

A Collective Case Study of Rated Air Force Officers' Decisions to Pursue Doctoral Degrees
with Policy Implications

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John J. Schaefer III

Major Professor: Jean Henscheid, Ph.D.

Committee Members: Michael Kroth, Ph.D.; Mary E. Gardiner, Ph.D.; Mark McGuire, Ed.D.

Department Administrator: Kathy Canfield-Davis, Ph.D.

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Authorization to Submit Dissertation

This dissertation of John J. Schaefer III, submitted for the degree of Doctor of Education with a major in Education and titled “A Collective Case Study of Rated Air Force Officers’ Decisions to Pursue Doctoral Degrees with Policy Implications,” has been reviewed in final form. Permission, as indicated by the signatures and dates below, is now granted to submit final copies to the College of Graduate Studies for approval.

Major Professor: _____ Date: _____
Jean Henscheid, Ph.D.

Committee Members: _____ Date: _____
Michael Kroth, Ph.D.

_____ Date: _____
Mary Gardiner, Ph.D.

_____ Date: _____
Mark McGuire, Ed.D.

Department
Administrator: _____ Date: _____
Kathy Canfield-Davis, Ph.D.

Abstract

This qualitative study uses collective case study methodologies to examine factors involved in rated Air Force officers' decisions to pursue doctoral degrees. This research uses semi-structured interviews with 13 rated officers to capture their stories. Pertinent documents and archival records were also reviewed. The study determined five motivational factors and two obstacles that are factors in rated officers' decisions to pursue doctoral degrees. The five motivational factors are job in the Air Force, job after the Air Force, intellectual curiosity, self-improvement, and family considerations. The two obstacles are the potential for negative career impacts and inflexible career tracks.

Acknowledgements

I wish to thank my committee for their patience and guidance throughout this process.

I am also very appreciative of the time participants freely gave to make this study a success.

Dedication

This work is dedicated to my wife, Jana, and both my children who graciously allowed me to take far too much of their time to complete this dissertation.

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Chapter I – Introduction of the Study

Introduction

Today's military officers face increasingly complex problems in both war and peacetime. They must draw on their experience, training, and education to find solutions to problems far outside the tactical military realm. Chaotic situations faced by contemporary military leaders require creative solutions, and based on the security situation in war torn countries, civilian expertise is often unavailable when difficult social, economic, and cultural problems arise. General David Petraeus, who holds a Ph.D. in Economics from Princeton University and was put in command of all military forces in Iraq at the low point of the Operation Iraqi Freedom campaign in 2007, contends that a soldier's intellect is his most important weapon (Petraeus, 2007). When notified he would inherit the badly degraded situation in Iraq, Petraeus formed a brain trust of advisors to craft a new strategy (Knowlton, 2010). Key members of the trust included retired Lieutenant Colonel David Kilcullen, whose doctorate is in politics from the University of New South Wales, and Colonel H. R. McMaster, who earned a doctorate in history from the University of North Carolina. While history has yet to judge the overall result of Operation Iraqi Freedom, the situation took a dramatic change for the better after General Petraeus and his team of intellectual leaders assumed leadership of the Iraqi theater of operations. This high-profile story would seem to suggest that the military places value on the capabilities of officers who have earned advanced academic degrees and may be developing a cadre of doctorate holders to tackle difficult situations in the future. This is not the case. Despite General Petraeus's choice of advisors in the most serious of circumstances, empirical data suggest that few officers pursue doctoral level degrees.

Military pundit Ralph Peters (2007) wrote that too much education inhibits an officer's ability to lead on the battlefield. In the Air Force, for example, the Air Force Personnel Center reports that only 1.4% of Air Force officers hold doctorates (United States Air Force, 2009). This equates to about 900 Air Force officers with doctorates, most employed as instructors in the Air Force's academic institutions or in highly technical laboratory and acquisitions positions. The Air Force Institute of Technology (AFIT) produces less than 40 graduates annually, and almost all are bound for academic or research positions. Few AFIT-sponsored doctoral candidates return to the operational Air Force in a leadership capacity (Air Force Institute of Technology, 2005; Givhan, Trias, & Allen, 2011).

