EXECUTIVE SUMMARY

This program evaluation aimed to determine the level of proficiency of US Army pilots after an extended period away from flying. A secondary objective was to present a viable low-cost solution to the problem of reduced proficiency that could reduce re-training time and maintain higher operational readiness for the US Army. The evaluation estimated that employing a fully funded low-cost pilot proficiency program has the potential to save $1,829,880 in a one-year period for 46 pilots. The savings in this evaluation only accounted for a small population of the total pool of US Army pilots assigned to non-flying positions for an extended period of time.

In performing this initial evaluation, the researcher attempted to improve understanding of the problem, identify the average number of additional flight hours required to regain proficiency and identify opportunities to improve identified deficiencies. The primary recommendations from the program evaluation are as follows:

First, the US Army should seek to improve the balance between leader development and pilot skill sustainment in order to improve readiness and efficiency. Minor modifications, the current leader development model could remain virtually unaltered and provide dramatic improvements to pilot skill sustainment. If pilots could retain higher basic piloting proficiency during non-flying assignments, then it is possible for them to more rapidly return to mission proficiency.

Second, integrate low-cost pilot sustainment training with existing Army Credentialing Program (ACP) initiatives. This will maximize the overall program value and increase the return on investment for both the US Army and the individual(s).

Third, expand the program evaluation to improve understanding of the impact and cost associated with military pilots in non-flying positions for extended periods of time and the potential benefits of low-cost aircraft to sustain pilot proficiency.
A PROGRAM EVALUATION FOR THE EFFICIENT EMPLOYMENT OF THE US ARMY’S MODEL FOR PILOT PROFICIENCY

MSA 699 Capstone

Typology: Program Evaluation (Efficiency)
For Master of Science in Administration
(Concentration in Leadership)

By:
Scott M. Messare

Instructor:
Dr. Robert Weltzer, Jr.

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CHAPTER I: DEFINING THE PROBLEM

Introduction.

The US Army invest substantial resources in the initial qualification of aviation officers. The long-term career cost of maintaining an aviators piloting proficiency is higher. This resource cost is still higher for those Army pilots who frequently depart steady flying assignments for extended periods throughout their career. There are multiple reasons for these career departures. As outlined by Department of the Army Pamphlet 600-3 "Commissioned Officer Professional Development and Career Management", officers depart flying duty for individual leader development, to provide officer broadening, and to fulfill institutional qualifying or professional educational needs (2014, pp. 11-13). This situation is typical for aviation commissioned officers in the ranks of Captain through Lieutenant Colonel, however it is not exclusive to this band of officers. When these pilots return to flying duty after serving in non-flying assignments, they must complete a required set of reintegration flight training which varies in cost and duration based on the individual pilot's retained proficiency and the particular military platform being flown.

The Army aviation officer developmental model attempts to balance the individual's professional developmental needs with total army requirements with little regard for long-term pilot proficiency. From this perspective, the Army is effective in meeting their desired requirements, producing competent mission focused leaders with a broad experience base. This approach leaves aviation pilot proficiency as a low priority, with the acknowledgment that resources would be allocated to regain proficiency at a later date. While this approach may be effective, it is not efficient.

Purpose of Evaluation.

The purpose of this program evaluation was to assess the overall efficiency of the US Army's pilot proficiency training program. The evaluation specifically looked at the typical pilot returning to a flying assignment after an extended period away from flight duties. As a metric,
this evaluation looked at the number of flight hours and cost to conduct aviator reintegration/refresher training. Cost values throughout this evaluation were based upon the 2017 Department of Defense aviation reimbursable rates as they related to the average additional number of flight hours associated with pilot re-training.

This evaluation also began to examine the qualitative proficiency benefits that might be attained and potentially offset re-training cost. The offset option presented in this evaluation was the concept of operating low-cost civil aircraft with a Federal Aviation Administration (FAA) rating. To accomplish this, a pilot would require a Single Engine Land Airplane rating (ASEL) as a baseline, which would provide them the ability to fly civilian aircraft during a non-flying assignment. This low-cost alternative to flying advanced operational military aircraft during a non-flying assignment could provide substantial cost savings for the US Army as a result of higher retained pilot proficiency. The tangible and intangible resource savings could be redirected towards other priority requirements.

**Definition of the Problem.**

The Chief of Staff of the Army (CSA), General Mark A. Milley, recently prioritized force readiness as the Army's top priority. In fact, in his 2016-2017 guidance he signed the document with the words, "Readiness is #1...And there is no other #1" (CSA, 2017). This requires the Army as a whole to continually assess their effectiveness while simultaneously looking to efficiently execute resources in order to produce results. With regard to Aviation proficiency and maintaining base skills, the problem statement sounds as follows: How does the US Army achieve "sustained proficiency within the band of excellence" for aviators who routinely depart operational flying positions throughout their military career as a function of the normal broadening and educational assignments cycle while efficiently allocating resources (FM 7-0, 2016, pp. 1-3)? The current resource constrained environment adds substantial complexity to the readiness problem set.
Research Focus and Objectives.

The purpose of this research was to evaluate the retained proficiency of US Army pilots after experiencing an extended period away from flying and to present a viable low-cost option that could reduce re-training time and cost for the US Army. The research objectives (ROs) and focus that guided this research are listed below:

• Research Focus: The central question is can Army aviators who fly between operational flying assignments, in low-cost general aircraft, (example: a Cessna 172), could maintain higher basic piloting proficiency resulting in a more rapid return to mission proficiency? If this were the case, then the potential exists to reduce associated training time and cost in an advanced military aircraft for the US Army.

• RO#1: Determine the number of extra flight hours and cost associated with re-training an Army pilot after an extended period of non-flying.

• RO#2: Identify a low-cost option that maintains a pilot's basic proficiency that could save the US Army money associated with additional flight time in high-cost mission platforms.

• RO#3: Identify the percentage of Army aviators who possess FAA ratings and individually fly outside of their military duties or desire to do so but currently do not. Further, whether this population individually assess a tangible impact on their base aviation skills between operational assignments.

Key Program Inputs.

The primary program inputs that affects pilot proficiency are the result of normal officer assignment cycles. Beyond the first six years of service, the US Army Aviation Officer career timelines is designed to develop officers into an expert leader more than an expert pilot.

"Aviation career development is based on operational experience and training, institutional education, and self-study/development. Early career development focuses on developing tactical expertise in Aviation employment and sustainment ... and technical expertise in the operation of Aviation platforms/systems. Mid-career development continues to refine tactical and
technical expertise and focuses on developing competency in operational-level employment and sustainment of Aviation ...
" (DA Pam 600-3, 2014, pp. 76)

While this system is effective in creating a progressively capable aviation officer for broader responsibilities, it is not efficient from a resource standpoint. Reintegration training is characterized as more extensive for pilots returning after a long lapse in flying than for those arriving from a recent flying assignment.

**Flying Gaps and Impact.** Department of the Army Pamphlet 600-3, "Commissioned Officer Professional Development and Career Management," outlines multiple reasons for these career departures. Ultimately, Officers depart flying duty for individual leader development, to provide broadening, and to fulfill institutional qualifying or professional educational needs (2014, pp. 11-13).

These situations are typical for aviation commissioned officers in the rank of Captain through Lieutenant Colonel. When these pilots return to flying duty after a non-flying assignment, they must complete reintegration flight training which varies in cost and duration based on the individual pilot's retained proficiency and the aircraft platform being flown.

There are three primary flying gap periods that generally span greater than 12 months. The first gap period begins prior to the Captains Career Course (CCC) and can extend for several months as a pilot awaits reintegration to a unit flight training program. The second gap follows company command during broadening assignments, Command and General Staff College (CGSC) or equivalent Professional Military Education (PME). The third gap period, follows Key Developmental (KD) operational flying periods characterized by 24-36 months away from flying.

While individual circumstances may vary, the typical commissioned Army aviation officer will experience three extended gaps in their flying duties as highlighted in figure 1-1 below from DA Pam 600-3 (2014, Figure 3-2, pp. 17). These three gaps, while essential for the
individual officer’s long-term professional development, represent predictable periods that usually exceed 12 months in duration. During these periods officers can anticipate extremely limited opportunities to practice their flying skills. In many cases, there are no opportunities to fly unless the individual resources the effort. Upon returning to a flying assignment after each of these gap periods, the pilot would require a standard assessment, re-training of basic piloting skills, and then integration training. For this program evaluation, the researcher focused on a population sample that was affected by the second flying gap period (CGSC/PME).

**Core Program Activities.**

The core activities associated with aviation proficiency revolves around a pilot evaluation, necessary re-training and integration. Regardless of total flight experience or rank, these program activities are used to assess a pilots’ abilities. This assessment model is used for pilots who have a lapse in flight currency for a period greater than 60 days for any reason to include extended absences due to career assignments. The procedures are documented in detail across various Department of the Army Regulations (AR), Aviation Training Manuals (ATM) and Training Circulars (TC), Army Regulation 95-1 Flight Regulation and TC3-04.11 Commander’s Aviation Training and Standardization Program. These sources outline the requirements and process for conducting official assessments for pilots through a combination of ground and flight proficiency evaluations.
These assessments are designed to evaluate the residual proficiency after pilots lapse in currency and then designate a proficiency Readiness Level (RL). The designated RL (i.e.: RL1, RL2 or RL3), determines the amount of re-training required before the individual can be fully re-integrated into the flying unit as a mission pilot. RL1 pilots are considered mission proficient in all tasks. Pilots designated RL2 will train on tactical mission tasks and RL3 pilots will train basic individual tasks for a mission platform (TC 3-04.11, 2016, pp. 8-4 to 8-7). While RL3 tasks involve aircraft specific tasks, there are some RL3 tasks and principles that are aircraft agnostic.

The respective aircraft ATM's outline a guide for full RL3 refresher training that is proficiency based. If individuals can maintain higher basic piloting proficiency while away from military flying, there is a high potential for cost savings and a more efficient use of resources.

Base Assumptions.
1. Serving in extended non-flying positions result in decreased pilot skill proficiency. Upon returning to flying duty, this decreased proficiency, increases the associated flight time, and cost to regain an acceptable level of basic piloting and mission proficiency.
2. The US Army Aviation community is interested in improving proficiency between periods of military flying, increase readiness, reduce individual training time to RL2 and efficiently manage available resources.

Definition of Terms.
ACP: Army Credentialing Program
AR: Army Regulation
ASEL: Airplane Single Engine Land
ATM: Aviation Training Manual
ATP: Aircrew Training Program
DA Pam: Department of the Army Pamphlet
DoD: Department of Defense
FAA: Federal Aviation Administration
FAC: Flight Activity Category
Research Questions (RQs).

• RQ#1: What is the average time required to complete refresher and reintegration training for a pilot who arrives from a recent operational flying assignment, (less than 12 months)? Note: This does not include personnel assigned after their initial flight training.

• RQ#2: What is the average time required to complete refresher and reintegration training for a pilot after an extended period of non-flying, (12 months or greater)?

• RQ#3: Is there a correlation between reduced time away from flying and retained proficiency?

• RQ#4: Do aviators who fly with an FAA rating outside of their military duties benefit from their rating and do they take less time to regain flight proficiency if they fly between operational flying assignments?

• RQ#5: Are Army aviators interested in a program that offsets training cost to acquire FAA airplane qualifications, with the aim of higher sustained piloting proficiency and enables them to fly between operational assignments?

• RQ#6: What low-cost proficiency aviation tools, resources or programs exist for aviators who are unable to fly their primary military aircraft for extended periods of time?

• RQ#7: What are the training requirements, timeline and average cost for an Army aviator to obtain an ASEL FAA certification?
The researcher intended to answer research questions #1 through #5 through the use of primary data in the form of a survey. The survey results and specific answers to each question will be addressed in Chapter IV as a component of the data analysis. Research question #6 and #7 will be addressed in Chapter II during the literature review as this information is available in the public domain as secondary data.

**Limitations and Delimitations.**

The research involved a sample population of Army aviation officers including active duty, reserve components, and retirees. The sample consisted of 72 personnel from the Command and General Staff College (CGSC) at Fort Leavenworth, Kansas. The survey was exclusively distributed through the CGSC Verint survey system which contained the available input to a small sampling over a two-week period. The population sample consisted of 56 Army aviation students and 17 faculty/staff members at the Command and General Staff College, Fort Leavenworth, KS (Appendix C: Clearance Letter Command and General Staff College).

**Summary.**

Chapter I outlines the foundation and critical background information that this study aimed to evaluate. This program evaluation identifies that there is a lack of efficiency in the management of pilot proficiency due to aviation officer professional broadening. While pilot assessments, re-training and integration after a lapse in flight currency might be effective it significantly lacks efficiency for pilots returning to flight after an extended lapse in currency. Chapter II will explore in more detail the relevant documents and background details necessary for further evaluation.
CHAPTER II: REVIEW OF RELATED LITERATURE

Introduction.

