actively working in the acquisition workforce prior to CAP requirements.
3. No regionalization for acquisition officers. Two-year assignments until CAP assignment with no guarantee of consecutive assignments in the officer's primary ACF.
4. ACS opportunities are not afforded to every acquisition officer. It is a competitive process and takes into account the officer's timeline. If the officer is not accepted into ACS, then he has to obtain his master's degree through another avenue.
5. Some officers may not have the opportunity for TWI due to a shorter timeline to achieve DAWIA certification requirements. It is highly encouraged to obtain DAWIA Level III in the primary ACF prior to the zone of eligibility for the rank of LTC.
6. Assignments are based on the "needs of the Army" which may not necessarily take into consideration a program management or contracting position for the AAC officer's first duty

assignment. Officers may be assigned to positions other than program management or contracting based on available positions at that time.

### 3.4 Proposed Model

The proposed active duty AAC officer model addresses negative encounters with inexperienced personnel in the rank of LTC and above and challenges the AAC officer to gain an expert proficiency in his primary ACF prior to being considered for promotion to LTC.

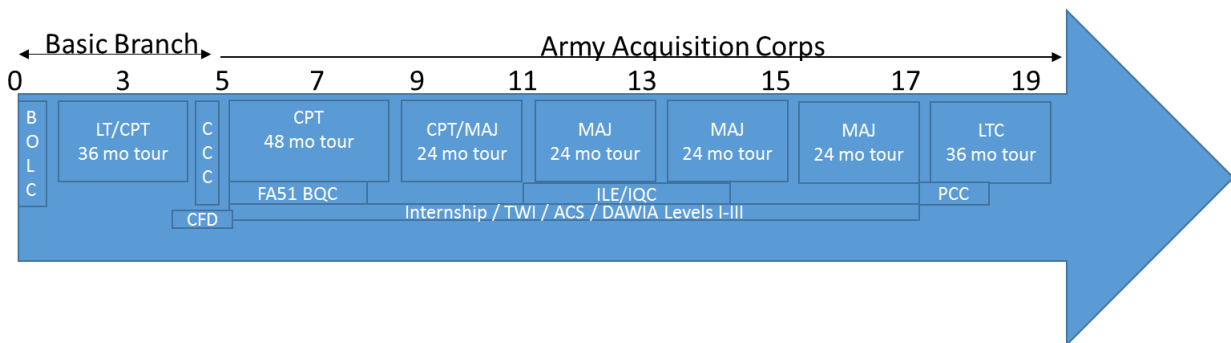


Figure 3-2: Proposed Active Duty AAC Officer Career Flow

Note. Some information were adapted from *Commissioned Officer Professional Development and Career Management*, by Department of the Army, pp.17 and 442, 2014, Washington, DC: Headquarters, Department of the Army.

The strengths of the proposed model are as follows:

1. Highlights the importance of experience gained in the AAC officer’s primary ACF.
2. The CFD board occurs following the officer’s first duty assignment and at least one key leader position in accordance with their basic branch requirements for LT/CPT. There is no big window for CFD consideration.
  - a. The officer learns and gains experience in the operational Army.

- b. The officer is promoted to the rank of CPT with his peers.
2. AAC officer is given more opportunities for broadening and developmental assignments to include obtaining a master's degree through the ACS program and/or taking advantage of a training with industry (TWI) assignment to learn industry work habits and standards. A wider timeline to gain hands-on work experience in other areas of acquisition prior to a CAP.
3. Introduces an internship opportunity for AAC officers that was only afforded to the civilian acquisition workforce.
4. Re-establishes regionalization for the first duty assignment, but proposes assignments in one ACF vice two within that four-year tour.
5. Allows the officer time to gain expert proficiency and overtraining in his primary ACF and move to achieve at least an advanced level of proficiency in a secondary ACF prior to his promotion zone to the rank of LTC.
6. If assignments are managed properly, then this model allows for at least a one-year overlap between the subordinate's (initial) four-year assignment and supervisor/senior leader three-year assignment.

The weaknesses to the proposed model are as follows:

1. Limits initial operational experience.
2. Decreases the officer selection pool for the operational Army by removing basic branch officers earlier in their career.
3. Does not address the short assignment periods past the first acquisition assignment. This may have a negative effect on retention learned and gained from the first acquisition assignment.
4. Assignments are based on the "needs of the Army" which may not necessarily take into consideration a program management or contracting position for the AAC officer's first duty

assignment. Officers may be assigned to positions other than program management or contracting based on available positions at that time.