Background of the Problem

The Air Force places substantial importance on the development of its officer corps, which is a continuous process from the time officers enter the service until they depart. Figure 1, which is taken from the Air Force Personnel Center's website, depicts the professional military education (PME) program an Air Force officer might expect to encounter during a career. The figure details the dual emphasis on professional military and civilian education throughout an Air Force officer's career. The x-axis in the figure represents rank progression, and the y-axis breaks the different schools in the PME system into foundational or advanced categories. Figure 1 suggests that civilian degrees are encouraged for officers of all ranks. However, demographic data reveal only a small percentage of Air Force officers go beyond a master's degree. New officers attend basic developmental education (BDE) as part of or immediately following their commissioning program. Mid-level captains attend primary developmental education (PDE) in the form of Squadron Officers School, and are expected to work toward a graduate degree. Majors are competitively selected to attend intermediate

developmental education (IDE) and are expected to earn a master’s degree if they desire promotion (Switzer, 2011). Lieutenant colonels and colonels compete for selection to attend senior developmental education (SDE) opportunities, and those who achieve general officer rank attend appropriate executive education sessions.

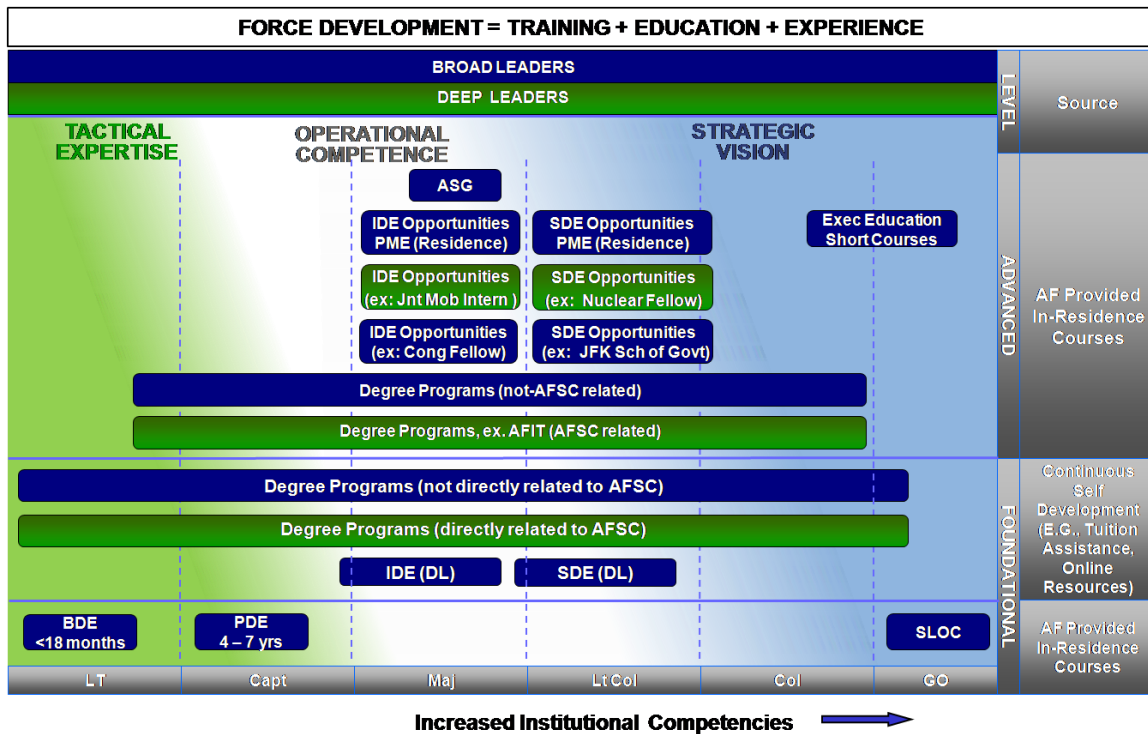


Figure 1. Air Force Development Flowchart (Air Force Personnel Center, 2012a).