This chapter presents a summary of the information and concepts derived from the published literature surrounding the normal Army aviation officer career cycle. Further, this chapter will review proficiency management, as well as initial and recurrent training costs by hour for the US Army. This chapter will highlight relevant Defense Department guidance, Army priorities, regulatory requirements for training, proficiency and expectation within the Army Aviation community. Finally, this chapter will begin to identify the programmatic benefits, cost factors and opportunities for the United States Army to improve efficiency.

Background.

As a starting point, there were no other known studies, surveys or research that produced related data sets for consideration. It is also unlikely that the US Army is unaware of the issue of pilot proficiency after an extended absence. However, if data collection or research was conducted on this topic was inaccessible for this program evaluation or no longer exist.

The United States Army estimates the initial cost to train a new Army Aviator between $750,000 to $1,000,000 based on the mission design platform i.e. UH-60 Blackhawk, AH-64 Apache or CH-47 Chinook Helicopter (Nix, C., 2017). This is congruent with DoD estimates of $1 million for basic flight training and more than $9 million to fully train a pilot with the requisite operational experience (United States Government Accounting Office, 1999, pp. 3). This process takes a new officer with no flying experience, through a rigorous ground aviation academic program, basic visual flight and instrument flight training and then through advance military aircraft mission platform qualification in a period of 34 to 42 weeks (Wesolek & Army’s Air Maneuver Battle, 2016).

The CSA published his Readiness Guidance in January 2017 for Army Leaders at all levels. In this guidance, his priorities are being ready for the next conflict, optimizing limited resources, maximizing funds and efficiently delivering combat forces to Combatant
Program Evaluation of the US Army’s Model for Pilot Proficiency

Commanders. He specifically states, "Commanders will creatively generate the highest possible training readiness" which conforms to the focus of this evaluation.

In February 2017, Secretary of Defense, James Mattis, took his first steps and provided his vision for the Department of Defense to be an efficient and effective military (Read, R. 2017). His intent was to streamline operations and free up capital by developing “cross-functional teams” across military services in order to avoid the duplication of capabilities aimed at efficiency. In his memo Mattis said, “It is incumbent on each of us to accomplish this...in the most cost-effective, efficient manner possible” (SecDef, 2017).

Issues and Variables: Why it Matters.

This evaluation does not question the fundamental requirement for military flying proficiency or the high cost of training. However, it matters because if an organization can accomplish the same ends at a lower cost, then it is worth investigating. This section will address the issues and variables beginning with the estimated cost associated with additional individual flight training per hour, and the framework of proficiency management. It will also look at low-cost flying opportunities to sustain proficiency.

DoD Reimbursable Rates. The Fiscal Year (FY) 2017 Department of Defense Fixed Wing and Helicopter programmed reimbursement at the Operations and Maintenance (O&M) rates are as follow (DoD Comptroller, Program & Budget, 2016, pg. 9):

- **CH-47F**: $8,649 per hour
- **UH-60L/M**: $4,487 / $3,633 per hour
- **AH-64D**: $6,442 per hour
- **OH-58C/D**: $975 / $2,539 per hour
- **UH-72**: $2,587 / per hour
Table 2-1 provides a visualization of the potential cost associated with each additional flight hour committed to flight training due to unsustainable proficiency. As an example, if you have two CH-47 aviation officer who lapse in currency, both require an evaluation flight and potential re-

<table>
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<th>CH-47F</th>
<th>UH-60L</th>
<th>UH-60M</th>
<th>AH-64</th>
<th>OH-58</th>
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</table>

Table 2-1: 2017 DoD Aircraft Reimbursement Rates by Flight Hour.

training as depicted in Figure 2-1. The first officer last flew 61 days ago and requires only one (1) hour of flight to demonstrate basic flight proficiency. The pilot continues with mission training as programed and if necessary. The second officer, has not flown in over 18 months and it takes five (5) additional flight hours to demonstrate basic flight skill proficiency before continuing with more advanced mission training tasks. In this example, an additional $34,596 in Operations and Maintenance (O&M) resources were committed for the four (4) extra hours to bring the second pilot back to an acceptable level within the “band of excellence.” While the number of additional flight training hours will vary by individual, it is easy to see the added cost
margin that is present prior to beginning mission training. This chart reflects sample aggregate additional cost if baseline proficiency is not maintained over a pilot career under the current model. This chart does not account for less tangible resource draws such as limited instructor pilots as a resource pulled from higher priority training.

**Refresher Training & Progression Training.** While serving in an operational flying position, aviation officers who lapse in aircraft currency requirements (over 60 days since last flight) will be administered a flight evaluation (AR 95-1, 2016, pp. 25). A pilot returning to flying duty after any extended absence (minimum 180 days), will conduct refresher training. While 180 days is the minimum extended absence period, the current career professional development model leaves the pilot out of the cockpit for much longer periods of time. According to the UH-60 ATM,

"The refresher training program is designed for crewmembers that are initially integrated into the ATP as RL3 or have not flown in an H-60 aircraft in more than 180 days. It enables them to regain proficiency in all base tasks." (TC 3-04.33, 2013, pp. 2–2 to 2–3).

The UH-60 and CH-47 ATM’s use the same guide of 18-25 hours to complete refresher training. They also both assert that since refresher training is proficiency based, there is no minimum flying hour requirement (TC 3-04.33 & TC3-04.34, 2013). Using the low and high range of the refresher training guide, and the reimbursable rates from Program and Budget, 2016, for a UH-60 and a CH-47 the cost range for a normal refresher training program would be $65,394 to $112,175 and $155,682 to $216,225.

- UH-60 refresher training at $4,487/$3,633 per hr x 18 to 24 hours = $65,394 to $112,175.
- CH-47 refresher training at $8,649 per hr x 18 to 24 hours = $155,682 to $216,225.

The goal is to regain proficiency, and if this could be accomplished at the lower end of resource commitment then additional resources would be available for higher priority requirements.

**US Army Pilot Resourcing and Proficiency Management.** The framework to train and resource an operationally ready, proficient and responsive aviation force to support worldwide
deployments begins at the unit level by allocating training resources. From a service-wide Army level, pilot proficiency is managed by assigning personnel to either non-operational or operational flying positions. Each flying position is further allocated a designated number of flying hours the pilot must complete during a prescribed period (TC 3-04.11, 2016, pp.7-3 - 7-4). Pilots in operational flying positions are allocated training resources in a tiered approach, with a designated Flight Activity Category (FAC). Each FAC designation aligns with proficiency expectations, minimum required flight hours and task iteration requirements. The lower the FAC designation, the greater proficiency expectation i.e.: FAC-1 pilot have higher flying hour requirements and are expected to be more proficient than FAC-2 or FAC-3 pilots.

These FAC designations are broken out by aircraft in their respective ATM with specified flying hour requirements for the pilot. For example, per the CH-47 ATM, a CH-47 pilot designated FAC-1 was required to fly 45 hours in a semi-annual period (TC 3-04.34, pp. 2–7). Similarly, a UH-60 pilot was required to fly 48 hours in the same period (TC 3-04.33, 2013, pp. 2–4 – 2–5). It is through the operational and non-operational assignments coupled with the FAC designations that the US Army manages pilot proficiency requirements across the service.

According to the Commander’s Aviation Training and Standardization Program, when assigned to non-operational position, pilots are prohibited from performing aircrew member duties (TC 3-04.11, 2016, pp.7-4).

The Band of Excellence. The US Army aims to maintain readiness and proficiency at a highly sustainable level. That being said, Field Manual 7-0, (2016, pp. 1-3, 1-4) acknowledges the following:

“proficiency naturally fluctuates over time and in response to various factors. ...these factors, including training frequency, key personnel turnover, new equipment fielding, and resource constraints. Well-trained units seek to minimize significant variances in achieved training proficiency over time. This is training in a band of excellence. This common-sense approach precludes deep valleys in proficiency that occur when units lose their training proficiency. Failing to sustain proficiency requires more resources and time to retrain the unit. Training within a band of excellence is the key to sustaining long-range training readiness.”
Army flight units are required to develop coherent training plans to build individual, team and collective flight mission proficiency. Operational flight units are filled with pilots designated FAC-1. This means the challenge of an individual not flying enough to remain proficient is less of a concern. FAC-1 designations demand the highest proficiency with higher minimum flying hour requirements and it program with the appropriate resourcing to accomplish demands of mission proficiency. FAC-1 requirements at the flight unit level demonstrates that the US Army postures for proficiency within the “band of excellence” at the unit level.

This evaluation aimed to look at the increased cost incurred by bringing an individual pilot back to the “band of excellence” after spending an extended period away from an operational flying position. As is often the case, these individuals return to flying assignments in a lower FAC (i.e. FAC-2 or FAC-3). These lesser FAC assignments often demand less emphasis on flying duties which can result in further prolonging the timeline to regain the requisite flying proficiency. As an example, a pilot who has not flown for 24 months due to an assignment to a non-flying position and/or Professional Military Education could return to a flying unit as a FAC-2 pilot where their primary role is filling a key staff billet and their secondary duty is as a pilot. As mentioned, this presented a further challenge for returning to “the band of excellence.”
Low-Cost Pilot Proficiency Resource Options.

While there are several options in the private sector to maintain or even improve hands-on skills and aviation academic knowledge, few live and virtual tools are available to US Army pilots assigned to non-operational flying positions. The next section will discuss the Head Hunter program which fills a capability requirement and as a byproduct, allows aviators to remain flying. This section will also discuss flying clubs, civilian flight schools and the Army Credentialing Program which could present future opportunities for formal aviator proficiency programs.

Low-Cost Military Aircraft. One fairly successful pilot proficiency program does exist for those assigned to the US Army Aviation Center of Excellence (USAACoE) at Fort Rucker, AL. The purpose of USAACoE is to generate qualified helicopter crews for the US Army. A supporting task is to safely train while providing reliable communication, accurate aircraft tracking and the ability to rapidly respond in the event of an emergency. As a result of this secondary mission came the development of the Head Hunter Aerial Flight Following Program. This program and capability is provided by anywhere from 10-35 staff pilots on Head Hunter Aircrew Training Program (Pruyne, G. 2017).

"The primary purpose of the Headhunter (HH) Program is to provide vital flight following services for USAACE aircrews in training. The secondary purpose of HH is to afford flying opportunities to Fort Rucker aviators in order to develop leadership and flight experience."
(Procedures Guide for the Head Hunter Aerial Flight Following Program, 2017, pp.1)

These flights provide invaluable situational awareness, rapid response and long-range communications relay for training aircraft simultaneously operating across the local USAACoE flying area i.e. Alabama, Georgia and Northern Florida. For many staff pilots assigned to USAACoE and choose to participate in the Head Hunter Program, it allows them the ability to remain proficient in baseline aviation skills (Pruyne, G. 2017). The OH-58A/C has an operating
cost of approximately $975 per hour which is far lower than most mission aircraft (DoD Comptroller, Program & Budget, 2016, pg. 9).

Each day one-aircraft is flown three separate, 4-hour shifts manned by two pilots each, covering 12-hours of mission support to USAACoE primary training mission (Pruyne, G. 2017). While these pilots fill a critical mission requirement for USAACoE, they are also sustaining their piloting skills. For most pilots, the OH-58A/C was never their primary mission aircraft, however it provides a low-cost venue that allows for higher retained/sustained flight proficiency during a time when these staff officers would otherwise not fly.

With regards to re-training and qualification in the OH-58A/C, Mr. Pruyne mentioned that he typically will spends between 4-5 flight hours going over basic flight knowledge after a typical 2-3 years flying absence. This was attributed to both lower overall pilot flying experience as well as the extended duration of non-flying.

“There are cases where 15-23 hours are spent getting less experienced pilots up to speed on Basic pilot tasks...In the past, Pilots would come to Head Hunter with 1500-2500 hr of total flight experience and multiple combat deployments...Now we are lucky to have a pilot arriving with 1000 hours.” (Pruyne, G. 2017).

Mr. Pruyne stated that, individuals typically flew their semi-annual required hours (60 hours semi-annual) without any trouble and that some reached as many as 150 hours annually. He further mentioned that in his assessment the program was “very worthwhile" in keeping pilots proficient in base aviation tasks (Pruyne, G. 2017). Unfortunately, the Head Hunter program is only available to aviation officers assigned to Fort Rucker, AL and is not applicable to pilots assigned to non-flying positions in other duty locations. Additional notes from the information session with Mr. Pruyne are located in Appendix K.