## CHAPTER 4: DISCUSSION

### 4.1 Benefits

The benefits of introducing the systems analysis approach for improving the acquisition workforce personnel management are:

1. Assumes that literature and previous studies identifying challenges in an inexperienced workforce is true and accurate. This can also be a limitation.
2. Looks at what area or areas of a system that needs improvement by reviewing previous studies and understanding why the model does not necessarily work as it should.
3. Allows for a proposed model (if needed) to be addressed to look at how that proposed model could potentially improve the system.

### 4.2 Limitations

The limitation of using this approach for improving the acquisition workforce personnel management are:

1. Assumes that literature and previous studies identifying challenges in an inexperienced workforce is true and accurate. Literature and previous studies may not be as accurate or current considering the many incremental changes that have occurred in acquisition streamlining.
2. The proposed model is not validated or tested through computer analysis or modeling. It is based on logic and recommendations from literature reviews.
3. Does not take into account the natural attrition of officers, the current officer pool in acquisition, or the number of positions available per rank per ACF.



## CHAPTER 5: CONCLUSION

Some of the issues that affect the streamlining process cannot be avoided, such as executive appointments to key senior leadership positions within the Office of the Secretary of Defense; however, there are potential ways that the Army can positively affect change in the Acquisition workforce which will subsequently influence the outcomes of the management of weapons programs. The proposed model is an alternative to developing a more competent acquisition officer who has not only the education and training, but the quality experience needed to fill critical assignments to include key leadership positions. The AAC officer may still be a novice after completing his FA51 BQC, but he shall become an expert in his primary ACF prior to his below-the-zone of consideration for LTC.

The proposed model is based on several identifying factors from various analysis of the acquisition platform, which led to the need for extensive (quality) acquisition experience for personnel in key leadership positions. This thesis challenged Secretary Kendall's initiative to improve the professionalism of the total acquisition workforce through higher standards for key leadership positions and that the current model does not allow the hands-on experienced required to fill those positions. The current model allowed for too many broadening opportunities before the officer's zone of consideration for LTC, which took away from mastering hands-on skills needed to be successful in critical and key leadership positions.

The proposed model highlighted greater work experience to be over-trained during the first duty acquisition duty assignment. Retention of skills is increased with more practice. If a future critical or key leader has more "practice" in the tasks required to succeed in those positions earlier rather than later in his acquisition career, then he can quickly attain mastery and an expert

proficiency and be on the same level of proficiency as his civilian counterparts; and are truly proficient enough to handle increased responsibilities as an acquisition officer.

### 5.1 Future Analysis

Although this thesis is a proposal based on literature review and logic. It lays down a foundation for future analysis for confirmed input and output variables to be developed with the assistance of key stakeholders to test and validate the proposed model using discrete event simulation or other computer modeling analysis. The key stakeholders are the human resources department for both the AAC Center of Excellence and the Department of the Army.

Prior to fully creating the proposed DES model the following shall be considered:

1. Consult with and confirm stakeholder requirements which includes human resources management concerns for the AAC and Department of the Army.
2. Consult with and confirm stakeholder requirements for validation performance measures.
3. Consult with and confirm stakeholder requirements for output performance measures.
4. Confirm any changes to the FA51 BQC training curriculum prior to the first acquisition assignment.
5. Conduct further research on the average amount of time it takes for the “normal” human brain to “lose” information learned from education if it is not applied in the workplace.
6. Conduct further research on the learning curve rate when applying education in the workplace.
7. Research the business industry’s model on career progression keeping in mind the longevity of assigned positions, in order to run a regression analysis.

Validation is needed to provide evidentiary support to the proposed changes and confirm early intervention in an active duty AAC officer's career for proper development and career progression in program management. In addition to a computer modeling analysis, a survey and analysis targeting current acquisition officers is recommended for future research, in order to receive a baseline perspective of the current AAC officer flow and whether or not the results of the survey supports the proposed changes. The survey shall include both questionnaire (closed and open-ended questions) and interviews.