The size and complexity of the Air Force professional development program suggests considerable institutional emphasis on developing officers. The current education system contains several methods for Air Force officers to complete senior developmental education. Approximately 15% of Air Force officers attend in-residence programs, the majority of whom attend senior developmental education via Air War College at Maxwell Air Force Base, Alabama. For Air Force officers who do not attend in-resident programs, online education is also available through Air War College—the most popular method for senior developmental education. During the 2011 academic year, 122 Air Force officers attended Air War College

in-residence and more than 5,000 participated in the online version (Hanson, 2012). These two programs account for the majority of Air Force senior developmental education.

Table 1. *Air Force Senior Developmental Education Options*

Joint Schools	Service Schools	Other Options
National War College	Air War College	Fellowships
Eisenhower School of National Security and Resource Strategy (previously the Industrial College of the Armed Forces)	Army War College Naval War College Marine Corps War College	Equivalency Foreign Schools

The Air Force sends officers to the National Defense University, where they attend both the National War College and the Eisenhower School of National Security and Resource Strategy (previously the Industrial College of the Armed Forces). The Army, Naval, and Marine Corps War Colleges also have small contingents of Air Force officers, and the Air Force conducts senior developmental education exchanges with ten foreign military schools. Officers participate in 27 different fellowship opportunities at think tanks, academic institutions, and with industry (Slade, 2010). There are also other programs and equivalency credit routes through which military personnel can complete senior developmental education (United States Air Force, 2010a).

The options depicted in Table 1 indicate the importance the Air Force places on officer leadership development. The results of Air Force colonel promotion boards show that completion of senior developmental education is a de facto requirement for promotion (Holmes, 2009) and confirm attendance in-residence as the institutionally preferred method of completion (Air Force Personnel Center, 2012b). Thus, the Air Force PME system currently provides a diverse set of developmental options for Air Force officers to pursue.

Officer Development Desired Outcomes

The PME system's formal desired outcomes are detailed in its governing regulations and instructions, but a parallel set of formal desired outcomes written by the Air Force for those who participate in civilian education does not exist. For the purpose of this study, education received from institutions not funded and staffed by the military is considered civilian education. Figure 1 demonstrates that the Air Force encourages military and civilian education.

Formal Desired Outcomes. The officer PME system is governed by the Chairman of The Joint Chiefs of Staff Instruction 1800.1, *Officer Professional Military Education Policy* (OPMEP), which defines the system's formal desired outcomes. Specifically, OPMEP says the PME system should produce:

1. Strategically minded officers educated in the profession of arms who possess an intuitive approach to joint warfighting built upon individual service competencies. Its aim is to produce graduates prepared to lead the Capstone Concept of Joint Operations (CCJO) envisioned force within a multi-service, multi-agency, multi-national environment and able to participate in and contribute to informed decision-making on the application of all instruments of national power.
2. Critical thinkers who view military affairs in the broadest context and are capable of identifying and evaluating likely changes and associated responses affecting the employment of U.S. military forces.

Graduates should possess acuity of mind at the highest level, gained as a result of a continuum of learning across a lifetime.

3. Senior officers who, as skilled joint warfighters, can develop and execute national military strategies that effectively employ the Armed Forces in concert with other instruments of national power to achieve the goals of national security strategy and policy in the air, land, maritime, and space physical domains and the information environment (which includes cyberspace). (United States Department of Defense, 2009, p. 2)

The Process Accreditation for Joint Education (PAJE) holds PME schools accountable for achieving the measurable outcomes in this document. The PAJE accreditation board visits each school on a rotating basis to certify they meet the requirements of the OPMEP.

The Air War College is governed by OPMEP but further clarifies its official goals through its mission statement, which reads:

To prepare students to lead in a joint, interagency, and multinational environment at the strategic level across the range of military operations; to develop cross-domain mastery of joint air, space and cyberspace power and its strategic contributions to national security; and to advance innovative thought on National Security, Department of Defense and Air Force issues (The Air War College, 2012, p. 1).