**Flying Clubs and Personal Pursuits to Flight Proficiency.** Another possible option for pilots are flying clubs. While the once widely available military installation flying-clubs are no longer common place, Army aviators have the opportunity to train and fly civilian aircraft through civilian flight training centers and clubs. This requires an individual to personally commit time, energy which is less of a deterrent than and the financial resourcing required to seek a civilian rating. The average out of pocket cost for a non-military pilot to obtain an ASEL
was between $6,500 to $12,000 (Garrett, K., 2016). The cost varies based on individual proficiency and the program selected and according to Kyle Garrett, flying for recreation and proficiency averages $120 per hour (2016). A survey conducted by Jason Blair revealed that the average Certified Flight Instruction (CFI) cost between $21-30 per hour (Blair, 2016). The ASEL rating requires an individual to log at least 40 hours of flight time which includes at least 20 hours of flight training from an authorized instructor and 10 hours of solo flight training (FAA, 2016). With these figures the cost of a private ASEL rating is less than $6,000, $120 per hour x 40 hours of flight = $4,800, plus a CFI at $30 per hour x 20 hours of instruction = $600 for a total cost of $5,400. While this cost is may not appear high when compared to the Army’s budget, it is a high out of pocket cost for an individual.

Regardless of prior aviation experience, a pilot who is looking to obtain their Private ASEL is required to achieve flying milestones in a Single Engine Land Airplane before obtaining the rating. One of the options available to pilots with previous aviation experience is the more tailorable FAR Part 61 program. A FAR Part 61 approach provides a path to meet the ASEL rating milestones and the 40-hour flying requirement (Title 14 Aeronautics and Space: Part 61, 2017). This type of program customizes the training to the needs of the student, and is able to adjust their syllabus based on the previous aviation knowledge and experience. Part 61 schools are an attractive option for individuals who do not have either the upfront financing or time to commit to a full-time program. Students in Part 61 programs can be characterized as part-time student pilots.

From a historical perspective, the technique of augmenting military flight training with civil experience can be viewed similarly to an approach taken from 1939 to 1945. At that time, the US Army employed civil aviation schools which were considered an integral part of the pilot training system. During this era, the United States Army Air Corps and later Air Force employed civil aviation capacity to generate tens of thousands of military pilots (Craft, S., 2012).
Although, the circumstances were different, general aviation could provide a low-cost alternative to maintain baseline pilot proficiency during the non-flying years.

According to AR 95-1 Flight Regulations, in certain situations, civilian aircraft flight time may be credited toward the ATM requirements to include credit for tasks performed that are similar in all respects to the ATM task requirements (2016, pp. 25). The interrelated nature of the military flying in the National Airspace and the fundamental principles across aviation. The US Army acknowledges the benefit and parallels of civilian flight experience for military applications.

Even without direct resourcing the US Army expects that their pilots remain at a certain level of proficiency during non-operational flying assignments.

"Aviation majors will likely serve in operational flying positions after being away from the cockpit for some time due to schooling and required staff positions. Therefore, their self-development should also be focused on refreshing themselves with new Aviation technologies in the cockpit. They should set the example for the younger generation of officers by continuing to place a strong emphasis on their technical and tactical Aviation proficiency." (DA Pam 600-3, 2014, pp. 80)

The expectations laid out in the above statement are enforced by authority derived from AR 600-105 Aviation Service of Rated Officers. This regulation details procedures for removing an Army pilot from flight duty based on lack of proficiency or failures to meet requirements (2010, pp.17). At present, the high level of sustained proficiency outlined by US Army aviation is almost exclusively achievable through self-development. Outside of the few aviation officers with access to programs like Head Hunter at USAACoE there are no other programmatic options to maintain this expectation.

**Professional Credentialing in the Army a Potential Opportunity.** DoD credentialing began with Executive Directives including Legislative Directives through a series of National Defense Authorization Acts (NDAA) from 2012-2016 as well as DoD Directives from 2012 and 2015. These authorizations and directives have rapidly shaped service managed programs to translate military skills into civilian recognized qualifications, creating a pathway to
credentialing opportunities (Parson, J., 2017). On 11 March, 2015, the Secretary of the Army issued Army Directive 2015-12 "Implementation Guidance for Credentialing Program and Career Skills Program" which allowed the Army Credentialing Program (ACP) to take shape (The Army University, 2017).

The Army University at Fort Leavenworth, Kansas has led the management and expansion of the ACP for the Army which now includes 1,644 programs primarily focused on enlisted personnel and warrant officers (Parson, J., 2017). These credentialing programs are typically connected with a Military Occupational Specialty (MOS) or Additional Skill Identifier (ASI) qualification (Parson, J., 2017). Eventually this program may expand to officer career fields and be linked into goArmyed.com for Army Tuition Assistance (TA), which would provide a mechanism to manage the delivery of funds and educational accountability of these programs (Parson, J., 2017). Across the more than 1,600 ACP eligible offerings, the average cost is roughly $4,500 per credential. (Parson, J., 2017). Under the current model, the ACP conforms to three resourcing and objective pillars. The first pillar is "institutionally delivered." These programs are resourced by the military proponent or school with an objective which "builds Army readiness." The second pillar is "self-directed." These programs are resourced by TA, credentialing assistance, the GI Bill, or through personal funds and aim to "enhancing Army readiness while improving Soldier skills and competencies." The final pillar is "transitions." These programs are resourced by the installation's industry partners which prepare Soldiers for transition to the private sector (The Army University, 2017).

Summary.

This chapter reviewed the programmatic benefits, cost factors and opportunities for the United States Army to improve efficiency within the aviation community. To thoroughly discuss these topics, this chapter reviewed pertinent Defense of Department guidance, Army priorities,
policies and regulations for aviation, as well as proficiency expectations within the Army Aviation community. Further, this chapter began to identify the programmatic cost and benefits of proficiency and the opportunities that exist within the Army, private sector for low cost proficiency management. This chapter ended with an introduction to the Army Credentialing Program as it may pertain to future aviation credentialing opportunities that are delivered either, institutionally or individually as a means of improving sustainable readiness across the Army aviation community. There are many factors that render the current US Army aviation proficiency management program and leader development process effective, however from an efficiency stance there is room for improvement.
CHAPTER III: RESEARCH METHODOLOGY

Research Methodology.

The purpose of this study was to evaluate the US Army aviation pilot proficiency program from an efficiency point of view. Where Chapter II focused on the challenges and the existing military and civilian pathways to sustain pilot proficiency, Chapter III will address the methods used to collect primary data for analysis. In doing so this chapter will describe the indicators, research design, data collection, research questions and the synthesis necessary to more fully understand the problem.

Operational Indicators and Research Design.

The primary indicator that this research intends to look at is an increase in the number of flight hours required to return to basic pilot proficiency after an extended period of time away from flying. This research looked to establish the baseline of normal flying hours required for a pilot returning to flight duty after a short period away from flying. Second, the research needed to evaluate the difference between what was considered normal refresher flight training and any deviation to determine for someone with more time away from flight duty. If more time was required, then it could be assessed that the individual’s flight proficiency had degraded more as time passed.

The most accurate way to measure this data would be to pull this data from the pilot training records, known as their Individual Flight Records Folder (IFRF). The IFRF captures flight hours during training and could be used to answer the specific data points for further evaluation. The researcher identified that this would be the most direct approach in identifying potential trends with retained flight proficiency. However, it was not possible for the researcher to gain sufficient sampling of IFRF’s during the research period for the initial program evaluation. Also, it was assessed that obtaining a large enough sampling of IFRF’s during an initial evaluation would prove intrusive to the operational Aviation community for an initial evaluation, when no previous baseline assessment was established. Therefore, an alternate
The alternative approach and the path taken in this research was to employ a survey that solicited the experience and knowledge of a population sample of aviation professionals. The survey allowed each individual to provide their expectation of flight proficiency, whether personally experienced, or observed previously in a flying unit. This approach provided a mechanism to measure, quantitatively and qualitatively the expectations of retained proficiency. This does present the possibility for varied interpretation by the survey respondents. However, as an initial evaluation this approach provides a reliable baseline that further research can be conducted. Subsequently, it was recommended that subsequent researchers should employ a similar survey with a larger audience and should seek to gain access to IFRF’s as they provide the most quantifiable data for determining proficiency trends.

**Performance Criteria.**

For this research, the performance criteria were higher sustained piloting proficiency between operational flying assignments. The operational indicators for this criterion are the assessed number of additional flight hours required to regain pilot proficiency as compared to a pilot who flew more recently. Flight currency is normally within 60 days. For this survey, recent flight was defined as flying within the last year. The survey sought to measure the amount of time and effort required to regain proficiency after periods of non-flying from both a qualitative and quantitatively position.

**Data Collection.**

The evaluation data collected was done through an anonymous survey containing focused on the performance criteria and operational indicator, while simultaneously addressing RQ#1 through #5. The ideal target audience for the survey is a population of active duty, reserve component and retired US Army aviation branch officers. These officers must further fall into one of three distinct categories to accurately provide the data required for analysis. Category-1,
is a US Army aviation warrant officer who serves or served as either a Standardization Instructor Pilot (SIP) or an Instructor Pilot (IP) who serves as the expert evaluator in aviation proficiency at the unit level. Category-2, is a US Army aviation post-command company grade officer who recently managed an Aircrew Training Program (ATP) which inherently manages proficiency based task training at the program level. Category-3, consist of US Army Aviation field grade officers who either will or have already experienced successive gap periods in their professional flying career.

The survey questionnaire was accessible by invitation only through the Command and General Staff College (CGSC) Verint Survey System. A survey invitation was sent out via e-mail to the population sample (Appendix D: Survey e-mail Invitation to Population Sample) which consisted of 72 Army aviation students, faculty and staff members at the Command and General Staff College, Fort Leavenworth, KS (Appendix B: Clearance Letter United States Army Aviation Center of Excellence).

The invitation also included the survey informed consent letter and contextual background data (Appendix E: Survey Informed Consent Letter and Survey Background) for respondents’ general reference. Once distributed, the respondents had two-weeks to respond to the survey. The survey questionnaire (Appendix F: Survey Questions US Army Aviation Retained Pilot Proficiency) consisted of 13 questions. All survey results were anonymous to the researcher as personally identifiable information was removed prior to export of data results.

**Data Analysis and Synthesis.**

Once the data collection timeframe concluded, the raw data collected from the survey responses were compiled using a spreadsheet and the data analysis functions in the online survey platform, Verint Survey System. The raw data will be organized using percentages of the population sample for each question. In addition, the compiled data was analyzed using percentage representations of the data by the respondents’ airframe type.
Answering RQs through data collection. This section outlines the methods used to answer individual research questions. RQ#1 through RQ#5 was answered by surveying a population sample of Army aviation officers. This data collection and analysis provided the foundation for this program evaluation and for future research. RQ#7 and RQ#8 was addressed through the use of readily available secondary data outlined in the Chapter II Literature Review.

Primary data for RQ#1 was expressed through survey question #5 response data. **RQ#1:** What is the average time required to complete refresher and reintegration training for a pilot who arrives from a recent operational flying assignment, less than 12 months?

Primary data for RQ#2 was expressed through survey question #6 response data. **RQ#2:** What is the average time required to complete refresher and reintegration training for a pilot after an extended period of non-flying, 12 months or greater?

Primary data for RQ#3 was expressed through survey questions #10 and #11 response data. **RQ#3:** Is there a correlation between reduced time away from flying and retained proficiency?

Primary data for RQ#4 was expressed through survey questions #10 and #11 response data. **RQ#4:** Do aviators who fly with an FAA rating outside of their military duties benefit from their rating and do they take less time to regain flight proficiency if they fly between operational flying assignments?

Primary data for RQ#5 was expressed through survey questions #9 and #12 response data. **RQ#5:** Are Army aviators interested in a cost offset Pilot Enrichment Professional Stipend and Credentialing (PEPS-C) program to acquire an FAA airplane qualifications in order to retain pilot proficiency and fly between operational assignments?

Secondary data was used to address RQ#6 (Low-cost programs and tools) and RQ#7 (Training requirements, times and cost) in Low-Cost Pilot Proficiency Resource Options in Chapter II. Research question #6 and #7 are listed below.
RQ#6: What low-cost proficiency aviation tools, resources, programs exist for aviators unable to fly their primary military aircraft for extended periods of time?

RQ#7: What are the training requirements, timeline and average cost for a Military Officer (Helicopter pilots) to obtain an ASEL FAA certification?

Reliability and Validity.