In order to move forward with this project and follow through with recommendations for future analysis, support from the AAC Center of Excellence and the PMILDEP ASA(ALT) is needed. The PMILDEP ASA(ALT) is the most senior military officer/leader in the AAC, and the AAC Center of Excellence is the primary resource for the MAPL. Receiving their support is extremely important because highlighting the need for improving hands-on experience in program management affects not only acquisition officer management as a whole, but it has the potential to change the role of the AAC from military functional area to a (true) acquisition profession for all military officers.

#### 5.1.1 Benefits

Some of the benefits to using computer modeling analysis to study personnel management are:

1. Illustrate to key stakeholders the answers to research questions.
2. Illustrate to key leaders the current career path for most acquisition officers from their first active duty assignment to their first acquisition assignment.

3. Senior military officers whom are in positions to affect change have a visual to better understand the potential (positive) impact that can be made to improve the AAC officer proficiency level.
4. Compare and contrast alternative(s) and current career path prior to executing any personnel changes.
5. Determine the best alternative (if any).
6. Determine the best time to intervene in the path to develop an AAC officer so that he can begin gaining the “hands-on” training he will need to progress to a key leader position.
7. Model validation is statistically supported.
8. Results of alternatives are statistically supported.

#### 5.1.2 Limitations

Some of the limitation factors to using the proposed career path model for model analysis are:

1. Potential challenge to determine data collection requirements due to changes in policies and procedures that may have affected the acquisition accession process.
2. Statistical support to determine the best alternative (if any) may not necessarily be the best recommendation when it is implemented.
3. Does not determine the best assignment for the newly appointed AAC officer.
4. Does not track proficiency level progression during and after the first acquisition assignment.
5. Does not compare and contrast civilian rank equivalent career path.
6. Further data collection may be needed for further analysis of the best alternative (if any) prior to making any policy and procedural changes that affect AAC officers.

## 5.2 Final Conclusion

The systems analysis approach to study the career progression of an AAC officer is a small step that may lead further study and analysis on testing and validating the proposed model in this thesis. The results of future analysis may persuade the DA to make incremental changes to their officer personnel management system, with a focus on how to improve the opportunities for AAC officers to gain hands-on experience in program management. If the AAC officer career progression changes to allow newly appointed AAC officers to enter the AAC earlier in their military career, then it may have a positive affect in acquisition streamlining and DA will manage to address the concerns of inexperienced leadership in program management in the AAC. The DA will have a pool of proficient AAC officers to place in key leadership positions whom will have a proven successful (acquisition) track record, where he or she can promote good acquisition decisions based on experience, knowledge, and training. Experience and retention are married; and over-training increases retention.

**APPENDIX A:  
REQUIRED DAWIA CERTIFICATION STANDARDS FOR PROGRAM  
MANAGEMENT CAREER FIELD**

Table 5-1: Level I Core Certification Standards (required)

Acquisition Training (DAU)	Fundamentals of Systems Acquisition Management
Functional Training (DAU)	Fundamentals of Systems Planning, Research, Development, and Engineering Cost Analysis Introduction to Earned Value Management
Education	Formal education not required
Experience	One year of acquisition experience with cost, schedule, and performance responsibilities

Source: Note. Information adapted from *Certification standards & core plus development guide program management level I*. by Defense Acquisition University, n.d., from <http://icatalog.dau.mil>.

Table 5-2: Level II Core Certification Standards (required)

Acquisition Training (DAU)	Intermediate Systems Acquisition, Part A Intermediate Systems Acquisition, Part B
Functional Training (DAU)	Program Management Tools Course, Part I Program Management Tools Course, Part II Contract Planning Contract Execution Contract Management Fundamentals of Earned Value Management Basic Information Systems Acquisition (can be substituted with Systems Acquisition Management until 01 October 2016, if completed after 15 November 2005)
Education	Formal education not required
Experience	Two years of acquisition experience with cost, schedule, and performance responsibilities

Source: Note. Information adapted from *Certification standards & core plus development guide program management level II*. by Defense Acquisition University, n.d., from <http://icatalog.dau.mil>.