This mission statement aligns with the OPMEP guide, placing additional emphasis on core Air Force mission sets. The emphasis on service skillsets is common across each of the

service schools as OPMEP provides service-specific desired learning outcomes for each service senior PME institution.

The Air Force officer development system supports diverse experiences in civilian settings that include numerous fellowships. The Air Force Fellows program provides senior developmental education credit with its own related mission and objectives. Table 2 displays the mission and objectives of these experiential fellowship programs. While Fellows are granted credit for senior service school, the programs concentrate on slightly different objectives from programs conducted in military or civilian academic environments. These programs concentrate on exposing Fellows to experiences missing from residence PME institutions.

Table 2. *Air Force Fellows Program Mission and Objectives* (The Air Force Fellows Program, 2012).

Mission Statement	Develop senior air, space and cyberspace power leaders with a strategic understanding of international security, civil-military affairs and cutting-edge technology.
Objectives	<ul style="list-style-type: none"> • Analyze current scholarly perspectives on defense policy and strategy issues • Evaluate processes and policy of US national security • Broaden and develop senior leader competencies • Solidify relationship with civilian academic and policy communities

The joint schools (operated by more than one service) and service school options for SDE have clearly defined outcomes and a mechanism in place to ensure attainment of those goals. The fellowship options have different formats, but are designed to expose students to the strategic level of leadership. Senior Air Force leaders are familiarized with the desired outcomes of the PME system and know what to expect from graduates.

Three Schools of Thought

Despite the robust officer development approach described above, not all interested parties hold the same opinion regarding the value and role of formal education in the development of senior officers. Contemporary literature can be considered to fall into three schools of thought: “muddy boots,” “status quo,” and “increased graduate education.” These categories are not all inclusive and some authors may be considered to belong to more than one school of thought. The first school maintains that experience, particularly the muddy boots experience obtained in combat, is the best teacher for senior military leaders (Ricks, 2012b). The term “muddy boots” is meant to imply hands-on combat experience, whether gained on the ground or in the air. Proponents of this school view combat experience as the crucible that trains leaders and defend their position with what can be considered anti-intellectual rhetoric. This group views graduate education as a distraction for military officers (Peters, 2007). The status quo group maintains the officer professional development system as appropriate and suggests that it requires only marginal changes to adapt to current and emerging situations. This school emphasizes the need to broadly educate all officers rather than change the system to highly educate some officers (Skelton, 2005). The third school of thought, similar to the first, is critical of the current system and its products, but its proponents have different ideas about how to change the system. The “increased graduate education” school proposes a substantial overhaul of the officer development system that would include increasing partnerships with civilian graduate schools, efforts to change the military’s culture with respect to education, and encouraging terminal degree attainment among more officers (Petreaus, 2007).

Table 3 summarizes some of the factors associated with each school of thought and identifies the key proponent of each. Characteristics of each school of thought are further explicated below.

Table 3. *Schools of Thought on Senior Developmental Education*

School of Thought	Muddy Boots	Status Quo	Increased Graduate Education
Characteristics	“Paralysis of Analysis”	“Not broken, don’t fix”	Broadens perspective
Factors	Distracts from concentration on warfare Anti-intellectualism	Preserves service expertise Builds network	Builds wider network Academically rigorous
Key Examples & Proponent	Lt Col Ralph Peters	PAJE OPMEP Ike Skelton	General David Petraeus

Muddy Boots School of Thought. The muddy boots school of thought holds that experience is the best teacher. Military commentator retired Lieutenant Colonel Ralph Peters (2007) maintains that too much education slows a senior military leader’s ability to react to changing situations on the battlefield. He asserts that graduate level education stunts the development of officers by robbing them of field experience and miring them in theoretical pursuits that may not fit the problems they encounter (Land Warfare Studies Centre, 2007). While Peters is likely the most vocal proponent of this approach, evidence suggests other facets of military culture have embraced this notion. Specifically, selection to attend senior PME is viewed in some quarters as more important than actual attendance. Many officers view selection as indicating they passed a quality cut, but they do not want to be sidetracked from gaining additional operational experience by taking time to attend school (Allen, 2010;