Use of a survey was the most efficient way to collect data to directly answer the RQ's for this program evaluation. This research should serve as an initial touchpoint for future research on the subject area. Reliability of the survey is based on the directed experiences of the survey respondents. The target audience was chosen for their unique perspective as aviation leaders who were affected by the research topic either personally or as an organizational leader in which they managed the challenges being researched. Their professional expertise should be considered highly reliable. The survey is valid based upon the unbiased and non-attributable input by the respondents to each question. Participation completely voluntary and should not be perceived as self-serving primarily because any changes implemented from this research are unlikely to directly benefit the respondents during their military careers. It is however possibly to gain greater reliability and validity if the researcher were to obtained access to personnel flight records or the survey audience was expanded to the larger Army aviation community.

The survey questionnaire was designed to be anonymous survey and was tested by five US Army officers (four aviation officers and one non-aviation officer). The feedback received from the test surveys were incorporated in the final survey. The original draft survey was 11 questions and was adjusted to 13 in an attempt to provide more clarity on aircraft specific cost. Also, survey question #3 was added to assess the general interest in a pursuing low cost flying options from a pilots’ perspective.

Scope and Limitations.

The designed scope and limitation of this research is to begin the professional dialog that addresses the possible efficiency deficiencies with one or two viable program improvement
recommendations for consideration by the US Army aviation proponent, USAACoE. As previously discussed, retained pilot proficiency is most accurately evaluated by calculating the actual and specific number of hours required and officially recorded during refresher training. The Individual Flight Record Files (IFRF) is the official record for pilot training and proficiency. As such it is the best way to evaluate the time required to regain base aviation skill proficiency exist only at the Army aviation unit level, and would require the review of hundreds records to evaluate trends. While this may become necessary in subsequent evaluations and research, it is not the intent nor is it within the scope of this initial evaluation to conduct such a resource intensive assessment. Finally, while the three (3) categories of respondents were ideal, due to limitations on approved access, the survey was only disseminated to a sample population containing Category-3 personnel.

Summary.

Chapter III outlines the method and design of data collection while beginning to define the systematic approach necessary to complete data analysis and information synthesis. Further, this chapter addresses how the research approach improves overall reliability & validity, as well as the overall scope necessary and designed limitations of this research project.
CHAPTER IV: DATA ANALYSIS

Introduction.

This chapter will provide a written description of the data with respect to the survey question and provide contextual basis for addressing the stated research questions. Further, in detailing the results from the research survey this chapter provide the five take away elements and challenges with regards to the overall program evaluation of the US Army’s pilot proficiency model.

Description of Data Sources.

During this initial program evaluation only Category-3 personnel were surveyed. This did not include any warrant officers or pre-command company grade officers. The survey was administered during a two-week period that ended on 09 May 2017. With 35 responses, it has a confidence level of 95% and a confidence interval of 12. To increase the accuracy and confidence level, a higher response was required. It was recommended that future surveys be sent to a larger population sample that includes Category-1 and Category-2 aviation professionals. More information is available on the three population categories in Chapter III: Data Collection.

The Category-3 sample population consisted of 48 active duty, regular Army aviation officers, five (5) Army National Guard Officers, and three (3) members from the US Army Reserves. The faculty and staff composition consisted of seven (7) retired Army aviation officer and 10 active duty aviation officers. A total of 35 respondents completed the survey of the 72 individuals in the population sample. From those 35, a total of 46 individual aircraft qualification responses were identified. The 46 individual aircraft types will be used to express potential sample cost and savings in Chapter V. While some questions had as high as 46 responses (i.e.: aircraft demographics) most survey questions had 35 or fewer responses. The survey results are available in Appendix G: Survey Results US Army Aviation Retained Pilot Proficiency.
Technical Interpretation with Pertinent Data.

RQ#1: What is the average time required to complete refresher and reintegration training for a pilot who arrives directly from a operational flying assignment, flown within the last 12 months? RQ#1 was intended to provide a baseline expectation from the population sample of the average flight time required for a pilot to integrate into a flying unit through base flying tasks (RL3 Complete). Survey question #5 specifically addressed this RQ and the results are graphically depicted below. The results indicate 67.65% believed the average pilot would require between 5-15 flight hours to complete integration flight training after having recent flying experience within the proceeding 12 months. Only 20.58% of respondents believed that average pilot would require less than five (5) flight hours and 11.76% indicated it would take more than 15 hours to accomplish the same level of flight proficiency when joining a new flight unit.

RQ#2: What is the average time required to complete refresher and reintegration training for a pilot after an extended period of non-flying, (12 months or greater)? Survey question #6 specifically addressed this RQ and the results are graphically depicted below. The majority of responses, 79.4% (27 respondents), indicated that individual re-training upon returning to an operational flying assignment would range between 5-15 additional flight hours. Based upon these results, a mean of 10 flight hours was used to calculate potential cost and savings during the program evaluation.

Only four respondents believed that fewer hours would be required to regain proficiency. One of those respondents indicated that it would require zero (0) additional flight time to regain proficiency. Two respondents indicated it would require more flight time. One of these respondents indicated an additional 30 flight hours would be required. The final respondent noted that it,
“Depends on the proficiency of the pilot before the extended absence began; <500 hours might need 20+; <1000 hours might need 15; >1000 hours should be able to do it in 5-15 depending on any specialty training (IP, MP, etc)” – anonymous respondent

RQ#3: Is there a correlation between reduced time away from flying and retained proficiency? Together, survey questions #10 and #11 aimed to address whether there was a relationship between latency in flying and retained proficiency. Based on the majority responses of these questions the population sample believed that there was a qualitative correlation between time away from flying and retained proficiency. A follow up study is required to determine the quantitative ratios between the amount of time away from flying and the additional flying hours necessary for re-training.

Survey question #10 asked, “Do Army aviators retain higher proficiency in basic piloting skills when they fly low cost aircraft (i.e.: Cessna172, OH-58) between operational assignments?” Thirty-one respondents (93.93% of responses) indicated that they either “Strongly Agree” (63.63% / 21) or “Somewhat Agree” (30.30% / 10). One respondent indicated they were “Unsure” and one indicated that they “Somewhat Disagree,” together comprising 6.06% of responses.

Survey question #11, asked whether “Flying civilian airplane between operational assignments directly correlates to regaining mission proficiency in their primary military helicopter more rapidly (i.e.: UH-60, CH-47, AH-64 etc)?” As a result, twenty-eight respondents (84.84% of responses) indicated that they either “Definitely Agree” (42.42% / 14) or “Somewhat Agree” (42.42% / 14). One respondent indicated they were “Unsure” and three indicated that they “Somewhat Disagree,” together comprising 12.12% of responses.

RQ#4: Do aviators who fly with an FAA rating outside of their military duties benefit from their rating and do they take less time to regain flight proficiency if they fly between operational flying assignments? RQ#4 is addressed by survey questions #10 and #11 which are
detailed above. From a qualitative position, the respondents indicated that there was a positive correlation between flying outside of their military duties and retained flight proficiency.

Subsequently, survey question #13 provides critical insight to this RQ. Survey question #13 was an open-ended question which was not originally designed to address RQ#4. Survey question #13 asked, “Are there any additional comments or recommendations you believe should be considered to improve Army pilot proficiency?” All of the responses were extracted from the raw survey results to create Appendix H (Additional Survey Feedback from 14 Respondent) to provide more precise discussion of the anonymous respondent’s feedback.

Of particular interest, was the following provided statement:

I have been away from the aircraft for 2 1/2 years. I personally feel that my aviator skills have atrophied significantly in that time. In the last year, I took it upon myself to get current in single-engine, fixed wing aircraft (at my own expense). The effects have been significant, as I have re-gained my experience in operating with Air Traffic Control, communications, pilotage, navigation, flight planning, etc. With my first few flights, I noticed a significant degradation in my cross check and overall situational awareness in the airplane. Instrument flying skills are another big aspect of time away from the aircraft. This is a safety issue, and one that needs consistency to grow confidence and competence. I have invested several thousand dollars of my own money in order to remain "relevant" in the aircraft, and I will continue to do so absent [of] support from the Army. Would the Army be better served spending a few thousand dollars on each aviator in a non-flying assignment, or several tens of thousands of dollars extending the aviator's RL progression upon returning to a flying assignment? I for one would take full advantage of any program that would help me maintain my proficiency as a professional aviator. (Appendix H: Respondent F, 2017)

Another respondent stated,

Flying civilian aviation aircraft would definitely help with proficiency. Often, the hardest skills to ‘get back’ are general communications, instruments, filing, and weather.” (Appendix H: Respondent I, 2017)

RQ#5: Are Army aviators interested in a cost offset Pilot Enrichment Professional Stipend and Credentialing (PEPS-C) to acquire an FAA airplane qualifications in order to retain pilot proficiency and fly between operational assignments? Together, survey questions
PROGRAM EVALUATION OF THE US ARMY’S MODEL FOR PILOT PROFICIENCY

#9 and #12 aimed to address this RQ. Subsequently the results indicate that there is a strong demand from the population sample for a *cost offset Pilot Enrichment Program*.

Survey question #9 asked, “If you were provided a no-cost or low cost Pilot Enrichment Stipend to acquire an FAA airplane qualifications in order to retain pilot proficiency and fly between operational assignments how likely would you be to take advantage of this type of program?” There were 33 responses to this question. Thirty respondents (90.9% of responses) indicated that they were either “Very Likely” (75.75 / 25) or “Likely” (15.15% / 5). Two respondents indicated they were “Unlikely” to take advantage of such a program.

Survey question #12 asked, whether the respondent believed “Army aviation officers should pursue opportunities to fly civilian aircraft during the "in-between years" of operational flying assignments whether personally or Army funded?” As a result, twenty-six respondents (78.78% of responses) indicated that they either “Definitely Agree” (33.33% / 11) or “Somewhat Agree” (45.45% / 15). One respondent indicated they were “Unsure” and three indicated they “Somewhat Disagree” together comprising 12.12% of responses.
Survey question #13 provided other key insights with respect to the desire to partake in such a program.

“I actually began conducting training for my private pilots license (single engine airplane) a few years ago. Even though other priorities took precedent and I have not yet completed the training, part of my reasoning was to maintain some basic airmanship skills that are bound to erode during non-flying times in my career. I think if the military were to provide financial assistance, you'd see a lot more aviators taking advantage. ... One additional factor as to why I have not completed the training is the cost.”  
(Appendix H: Respondent C, 2017)

RQ#6: What low-cost proficiency aviation tools, resources, programs exist for aviators unable to fly their primary military aircraft for extended periods of time? The literature review of “Low-Cost Pilot Proficiency Resource Options” in Chapter II discusses this RQ at length. Ultimately, Army managed program wide pilot enhancement options are very limited with the best know being the Head Hunter Program, which is only available at Ft. Rucker Alabama. The few options that exist in the private sector are often too costly for individuals to personally sustain and therefore often yield less significant benefit for the individual and for the US Army as an aviation enterprise. While general aviation aircraft are relatively low-cost compared to Army aircraft, one response to survey question #13 captures the sentiment of other respondents by stating, “I can't afford to fly too much since it is so expensive.”  
(Appendix H: Respondent D, 2017)

Survey question #13 provide both supportive ideas of those discussed in Chapter II as well as the following two additional concepts. The first, recommendation was that the Army should,

“Provide low-cost access to simulator based flying, either at a facility on the base they are stationed on or by computer based software at their home/work computer.”  
(Appendix H: Respondent N, 2017)

The second additional recommendation was that Aviators should be allowed to fly on local units ATP during their non-operational assignment.

“As an assistant BAO, I was not allowed to drive fifteen minutes down to the airfield once a month for a 2-hour flight to retain proficiency. Then, in many cases, aviators on broadening assignments to grad school, ROTC, etc.
within a reasonable distance of an ATP. I did grad school within a few hours of Ft. Knox, which has an Apache BN, and I wasn't allowed to fly” (Appendix H: Respondent g, 2017)

RQ#7: What are the training requirements, timeline and average cost for a Military Officer (Helicopter pilots only) to obtain an ASEL FAA certification? The foundation for answering RQ#7 was provided in Chapter II with respect to the available flight school training options (FAR Part 141 or Part 61 schools) that are available to student pilots regardless of experience levels. The following will discuss the key considerations for military helicopter pilot with respect to their options of a formalized Part 141 school and a Part 61 school. A military pilot should expect to pay between $5,000-$6,000 for their ASEL private rating. While flight school prices vary, the average cost example is, $120 per hour x 40 hours of flight = $4,800, with a CFI rate of $30 per hour x 20 hours (mandatory dual instruction) = $600 for a total cost of $5,400. The time required to complete flight training will also vary based on the individual program selected, individual flight proficiency, motivation, steady funding and availability to train.