Table 5-3: Level III Core Certification Standards (required)

Acquisition Training (DAU)	None required
Functional Training (DAU)	<p>Fundamentals of Business Financial Management</p> <p>Reliability, Availability, and Maintainability</p> <p>Program Management Office Course, Part A</p> <p>Program Management Office Course, Part B</p> <p>Intermediate Systems Planning, Research, Development, and Engineering, Part I</p> <p>The below courses are added starting on 01 October 2015</p> <p>Understanding Industry (Business Acumen)</p> <p>Principles of Schedule Management</p>
Education	Formal education not required
Experience	<p>Four years in program management with cost, schedule and performance responsibilities</p> <p>At least two years in a program office or similar organization (dedicated matrix support to a PM, PEO, DCMA program integrator, or supervisor of shipbuilding). The two years may run concurrent to the four year requirement.</p> <p>OR</p> <p>Level III DAWIA certification in another acquisition CFD</p> <p>Two years in program management in cost, schedule and performance responsibilities</p> <p>Two years in a program office or similar organization (dedicated matrix support to a PM, PEO, DCMA program integrator, or supervisor of shipbuilding). The two years may run concurrent to the Level III or two year requirement.</p>

Source: Note. Information adapted from *Certification standards & core plus development guide program management level III*.by Defense Acquisition University, n.d., from <http://icatalog.dau.mil>.



**APPENDIX B:  
MILITARY/CIVILIAN EQUIVALENT AND PROFICIENCY LEVEL/SCORE**

Table 5-4: Military and Civilian Equivalency and Proficiency

Military Grade	Civilian Grade Equivalent	Recommended Proficiency Score	Proficiency Level
O-9	ES-05/06	5	Expert
O-8	ES-03/04	5	Expert
O-7	ES-01/02	5	Expert
O-6	GS-15	5	Expert
O-5	GS-14	4 or 5	Advanced or Expert
O-4	GS-13	4	Advanced
O-3	GS-12	4	Advanced
O-2	GS-11	3 or 4	Intermediate or Advanced
O-1	GS-9	3	Intermediate

Sources:

Note. Military and civilian equivalency adapted from *Department of defense working capital funds civilian/military equivalent rate fiscal year 2002* by Office of the Under Secretary of Defense (Comptroller), 2001 from <http://comptroller.defense.gov>.

Note: Proficiency score and proficiency level adapted from *NIH suggested proficiency map* by Office of Human Resources at the National Institutes of Health, 2015 from [hr.od.nih.gov](http://hr.od.nih.gov).

**APPENDIX C:  
PROFICIENCY DESCRIPTION**

Table 5-5: Proficiency Scale

Score	Level	Description
1	Fundamental Awareness (basic knowledge)	Common knowledge or understanding of basic techniques and concepts.
		Focus on learning.
2	Novice (limited experience)	Experience gained in classroom and/or experimental scenarios as an on-the-job trainee. Help is expected to perform skills.
		Focus on developing through on-the-job training;
		Has an understanding and can discuss terminology, concepts, principles, and issues related to this competency;
		Utilizes a range of reference and resource materials.
3	Intermediate (practical application)	Can successfully complete tasks in this competency as requested. Help from an expert may be required, but can usually perform the skill independently.
		Focus on applying and enhancing knowledge or skill;
		Apply this competency on occasions under minimal guidance to perform successfully;
4	Advanced (applied theory)	Understand and discuss the application and implications of changes to processes, policies, and procedures in this area.
		Perform associated actions requiring this skill without assistance. "Go to" person within the immediate organization to answer difficult questions.
		Focus on broad organization/professional issues;
		Consistently provide practical/relevant ideas and perspectives on process or practice improvements which may easily be implemented;
		Capable of coaching others by translating complex nuances into simpler terms;
		Participate in senior level discussions;
5	Expert (recognized authority)	Assist in the development of reference and resource materials.
		Known as the expert in your career field. Can provide guidance, troubleshoot and answer questions at this area of expertise and the field where the skill is used.
		Focus on strategic;
		Demonstrate consistent excellence in applying this competency across multiple projects and/or organizations;
		Create new applications for and/or lead the development of reference and resource materials;
Able to diagram or explain the relevant process elements and issues in relation to organizational issues and trends in sufficient detail during discussions and presentation, to foster a greater understanding among internal and external colleagues and constituents.		

Source: Note: Proficiency scale adapted from *Competencies proficiency scale* by Office of Human Resources at the National Institutes of Health, 2009 from hr.od.nih.gov.

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