FAR Part 61.73 covers the special rules applicable to military pilots or former military pilots. While military pilots are equipped with general aviation knowledge, pilotage skills and abilities, the FAA further outlines specific requirements for obtaining an ASEL certification that differ from the those directly transferable from military helicopter experience. As such, military pilots must meet those requirements that were not previously instructed or performed in an aircraft and in some instances performed specifically in an airplane versus a helicopter.

Having military flight training previously, reduces the necessity of some ground school curriculum, such as general aviation fundamental principles, weather, airspace etc. In a Part 141 school the military pilot is likely to encounter an overlap in the curriculum from training previously received.

While refresher training is not inherently bad, military pilots are often better suited for the FAR Part 61 meaning that they can customize their learning experience to an individual’s needs and focus on airplane specific requirements. This method would still provide the necessary ground-flight instruction and the hands on application in various conditions within the airplane (i.e.: Dual, Solo, Night flight, Cross-Country etc) for a total of 40-hour prior to a qualifying check ride (FAR Part 61, 2016). As such a military helicopter with an FAA rotary wing rating
must meet the mandated instruction, solo flight, and prior to demonstrating hands on proficiency in an airplane to obtain their fixed wing license (FAR Part 61, 2016).

Summary.
The data indicates that there are five take away elements and challenges with regards to the overall program evaluation of the US Army’s pilot proficiency model.

First, some Army aviation professionals believe there is a correlation between time away from flying and reduced pilot proficiency. Second, the expected time to recover proficiency ranges between 5-15 additional flight hours above what a pilot with recent flight experience would require. These hours directly translate to higher fiscal resourcing requirements. Third, the population sample indicated that flying general aviation or other low-cost aircraft could provide positive proficiency benefits. Fourth, several pilots were discouraged to personally pursuing proficiency flight training outside of their professional career due to the relatively high personal financial investment required with little extrinsic professional return on investment. Fifth, regardless of cost, the same discouraged pilots still appeared to have an appetite for improving their proficiency, particularly if a subsidized option were available.

As indicated previously, the current US Army pilot proficiency model coupled with the professional development model takes an effectiveness rather than an efficient approach. That is, the Army is focused on aviation professional development as leaders independently of their development as professional pilots. While this approach may be effective, it also costly.
CHAPTER V: SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

Summary.

The five elements and challenges detailed in the Chapter IV summary must be addressed before the US Army can shift from a mutually exclusive leader development or pilot developmental model toward a more complimentary model that is both efficient and effective. A complimentary model should not be interpreted as diluting leader development, but rather as modifying the model to gain greater efficiency for both leader development and pilot sustainment. Creating a model that aims to achieve the right mix of leader development without depriving pilot proficiency to the point of atrophy will be a constant struggle. Reaching the optimal balance may still require situations where pilot flight proficiency is set aside to achieve the desired leader outcome. This chapter will provide a recommendation for a low-cost mutually supportive approach to optimize leader-pilot development/sustainment throughout an Army aviation officer’s career. Additionally, the recommendation has the potential to improve readiness, yield tangible cost savings, and provide aviation officers with professional civilian credentials.

Context & Problem.

The Army aviation officer developmental model attempts to balance the individual's professional developmental needs with total army manning, resourcing and leadership requirements with less emphasis on commissioned officer pilot proficiency. From this perspective, the Army is effective in producing competent mission focused leaders with a broad experience base. This approach leaves aviation pilot proficiency as a lower priority, with the acknowledgment that additional resources could be allocated to regain proficiency at a later date. While this approach may be effective, it is not efficient.

Research Objective.

The objective was to evaluate the Army’s proficiency model, determine if the problem of reduced proficiency after non-flying assignments was evident to other Army aviation
professionals, expanded to the discussion to address the issue and to provide a recommendation to improve the current model.

The objective aimed to evaluate the retained proficiency of US Army pilots after experiencing an extended period away from flying their primary military aircraft and to present a viable low-cost option that could reduce re-training time and cost for the US Army. The premise being, that if an individual retained higher proficiency between flying assignments, then it might be possible for an individual to more rapidly return to mission proficiency.

Data Interpretation.

The survey results indicated that a pilot with an extended flying gap would require between 5-15 additional flight hours to regain proficiency when compared with a pilot who has recent flight experience. When you conservatively apply 8-flight hours, two less than the survey median value of 10-flight hours, the cost associated with re-training was $2,050,680. This cost

<table>
<thead>
<tr>
<th>Reimbursable Rate by ACFT</th>
</tr>
</thead>
<tbody>
<tr>
<td># Hr</td>
</tr>
<tr>
<td>+1h</td>
</tr>
<tr>
<td>+6h</td>
</tr>
<tr>
<td>+8h</td>
</tr>
<tr>
<td>+10h</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Example Career Cost Per Pilot for Added Flight Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost to fly additional hours after non-operational flying assignments</td>
</tr>
<tr>
<td>AvgHrs</td>
</tr>
<tr>
<td>GAP 1: Post CGC</td>
</tr>
<tr>
<td>GAP 2: Post CGSC</td>
</tr>
<tr>
<td>GAP 3: Post KD O4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Est. Additional Career Cost to Retrain One Pilot By ACFT Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>$207,576</td>
</tr>
</tbody>
</table>

Table 5-1: Additional Cost of Training After Extended Absence.

estimate only accounts for the 46 CGSC students who completed the survey question pertaining to aircraft assignment. This value would be higher if the aircraft types were known for all 56 CGSC students. The CGSC aviation population who took the survey were personally
experiencing the previously identified, 2nd career flying Gap in support of Professional Military Education.

As a gauge, Table 5-2 provides a sampling of the cost associated with flying various military helicopters for 1-flight hour as well as 6, 8 and 10-flight hours. These values were selected based on the premise that fewer hours would be required to regain proficiency as a pilot progresses during their career. It is reasonable to expect a more senior pilot with greater overall flight experience would regain proficiency with less additional training than a more junior pilot (i.e.: Gap 1 aviator vs. a Gap 3 aviator). An aviator in their 1st Gap period may only have between 300-800 career flight hours while a 3rd Gap aviator may have between 1200-2000 total flight hours.

**Recommendation: Pilot Enrichment Professional Stipend and Credentialing Program.**

It is possible to reduce the high re-training cost and still ensure aviator flight proficiency while officers are serving in non-flying professional development assignments. The recommendations to follow aim to simultaneously address pilot proficiency with a low-cost solution that mutually supports optimized leader-pilot development, improves readiness, yields tangible cost savings, and provide aviation officers with professional civilian credentials. The recommendation is for the Army to institutionally offer a continuity of flight program that would provide a path to civil flight certifications for US Army pilots. This is particularly beneficial for those US Army pilots who will serve in non-operational flying assignments. This program would provide the additional skills necessary to enable hands-on pilot sustainment opportunities resulting in maintaining flight skill proficiency over long-term gaps between operational flying assignments. Like other US Army professional credentialing programs, this Pilot Enrichment Professional Stipend and Credentialing (PEPS-C) program aims to enhance individual skills and maintain higher levels of professional readiness at an institutional 20-year career cost of $15,600 per pilot, distributed in three allotments (See Table 5-3 for distribution plan).
With institutional funding, the PEPS-C program would be a cost saving measure that could revitalize sustained readiness for aviation professionals across the Army. Ideally, the funding would go toward FAA certifications and the cost required to operate low-cost general aviation platforms during a non-flying assignment. The proposal is that by nurturing an individual’s aviation professional knowledge and hands-on application during the off years, the Army would sustain higher individual proficiency while simultaneously saving resources in the near and long term. Overall, the benefits and savings would be significant, with little overhead to the US Army as this training is readily available in private sector and could be managed as an educational stipend.

**Proposed PEPS-C Data on Cost and Savings.** As previously mentioned, the program evaluation surveyed 72 Army aviation professionals at the Command and General Staff College (CGSC) in 2017. While only 35 respondents completed the survey, 46 individual aircraft qualifications were identified. For the purpose of this example, 46 individual aircraft types will be used to express potential cost for this small pool of students. With a conservative estimate that these pilots would only require eight (8) additional flight hours during re-training in their

<table>
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<tr>
<th>Aircraft</th>
<th>CH-47F</th>
<th>UH-60L/M</th>
<th>AH-64</th>
<th>OH-58D</th>
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<td>19</td>
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<tr>
<td>Total # Aircraft Responses</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Post Gap 2: Retraining Cost</td>
<td>$761,112</td>
<td>$682,024</td>
<td>$463,824</td>
<td>$60,936</td>
<td>$82,784</td>
</tr>
</tbody>
</table>

| Est. One Year Retraining Cost for All Respondents | $2,050,680 |

*Table 5-2: Estimated Re-training Cost for CGSC Population after Gap 2 Period.*
respective military aircraft following CGSC, the cost of this re-training is estimated at $2,050,680 (Table 5-2). The cost for the same 46 CGSC students to participate in the PEPS-C program while attending CGSC would be only $220,800 (Table 5-3). Further, the estimated total career credentialing cost for the same 42 pilots be only be $717,600 (Table 5-3). Assuming the

| Career Cost of Pilot Enrichment Professional Stipend and Credentialing (PEPS-C) For CGSC Respondents |
|------------------------------------------------------|--------|--------|--------|--------|--------|--------|
| PEPS C A: Credentialing Qual | AvgHrs | CH 47F | UH 60L | UH 60M | AH 64 | AH 58D | UH 72 |
| Private ASEL + 40 hr | $6,000 | $6,000 | $6,000 | $6,000 | $6,000 | $6,000 |
| PEPS C B: Credentialing upgrades and sustainment Right | ~40 hr | $4,800 | $4,800 | $4,800 | $4,800 | $4,800 |
| PEPS C Block C: Credentialing upgrades and sustainment Right | ~40 hr | $4,800 | $4,800 | $4,800 | $4,800 | $4,800 |
| Total Program Cost | ~120 hr | $15,600 | $15,600 | $15,600 | $15,600 | $15,600 |

| CAREER COST SAVING POTENTIAL For One Pilot By AC/FT Type |
|------------------------------------------------------|--------|--------|--------|--------|--------|
| CAREER Stipend Cost for 46 Associated Respondent’s (CGSC Population) | $191,976 | $92,888 | $71,592 | $139,008 | $48,336 | $46,488 |
| PEPS B Cost for 46 Associated Respondent’s Aircraft (CGSC Population) | $220,800 |
| Potential One Year Cost Avoidance For Re-training (CGSC Population) | $1,605,608 |

Table 5-3: PEPS-C Career Cost Projection Compared to CGSC Re-training Cost.

PEPS-C disbursement of $220,800 for sustainment flying during the second career flying gap period saves all eight (8) hours of re-training cost, the potential savings for this one-year period would be $1,829,880. In this example, the (total career proficiency stipend with three disbursements for 46 pilots = $717,600) minus (one-year re-training cost for 46 pilots = $2,050,680) yields potential cost savings of approximately $1,605,608.

Ideally the PEPS-C would include three stipend disbursements. One disbursement would be available during each major non-flying period throughout an officer’s career and would equal
approximately 40-hours per stipend disbursement for a total of 120-hours in a low-cost aircraft. This would enable a pilot to obtain their Private Airplane Single Engine Land FAA license and sustain their basic flying skills during non-operational assignments. It would also allow an individual to pursue advanced ratings simultaneously as a further credentialing program.

Future Employment Validation and Feasibility.

While the program evaluation provided a low-cost, high-payoff solution, it also emphasized the need for further research and validation. Prior to future employment of PEPS-C, the evaluation must be expanded to specifically identify the proficiency challenges and validate optimization options. Finally, further studies must assess the feasibility of implementing the low-cost, high-payoff Pilot Enrichment Professional Stipend and Credentialing program.

The program evaluation provides Army aviation with a low-cost, high-payoff recommendation that would optimize readiness, improve aviator basic skills proficiency and achieve cost savings. Aviation leaders at all levels need to begin shifting the culture focused on effectiveness toward one of efficiency to ensure long term strategic readiness in the band of excellence.

Conclusion: Proposal for Future Research.

Based upon the data from this initial program evaluation, there appears to be an imbalance between aviation officer pilot proficiency and the leader development model that the US Army should investigate further. This imbalance results in higher training cost as pilots return to flight positions after an extended absence from flight duty. As a whole, existing data related to the benefits of retained Army pilot proficiency through the use of low-cost general aviation aircraft is under developed. While it is generally understood that aviation knowledge
and experience can be transferable, the industry specific nature of military aircraft limits research opportunities and applicability to that of the Department of Defense. To further increase reliability and validity, further research and analysis should be conducted with the aim of reaching a larger population for input. Also, data collection should not be limited to surveys, as a significant amount of data exist at the unit level in the individual flight training records. Access to this information was limited, therefore, collection and analysis was beyond the and resource capability of this initial evaluation.
REFERENCES


LIST OF APPENDICES

Appendix A: Clearance Research Request Approval Mount Pleasant
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Appendix C: Clearance Letter Command and General Staff College
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Appendix K: Notes from Head Hunter Information Session with Mr. Gary Pruyno USAACoE
Appendix A: Clearance Research Request Approval Mount Pleasant

From: Christina Leigh Prout
To: Scott M Messare
Cc: Robert E Weltzer Jr, Fort Leavenworth Center - CEL

Research Review Application approval/S. Messare
Yesterday at 12:03 PM

Dear Scott,

Your Research Review Application has been reviewed and approved. You may start your data collection. This approval will not expire as long as your topic and methodology remain unchanged. If your topic or methodology changes, please submit a new Research Review Application and supporting documents to your instructor by e-mail.

Please contact your instructor if you have any questions. Also, be sure to check with your instructor concerning the due dates for your project.

Good luck with your project. This is the only notification you will receive. Please keep a copy for your records.

Kim Gribben
Assistant Director, MSA Program

Christina Prout
Administrative Secretary Master of Science in Administration Program
Rowe 222 | Central Michigan University | Mount Pleasant, MI 48859
Ph: 989-774-6525 | Fax 989-774-2573
1-800-950-1144, ext. 8525
* prout1@cmich.edu
8: Visit us online!

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COST BENEFIT ANALYSIS BETWEEN US ARMY AVIATORS WITH AND WITHOUT FAA RATINGS AS IT RELATES TO THEIR RETAINED FLYING PROFICIENCY

For Masters of Science in Administration
Proposed Thesis Topic
MAJ Scott Messare

Problem / Opportunity: How does the US Army achieve "sustained proficiency within the band of excellence" per FM 7-0 for aviators who routinely depart operational flying positions throughout their military career (normal assignment cycle) in a resource constrained environment.

Methodology and Hypothesis: Conduct a cost benefit analysis between the cost (Hours/Dollars) of aviator refresher, reintegration, progression training for an individual with non-military FAA ratings i.e.: Single Engine Land Airplane (ASEL) or other, compared to an aviator who only flys military aircraft when assigned to an operational position.

I would label this Hypothesis. Army aviators with personally acquired FAA ratings who fly outside of the military maintain higher base aviation skills and proficiency between operational assignments. This in turn translates to a more rapid return to mission proficiency thus reducing training/operating cost in military aircraft for the US Army.

To conduct a detailed analysis, I require the information below. Some of this data is publicly available while others will require coordination with various military organizations. Data collection from pre-existing surveys, assessments, cost projections or through new surveys may be used to answer the following data gaps.

1. What is the operating costs for military aircraft? (DoD Comptroller Reimbursable Rates-Latest version)
2. What is the estimated average cost per student pilot to complete training? (U.S. Army Aviation Center of Excellence)
3. What is the average time required for aviators returning to operational flying to complete the required Refresher, Progression, Reintegration training after an extended period of non-flying assignment? (Survey conducted with Army Aviation Standardization)
4. Does an aviator with an FAA Rating outside of their military flying experience require less time to regain mission proficiency than one without extra-military flying experience? (Survey conducted with Army Aviation Standardization)
5. Average cost of FAA qualifications? (FAA/FAR/AIM)
6. Training requirements, timeline for Military Officer (Helicopter pilots only) to obtain FAA Cert for airplane rating with estimated cost? (Flight School survey/FAA/FAR/AIM)
Additional interest areas:
1) Cost to obtain a Private Single Engine Airplane FAA rating which provides aviators with the ability to continue flying while in non-operational military flying assignments?

*Estimate:* $4,000-$6,000 per pilot cost for FAA Private rating with military competency

2) What is the potential return on investment or savings associated with a higher baseline proficiency due to recency of flight? Potentially reduced training time and reduced cost per aviator over a military lifecycle.

*Reimbursable rate:* $3,200-$9,533 per hour

Assumptions:
- Serving in extended non-flying positions results in decreased proficiency upon return to a flying position. This increases the time, effort, associated cost and resources required to regain acceptable level of mission proficiency.
- There is interest by the US Army Aviation community to maintain proficiency between periods of military flying.
- There are two primary means of filling this qualification gap: individually funded qualification incentive program and US Army funded qualification incentive program.

Background: The initial investment by the US Army in new aviation officers is substantial. The career cost of maintaining aviators proficiency is even higher. US Army Commissioned Officers in particular frequently spend extended periods of time away from flying positions after their initial 6-years of aviation service. When commissioned officers return to flying after fulfilling non-flying positions, they complete required reintegration flight training which varies in cost and duration based on the residual proficiency of the pilot and advanced military platform.

My cost benefit analysis will focus on the tangible cost benefit for the US Army and the potential proficiency benefits for the individual aviator) though simply obtaining their FAA qualifications as an alternatives to flying military aircraft (i.e. Single Engine Land Airplane). These ratings would allow aviators to fly independent of their military assignment but particularly during the years between operational flying positions.

The point of contact for this proposal is MAJ Scott Messare at:
Appendix C: Clearance Letter Command and General Staff College

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Dear Scott Messare

I have reviewed your request to conduct research involving Army Aviation Officers using the student and faculty population from the Command and General Staff School (CGSS). Once all permissions are in place, you will have access to the CGSS population.

The following stipulations should be observed:

1. In order to collect data, you must have Central Michigan University IRB approval prior to receiving an administrative review from the Command and General Staff College Human Protections Administrator.

2. You must use the Verint Survey System for data collection. Data collection is limited to surveys.

3. Your administrative review will be based on your final protocol submission. Therefore, you will need to submit a current protocol with updated content prior to the administrative review. You will not be allowed to make changes to the protocol, interview questions, or informed consent once the administrative review is complete.

4. Should you decide more data collection is necessary after survey data collection is complete, you will need to submit a request for protocol modification to this office, requesting change approvals. Under no circumstances are you allowed to alter, modify, change, or add to your current protocol without approval from the HPA.

If you have any questions regarding this letter of approval, please call 913-684-7311.

Sincerely,

Bobbie Murray
Human Protections Administrator
Command and General Staff College
Fort Leavenworth, Kansas 66048
ATZL-LSA-HPA

5 April 2017

Scott Messare
319 Pope Ave #1
Fort Leavenworth, KS 66027

SUBJECT: DoD Institutional Administrative Review Approval

Your protocol to research Army Aviation Officers titled “Program Evaluation for US Army Pilot Retained Proficiency After Extended Period Away From Flying Assignments” dated December 12, 2016 was administratively reviewed on April 5, 2017 in accordance with Department of Defense Instruction (DoDI) 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research.

The Central Michigan University (CMU) Institutional Review Board (IRB) acting as a federally assured institution under assurance number FWA00000755 is the supervising IRB for your research study. This administrative review concurred with the risk determination of the CMU IRB as no greater than minimal risk and that the project is not human subjects research.

This project is for completion of CMU classroom requirements and is not designed to contribute to generalizable knowledge. It therefore fails to qualify as human subjects research and does not need to include human subjects protections required by 32CFR219 (45CFR46) and DoDI 3216.02.

Your proposal is approved with the following stipulations.

   a. Current Department of the Army policy prohibits the use of Survey Monkey or other third party survey systems to collect data from DoD employees. You must use the Command and General Staff College’s (CGSC) Verint survey system to conduct your survey.

   b. This project cannot be published or referenced outside the CMU MSA699 course.

You may begin data collection upon receipt of this letter. Coordinate with Captain Andre Williams at 684-3949 for creation and execution of your survey using the CGSC Verint system. Provide a copy of this letter to him when you coordinate for your survey.

You are expected to comply with all conditions indicated in this memorandum and to follow your approved protocol. You are subject to monitoring by the CGSC Human Protections Administrator (HPA) to ensure compliance.
ATZL-LSA- HPA
SUBJECT: DoD Institutional Administrative Review Approval

Any modifications to this study (including, but not limited to changes in recruitment materials or procedures, interview/survey questions, data collection procedures, increases in the number of participants enrolled, or expectations to publish the results outside the MSA699 course) must be submitted as a written amendment for review and approval by your IRB and the CGSC HPA prior to implementing the change. Failure to follow these guidelines could result in the termination of the approval for your research.

POC is the undersigned at dale.f.spurlin.civ@mail.mil or 684-4770.

[Signature]
DALE F. SPURLIN, PhD
Associate Professor and Chair
Collaborative Academic Institutional Review Board
Appendix D: Survey e-mail Invitation to Population Sample

INITIAL EMAIL INVITATION:
Subject: Army Aviation Survey for Student and Faculty
21 April 2017
Fellow Aviators,

My name is Scott Messare, I'm a CGSC student conducting research for a graduate program at Central Michigan University. For my final project, I am examining the Army's aviation program regarding pilot proficiency as it relates to extended absence from flying duty.

Overall, my research is focused on two areas. The first focus is to assess the additional flight hours required to regain base aviation task proficiency for a pilot who has not flown in the last 12 to 36 months. The second focus is to determine if flying low cost civilian aircraft (ie: general aviation aircraft) between military operational flying assignments would be beneficial to Army pilots proficiency.

I wanted to invite you to share your aviation expertise in the completion of a 13-question survey. The survey will only be available for 2-weeks. Thank you for your time and input to the Army Aviation profession. Please feel free to e-mail me for further information about the study.

Respectfully,
Scott Messare
REMINDER EMAIL:

Subject Line: Army Aviation Survey for Student and Faculty

01 May 2017

Fellow Aviators,

This email is a reminder that the survey on Aviation proficiency is scheduled to closes on Friday. If you are considering taking the survey and have not already done so, your time is getting short. I encourage you to take a few minutes and share your professional expertise.

For those who already completed the survey, I wanted to express my sincere appreciation for your time, effort and shared experiences. The initial survey response rate was excellent, hopefully we will have a few more before the end of the week.

Please feel free to contact me for any information regarding this assessment or if you require more time to individually access the survey.

Respectfully,
Scott Messare
Appendix E: Survey Informed Consent Letter and Survey

Background

21 April 2017

Dear Aviation colleague:

My name is Scott Messare and I am a graduate student at Central Michigan University. For my final project, I am examining the US Army aviation program and pilot proficiency in relation to extended periods away from flying duty. As an Army aviation professional, I am inviting you to complete a 13-question anonymous survey on this topic.

The purpose of my research aims to determine the number of added flight training time required to regain proficiency after an extended absence from flying. A secondary goal is to determine if there is value in offering a low-cost option to retain proficiency between operational flying assignments. The ideal survey respondent is a current or former Army aviation branch Commissioned Officer or Warrant Officer Evaluator from any component (Active duty, Guard, Reserve, Retired).

There is no compensation for responding nor is there any known risk. In order to ensure that all information will remain confidential, please do not include your name. Copies of the project will be provided to my Central Michigan University instructor, to the Command and General Staff College, and to the United States Army Aviation Center of Excellence at Fort Rucker, AL. If you choose to participate in this project, please answer all questions as honestly as possible and begin the questionnaires by clicking on the survey link found in the CGSC Verint Survey email. Participation is strictly voluntary and you may refuse to participate at any time.

Completion and return of the questionnaire will indicate your willingness to participate in this study. If you require additional information or have questions, please contact me at the number listed below. Please feel free to e-mail me if you would like a summary copy of the study.

Thank you for your time and improving the profession of Army Aviation.

Please note that if you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to the MSA Program by calling 989-774-6525 or addressing a letter to the MSA Program, Rowe 222, Central Michigan University, Mt. Pleasant, MI 48859.

Sincerely,

Scott M. Messare
254-231-8344 / messa1sm@cmich.edu / smessare@gmail.com

Dr. Robert Weltzer, Jr.
weltz1re@cmich.edu
Study Title: PROGRAM EVALUATION FOR US ARMY PILOT RETAINED PROFICIENCY AFTER AN EXTENDED PERIOD AWAY FROM FLYING ASSIGNMENTS

CGSC Survey Control Number is 17-04-061

Additional Background: Most commissioned Army aviation officers will experience multiple extended gaps in flying duty over a normal 20-year career. DA Pam 600-3 (2014) outlines the Commissioned Aviation Officer timeline. It defines three pre-programmed points where aviators depart operational flying positions for staff, schools or development (i.e.: the Captains Career Course, Post Command broadening/ILE and post KD assignments). These gaps have a direct impact on an individual's piloting proficiency. When a pilot returns to military flying duty the additional flight time required to regain base task proficiency is increased.

Expected Respondent Categories:
Respondent Category 1 - Aviation warrant officer, Standardization Instructor Pilot (SIP) / Instructor Pilot (IP) serves as the expert evaluator in aviation proficiency at the program level.

Respondent Category 2 - Aviation commanding/post-command, company grade officer who recently managed an Aircrew Training Program (ATP) which inherently manages proficiency task training at the program level.

Respondent Category 3 - Aviation field grade officers who either will or have already experienced successive gap periods in their professional flying career.
Appendix F: Survey Questions US Army Aviation Retained Pilot Proficiency

Scott Messare
Central Michigan University Capstone Survey
CGSC Survey Control Number is 17-04-061
smessare@gmail.com

US Army Aviation Retained Pilot Proficiency After An Extended Absence From Flying Duties.
Survey questions:

1. Are you a current or former US Army aviation branch officer? Select all applicable answers.
   - Yes. I am / was an Army aviation officer.
   - No. I was never an Army aviation officer.
   - Other (please specify)

2. What is your current status?
   - Active Duty Army
   - Army National Guard
   - Army Reserve
   - Retired
   - Other (please specify)

3. Select your assigned/qualified military helicopter(s)?
   - CH-47
   - UH-60
   - AH-64
   - OH-58
   - UH-72
   - Other (please specify)

4. How many years of aviation service do you have?
   - 5 or less years
   - 6-10 years
   - 11-15 years
   - 16-20 years
   - More than 20 years

5. As a baseline, the UH60/CH47 Aircrew Training Manual provide a 18-24 flight hours refresher training guide / syllabus which can be adjusted based on the individuals proficiency.

Recent flight experience: Consider the average line pilot or staff supported aviator arriving from a recent flying assignment who last flew between 180 days and 12 months.
How many flight hours would you expect to use to complete refresher/reintegration training through base flying tasks (RL3 Complete)?

- less than 4 hours
- 5-10 hours
- 11-15 hours
- 16-20 hours
- more than 20 hours
- Comments

6. No recent flight experience: Now consider the average pilot or staff supported aviator arriving from a non-operational flying assignment and not flying for 12 to 36 months.

Compared to a pilot with recent flight experience, HOW MANY ADDITIONAL hours would you expect to commit to complete refresher/reintegration training through base flying tasks (RL3 Complete) for a pilot with no recent flight experience?

- no additional hours
- 1-2 additional hours
- 2-4 additional hours
- 5-10 additional hours
- 11-15 additional hours
- Other (Add comment with # of hours)

7. Do you have an FAA rating(s) to operate aircraft outside of military duties? (i.e.: Airplane Single Engine Land - Private / Commercial)

- No. I do not have civilian pilot ratings
- Yes. FAA Airplane rating
- Yes. FAA Airplane rating and Rotary Wing / Helicopter rating
- Yes. FAA Rotary Wing / Helicopter rating

8. If you have an FAA rating, do you use it when not flying military aircraft?

- Yes, I fly regularly
- Yes, I fly occasionally
- No, I do not use my civil ratings
- Not applicable, I do not have civil aviation ratings

9. If you were provided a no cost or low cost Pilot Enrichment Stipend to acquire an FAA airplane qualifications in order to retain pilot proficiency and fly between operational assignments how likely would you be to take advantage of this type of program?

- Very Likely
- Likely
- Unsure
- Unlikely
- Very Unlikely
- Comments (please specify)
For 10-12 select how much you agree or disagree with the statement.

10. Army aviators retain higher proficiency in basic piloting skills when they fly low cost aircraft (i.e.: Cessna172, OH-58) between operational assignments.
   - 5- Definitely Agree
   - 4- Somewhat Agree
   - 3- Unsure
   - 2- Somewhat Disagree
   - Definitely Do Not agree

11. Flying civilian airplane between operational assignments directly correlates to regaining mission proficiency in their primary military helicopter more rapidly (i.e.: UH-60, CH-47, AH-64 etc).
   - 5- Definitely Agree
   - 4- Somewhat Agree
   - 3- Unsure
   - 2- Somewhat Disagree
   - Definitely Do Not agree

12. Army aviation officers should pursue opportunities to fly civilian aircraft during the "in-between years" of operational flying assignments whether personally or Army funded.
   - 5- Definitely Agree
   - 4- Somewhat Agree
   - 3- Unsure
   - 2- Somewhat Disagree
   - Definitely Do Not agree

13. Is there any additional comments or recommendation you believe should be considered for improved Army pilot proficiency?
    Add comments and feedback.
Appendix G: Survey Results US Army Aviation Retained Pilot Proficiency

US Army Aviation Retained Pilot Proficiency Survey (MAJ Scott Messare)

Type: Standard Report

Date: 5/9/2017

Time Zone in which Dates/Times Appear: (UTC-06:00) Central Time (US & Canada)

Total number of responses collected: 39

1. If you wish to participate, click “I consent” or “I do not consent” before starting the survey.
2. 1. Are you a current or former US Army aviation branch officer? Select all applicable answers.

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<th>Valid Responses</th>
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</thead>
<tbody>
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100.000% 35.000
3. 2. What is your current status?

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<td>Retired</td>
<td>8.571% 3.000</td>
<td></td>
</tr>
<tr>
<td>Other/please specify</td>
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4. 3. Select your assigned/qualified military helicopter(s)?

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<td>MH-47</td>
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<td>MH-47G</td>
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<tr>
<td>MH-47G</td>
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<tr>
<td>MH-60M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-12</td>
<td></td>
<td></td>
</tr>
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</table>
5. 4. How many years of aviation service do you have?
(Respondents could only choose a single response)
6. 5. As a baseline, the UH60/CH47 Aircrew Training Manual provide a 18-24 flight hours refresher training guide / syllabus which can be adjusted based on the individuals proficiency. Recent flight experience: Consider the average the line pilot or staff supported aviator arriving from a recent flying assignment who last flew between 180 days and 12 months. How many flight hours would you expect to use to complete refresher/integration training through base flying tasks (RL3 Complete)?

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<tbody>
<tr>
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<td>0</td>
<td>34</td>
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</tbody>
</table>
7. No recent flight experience: Now consider the average pilot or staff supported aviator arriving from a non-operational flying assignment and not flying for 12 to 36 months. Compared to a pilot with recent flight experience, how many more hours would you expect to commit to complete refresher/integration training through base flying tasks (RL3 Complete) for a pilot with no recent flight experience?

Response

More than 30 hours

Depends on the proficiency of the pilot before extended absence began; <500 hours might need 20+; <1000 hours might need 15; >1000 hours should be able to do it in 5-15 depending on any specialty training (IP, MP, etc)

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<tr>
<td>More than 30 hours</td>
<td>2</td>
<td>34</td>
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</table>
8. Do you have an FAA rating(s) to operate aircraft outside of military duties? (i.e.: Airplane Single Engine Land - Private / Commercial)
9. If you have an FAA rating, do you use it when not flying military aircraft?
10. 9. If you were provided a no cost or low cost Pilot Enrichment Stipend to acquire an FAA airplane qualifications in order to retain pilot proficiency and fly between operational assignments how likely would you be to take advantage of this type of program?

<table>
<thead>
<tr>
<th>Response</th>
<th>Valid Responses</th>
<th>Total Responses</th>
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<tbody>
<tr>
<td></td>
<td>0</td>
<td>33</td>
</tr>
</tbody>
</table>
11. Army aviators retain higher proficiency in basic piloting skills when they fly low cost aircraft (i.e.: Cessna172, OH-58) between operational assignments?
12. Flying civilian airplane between operational assignments directly correlates to regaining mission proficiency in their primary military helicopter more rapidly (i.e.: UH-60, CH-47, AH-64 etc).
13. Army aviation officers should pursue opportunities to fly civilian aircraft during the "in-between years" of operational flying assignments whether personally or Army funded.

![Bar Chart]

- Series 1:
  - 5: Definitely Agree: 45.45% (15,000)
  - 4: Somewhat Agree: 33.33% (11,000)
  - 3: Unsure: 9.09% (3,000)
  - 2: Somewhat Disagree: 9.09% (3,000)
  - 1: Definitely Do Not: 3.03% (1,000)
14. 13. Is there any additional comments or recommendation you believe should be considered for improved Army pilot proficiency?

<table>
<thead>
<tr>
<th>Response</th>
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<tbody>
<tr>
<td>The survey should highlight two areas - physical aptitude/muscle memory and mental aptitude with regards to procedures, rules, etc. This intermediary training would greatly aid in the mental processes - IFR, navigation, radios, fight management, etc. Muscle memory with respect to manipulating the flight controls actually comes back very quickly but does not by itself place you in the line for PIC evaluations. Anyone can wiggle the sticks, air-sense and air-mindedness need to be practiced regularly to sustain proficiency or enable quick resumption of flight duties.</td>
</tr>
<tr>
<td>Operating civil aircraft in the NAS is a bit different than operating tactically in a digitally enhanced crew station with various mission equipment. Therefore, operating a civil aircraft would only provide a portion of the skills needed to maintain during gaps in experience.</td>
</tr>
<tr>
<td>A very interesting topic. I actually began conducting training for my private pilots license (single engine airplane) a few years ago. Even though other priorities took precedent and I have not yet completed the training, part of my reasoning was to maintain some basic airmanship skills that are bound to erode during non-flying times in my career. I think if the military were to provide financial assistance, you'd see a lot more aviators taking advantage. Even though I have some civilian flying aspirations outside of the military (second career, etc.), one additional factor as to why I have not completed the training is the cost.</td>
</tr>
<tr>
<td>I agree with flying civilian aircraft to maintain some proficiency. It at least maintains proficiency on airspace procedures, filing, etc. However, I can't afford to fly too much since it is so expensive.</td>
</tr>
<tr>
<td>I have been away from the aircraft for 2 1/2 years. I personally feel that my aviator skills have atrophied significantly in that time. In the last year, I took it upon myself to get current in single-engine, fixed wing aircraft (at my own expense). The effects have been significant, as I have re-gained my experience in operating with Air Traffic Control, communications, pilotage, navigation, flight planning, etc. With my first few flights, I noticed a significant degradation in my cross check and overall situational awareness in the airplane. Instrument flying skills are another big aspect of time away from the aircraft. This is a safety issue, and one that needs consistency to grow confidence and competence. I have invested several thousand dollars of my own money in order to remain &quot;relevant&quot; in the aircraft, and I will continue to do so absent support from the Army. Would the Army be better served spending a few thousand dollars on each aviator in a non-flying assignment, or several tens of thousands of dollars extending the aviator's RL progression upon returning to a flying assignment? I for one would take full advantage of any program that would help me maintain my proficiency as a professional aviator.</td>
</tr>
<tr>
<td>Aviators need to be allowed to fly on an ATP during their non-operational assignments. Even as an assistant BAO, I was not allowed to drive fifteen minutes down to the airfield once a month for a 2-hour flight to retain proficiency. Then, in many cases, aviators on broadening assignments to grad school, ROTC, etc. are within a reasonable distance of an ATP. I did grad school within a few hours of Ft. Knox, which has an Apache BN, and I wasn't allowed to fly, because what unit wants to use its money supporting someone else? I don't blame the units for thinking this way; it's is an army policy problem.</td>
</tr>
<tr>
<td>Army Aviation should place more emphasis on &quot;Proficiency&quot; development and retention than on &quot;Currency&quot;. With limited flight hours and fiscals constraints limiting Staff-supported Aviators, the minimum number of flight hours to attain a &quot; progressed and Current&quot; status is insufficient for Aircrew safety and effectiveness.</td>
</tr>
<tr>
<td>I would not expect aviators to fund proficiency flights out of pocket. Flying civilian aviation aircraft would definitely help with proficiency. Often, the hardest skills to 'get back' are general communications, instruments, filing, and weather. Each of these aspects could be trained on the civilian side.</td>
</tr>
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</table>
I think that flying GA aircraft while in non-operational positions will keep a pilot proficient in operating in the National Airspace System. However, I do not think that it helps maintain tactical proficiency to operate a helicopter in mission profile.

From young to old aviators, any time we can practice our craft will only enhance our overall capabilities.

In addition to flying (when able) in non-operational flying positions, the Army should consider low cost rotary wing (OH-6/OH-58C) proficiency flying programs for officers in brigade and echelon above brigade assignments for the reasons stated in the survey above.

Are you sure civilian certification translates to non-ifr rated tactical aircraft such as AH-64? What skill or skill set would be transferable from a Cessna to an Apache?

Provide low-cost access to simulator based flying, either at a facility on the base they are stationed on or by computer based software at their home/work computer.

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<tr>
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<td></td>
<td>14</td>
<td>33</td>
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</table>
Appendix H: Additional Survey Feedback From 14 Respondent

Central Michigan University Capstone Survey
CGSC Survey Control Number is 17-04-061

From US Army Aviation Retained Pilot Proficiency After An Extended Absence From Flying Duties.

Survey question #13: Is there any additional comments or recommendations you believe should be considered to improve Army pilot proficiency?

Additional comments and feedback from anonymous respondents:

**Respondent A.** The survey should highlight two areas - physical aptitude/muscle memory and mental aptitude with regards to procedures, rules, etc. This intermediary training would greatly aid in the mental processes - IFR, navigation, radios, fight management, etc. Muscle memory with respect to manipulating the flight controls actually comes back very quickly but does not by itself place you in the line for Pilot in Command (PiC) evaluations. Anyone can wiggle the sticks, air-sense and air-mindedness need to be practiced regularly to sustain proficiency or enable quick resumption of flight duties.

**Respondent B.** Operating civil aircraft in the NAS is a bit different than operating tactically in a digitally enhanced crew station with various mission equipment. Therefore, operating a civil aircraft would only provide a portion of the skills needed to maintain during gaps in experience.

**Respondent C.** A very interesting topic. I actually began conducting training for my private pilot license (single engine airplane) a few years ago. Even though other priorities took precedent and I have not yet completed the training, part of my reasoning was to maintain some basic airmanship skills that are bound to erode during non-flying times in my career. I think if the military were to provide financial assistance, you'd see a lot more aviators taking advantage.
Even though I have some civilian flying aspirations outside of the military (second career, etc.), one additional factor as to why I have not completed the training is the cost.

**Respondent D.** I agree with flying civilian aircraft to maintain some proficiency. It at least maintains proficiency on airspace procedures, filing, etc. However, I can't afford to fly too much since it is so expensive.

**Respondent E.** Having no experience with flying civilian aircraft between operational assignments, I don't feel qualified to answer any of the above questions honestly.

**Respondent F.** I have been away from the aircraft for 2 1/2 years. I personally feel that my aviator skills have atrophied significantly in that time. In the last year, I took it upon myself to get current in single-engine, fixed wing aircraft (at my own expense). The effects have been significant, as I have re-gained my experience in operating with Air Traffic Control, communications, pilotage, navigation, flight planning, etc. With my first few flights, I noticed a significant degradation in my cross check and overall situational awareness in the airplane. Instrument flying skills are another big aspect of time away from the aircraft. This is a safety issue, and one that needs consistency to grow confidence and competence. I have invested several thousand dollars of my own money in order to remain "relevant" in the aircraft, and I will continue to do so absent support from the Army. Would the Army be better served spending a few thousand dollars on each aviator in a non-flying assignment, or several tens of thousands of dollars extending the aviator's RL progression upon returning to a flying assignment? I for one would take full advantage of any program that would help me maintain my proficiency as a professional aviator.

**Respondent G.** Aviators need to be allowed to fly on an ATP during their non-operational assignments. Even as an assistant BAO, I was not allowed to drive fifteen minutes down to the airfield once a month for a 2-hour flight to retain proficiency. Then, in many cases, aviators on broadening assignments to grad school, ROTC, etc. are within a reasonable distance of an ATP. I did grad school within a few hours of Ft. Knox, which has an Apache BN, and I wasn't allowed
to fly, because what unit wants to use its money supporting someone else? I don't blame the units for thinking this way; it's is an army policy problem.

**Respondent H.** Army Aviation should place more emphasis on "Proficiency" development and retention than on "Currency". With limited flight hours and fiscal constraints limiting Staff-supported Aviators, the minimum number of flight hours to attain a "Progressed and Current" status is insufficient for Aircrew safety and effectiveness.

**Respondent I.** I would not expect aviators to fund proficiency flights out of pocket. Flying civilian aviation aircraft would definitely help with proficiency. Often, the hardest skills to 'get back' are general communications, instruments, filing, and weather. Each of these aspects could be trained on the civilian side.

**Respondent J.** I think that flying GA aircraft while in non-operational positions will keep a pilot proficient in operating in the National Airspace System. However, I do not think that it helps maintain tactical proficiency to operate a helicopter in mission profile.

**Respondent K.** From young to old aviators, any time we can practice our craft will only enhance our overall capabilities.

**Respondent L.** In addition to flying (when able) in non-operational flying positions, the Army should consider low cost rotary wing (OH-6/OH-58C) proficiency flying programs for officers in brigade and echelon above brigade assignments for the reasons stated in the survey above.

**Respondent M.** Not sure civilian certification translates to non-IFR rated tactical aircraft such as AH-64. What skill or skill set would be transferable from a Cessna to an Apache?

**Respondent N.** Provide low-cost access to simulator based flying, either at a facility on the base they are stationed on or by computer based software at their home/work computer.
Appendix I: Army University - Army Credentialing Program

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**CREDENTIALING DIRECTIVES: TOP TO BOTTOM**

**EXECUTIVE DIRECTIVES**

BLUF: SUPPORT OUR VETERANS

- "VOW to Hire Heroes Act" 2011
  - addressed inability for military members to be credentialed or licensed in their fields preventing them from being competitive for future employment

- Presidential Memorandum: "Advancing Fair Practices by Education & Training Institutions Serving Service Members" 2016
  - directed Congress to remove credentialing restrictions; "may only obtain Credentials that relate to skills and training incident to military duties"

**LEGISLATIVE DIRECTIVES**

NDAA 2012 Sec 551
- services shall carry out job training and employment skills training programs

Sec 558
- DoD shall assess the feasibility of permitting service members to obtain civilian credentialing skills required for military occupational specialties
  - (Aircraft & Automotive Mechanics, Healthcare Support, Logistics & Supply, and Truck Drivers) Pilot Program to be completed within 5 years, Credentialing and Licensing Task Force established

NDAA 2013 Sec 543
- directed expansion of the pilot program to other MOSs

NDAA 2014 Sec 543
- directed expansion of the pilot program to other MOSs

NDAA 2015 Sec 551
- directed that each service shall carry out a program to enable professional credentialing related to military training & skills; acquired during service and incident to military duties & translate to civilian occupations & authorized use of appropriate funds for related expenses

NDAA 2016 Sec 559
- directed quality assurance standards on credentialing programs

NDAA 2017 Sec 551
- removed limitation of credentialing opportunities to be "incident to military duties", significantly changed quality assurance standards allowing for increased credentialing opportunities

NDAA 2018
- ASA M&A will recommend a final change to remove "related to military training and skills", allowing for increased credentialing opportunities and support to the Soldier

**DOD DIRECTIVES**

BLUF: SERVICES CREATE VOCATIONAL CREDENTIALING OPPORTUNITIES

**USECDEF "CREDENTIALING PILOT IMPLEMENTATION GUIDANCE" 2012**
- directed establishment of NDAA Pilot Framework and list of pilot MOSs (91B, 68W, 92Y, 92A, 88M)

**USECDEF "DEFENSE CREDENTIALING TASK FORCE EXTENSION" 2015**
- approved Task Force extension through DEC 17 to expand credentialing opportunities for Law Enforcement & Combat Arms occupational areas, Guard & Reserve components, and reduce local state barriers and increase reciprocity

**ARMY DIRECTIVES**

BLUF: ESTABLISH & EXPAND VOCATIONAL CREDENTIALING PROGRAMS

**SECARMY "ARMY DIRECTIVE 2015-12"**
- provided implementation guidance for the Army Credentialing Program & the Career Skills Program
- CG TRADOC and CG MEDCOM must conduct Army credentialing programs for select Soldiers as part of initial and mid-level PME
  - Individuals may pursue professional credentialing as a self-directed postsecondary school activity, a part of a military industry partnership or an agreement coordinated by Army training institutions.
  - On behalf of DCS G1, The Adjutant General of the US Army, HRC is the proponent for Career Skills Programs policy.
  - CG IMCOM will manage and execute all CSFs on Army installations.
  - On behalf of DCS G1, HRC is the proponent for this policy (Army Directive 2015-12)

**DA EXORD 214-15 "ESTABLISHMENT OF ARMYU" 2015**
- directed the expansion of the Army Credentialing Program

**BOTTOM LINE:** THE ARMY CREATES SELECTIVE OPPORTUNITIES FOR SOLDIERS TO EARN VOCATIONAL CREDENTIALS WHICH BENEFIT THE ARMY OR INCREASE THE SOLDIER'S CAREER READINESS
Appendix J: USAACoE Email Correspondence with LTC Cecil Nix

On May 16, 2017, at 6:38 PM, Nix, Cecil C (Cal) <cecil.c.nix.mil@mail.mil> wrote:

Scott,
This is the best I can get you. But I do not have a hard source I can give you. These are close approximates.

Figures below include all cost associated with IERW training (BOLC/WOBCS, SERE, Dunker, Common Core and TRACK). Cost consists of flight hours, contracts (A/C Maint, Sere, Dunker, Range, Refuel...) Civ Pay, OCIE, Supplies, land and tower leases...

FY17 Total estimate cost per student.

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<td>UH-60M Aviator</td>
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<td>C-12 Aviator</td>
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| Core Flt Hr Cost Only | $170,840 |

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<td>UH-60M Aviator</td>
<td>$188,409</td>
</tr>
</tbody>
</table>

CECIL C NIX
LTC, AV

From: Nicolucci, Steven L COL USARMY AVNCOE (US)
Sent: Monday, December 05, 2016 12:34 PM
To: Meacham, Jimmy L CIV USARMY AVNCOE (US)
Cc: Walsh, Brian E COL USARMY AVNCOE (US)
Subject: Fw: Thesis topic (UNCLASSIFIED)

Jimmy,
Rob Ault picked DOTD as lead OPR to assist MAJ Scott Messare with his ILE thesis (see attachment). Please let me know whose name you want me to give him as a good starting point.
Steven Nicolucci
COL, AV
Senior ARNG Aviation Advisor
Appendix K: Notes from Head Hunter Information Session with

Mr. Gary Pruyne USAACoE

Mr. Gary Pruyne (Head Hunter Subject Matter Expert)
At Shell AAF, Fort Rucker, AL on 27 July 2017 6:00pm

Mr. Pruyne had nearly 50 years of Army Aviation experience. He currently serves as a senior Department of the Army Civilian flight instructor at Fort Rucker, AL. Mr. Pruyne is the Head Hunter Platoon Leader / Standardization Instructor Pilot. As such, he manages the full range of the Head Hunter program recruitment, training, evaluation and operational employment of the program. The information session lasted approximately one and a half hours focused on the following primary questions.

Q1: What is the Headhunter mission, why does it exist?
"The primary purpose of the Headhunter (HH) Program is to provide vital flight following services for USAACE aircrews in training. The secondary purpose of HH is to afford flying opportunities to Fort Rucker aviators in order to develop leadership and flight experience." (Procedures Guide for the Head Hunter Aerial Flight Following Program, 2017, pp.1)

Flight following is the ability to provide observation and situational awareness, rapid response and long-range communications relay for training flights that are simultaneously operating across the local Fort Rucker flying area i.e. Alabama, Georgia and Northern Florida.

Q2: How many aviators fly Headhunter missions or supported on the ATP? Are they mostly staff supported aviators?
A: (Typically 25-35, currently 10 down nearly 1/2. Low numbers due to normal PCS season. Lost 10 for ILE, Graduate School, West Point Assignments etc for broadening assignments.)
(Nearly all are Staff supported aviators. Mostly pulling from FAC 3 pilots who must apply and be approved to serve as FAC 2 pilots supporting Head Hunter.)

**Q3: On average, how many Headhunter flight (#) fly each day to support how many USAACoE training missions each day?**

A: HH Missions: Typically support 1 aircraft for 12 hour coverage. 3x shifts AM mid shift and PM shift. 2xPilots per mission

Recent program flight hours --

--JAN 144hr
--FEB 122hr
--MAR 177hr
--APR 117hr
--MAY 135hr
--JUN 63.8hr
--JUL <40hr

**Q4: What is the value to the pilots flying HH? Why would they participate?**

A: Individuals typically executed their 60 flight hours semi-annually, some reach as many as 150 hours annually "Very worth while." Mr. Pruyne

**Additional information:**

Process: Pilots wishing to participate complete and submit assessment form to Head Hunter Platoon Leader. Assessment is reviewed and a request is sent to the BDE CDR to change pilot status from FAC-3 pilot to FAC-2. Pilots are progressed and signed off on OH-58A/C base tasks per TC 3-04.43 C1 Aircrew Training Manual OH-58A/C

All pilots must fly Night Vision Goggles (NVG).

Typically 4-5 hours of refresher spent just going over basic flight knowledge after 2-3 years flying absence. "There are cases where 15-23 hours are spent getting less experienced pilots up to speed on Basic pilot tasks"

"In the past, Pilots would come to Head Hunter with 1500-2500 hr of total flight experience and multiple combat deployments...Now we are lucky to have a pilot arriving with 1000 hours"