Bethel, 2010). The desire to value experience over education is not new or directly tied to the recent prolonged combat operations the Air Force has been involved in for more than two decades. In 1991, an Air University study concluded, “many officers perceive PME as a means to promotion rather than a way to enhance professional competence” (Davis & Donnini, 1991, p. 100). This study was conducted before combat experience was readily available to any officer who volunteered for duty in Iraq or Afghanistan, but 20 years after the original investigation, a similar investigation found that the corps of officers with significant combat experience in Iraq and Afghanistan still felt the same way (Switzer, 2011). Recent promotion board results show this school of thought has some institutional backing (Barno, 2009). Promotion boards use muddy boots combat experience as a key factor in deciding which officers are promoted to general officer ranks (Barno, 2009).

The attitude of “anti-intellectualism” (Hofstadter, 1963) that accompanies the thinking of some “muddy boots” proponents has, over the years, gained varying degrees of support within the Air Force. Chief of Staff of the Air Force General John Jumper deemphasized the role of civilian education in a 2005 policy letter to all airmen, directing that graduate degrees be masked from promotion boards and declaring that education should be tailored to benefit the jobs of airmen (Jumper, 2005). Jumper’s policy supported only graduate degrees that were immediately relevant to an officer’s current job, but did not consider them to have long-term value. However, the next Chief of Staff, General Moseley, along with the Secretary of the Air Force, the Honorable Michael Wynne, reversed the decision and included graduate school information in promotion folders (Wynne & Moseley, 2006). The Chief and Secretary confirmed an emphasis on continued professional and personal development through graduate education. This public debate and reversal of policy did not go unnoticed by the Air Force

officer population (Switzer, 2011). In 2014 the sitting Chief of Staff, General Mark Welsh, adjusted guidance yet again to mask graduate degrees from promotion boards below the colonel level (United States Air Force, 2014).

As far back as 1947, Air Force researchers noted that “air activities have most often attracted men of active rather than literary leanings ... The Air Force has never boasted a high percentage of scholars” (Parrish, 1947, p. 29). Researchers cite the American fascination with practical knowledge versus academic knowledge as a contributing factor to the rise of anti-intellectualism (Long, 1996). This is characterized by “impatience with abstract thought and a preference for practical knowledge on the frontier” (Ratner-Rosenhagen, 2009, p. 41). Additionally, researchers assert that American culture values just-in-time scholarship over intellectual preparation (Boshier, 2009). The Air Force system that sponsors advanced academic degrees also favors sponsorship of those degrees so that officers earn the required credential immediately before starting a new job (Staats, Reynolds, & Troxell, 2007). This system keeps officers in the field until they are perceived to need a degree for a particular upcoming job.

Status Quo School of Thought. The second school of thought maintains the military officer developmental system is effectively accomplishing its mission at a low cost relative to the entire defense budget. The Army War College surveys the supervisors of its graduates biennially to collect feedback on the effectiveness of its curriculum. The survey respondents are Army War College graduates including Air Force officers. In 2008, more than 95% of the general officer respondents reported the Army War College was successfully preparing its graduates to work at the strategic level (U.S. Army War College, 2008). This high level of satisfaction suggests that, for many, the status quo is sufficient.

Numerous Congressional studies have examined the officer developmental system. These inquiries produced different results regarding ways to improve the system, but all demonstrated a strong Congressional commitment to a robust PME system. While he was the ranking member of the House Armed Services Committee, Representative Ike Skelton stated, “The time spent at professional military schools needs to be longer – not shorter” (Skelton, 2005, p. 1). Even in today’s limited budget climate, this sentiment remains strong in Congress (U.S. Congress, 2010). The Air Force commitment to educating officers is demonstrated by the number sent to senior developmental education. Over the past four decades, the student bodies at senior developmental education have grown while the size of the military, notwithstanding temporary increases related to the wars in Iraq and Afghanistan, has generally decreased. Table 4 illustrates this trend at the Eisenhower School of National Security and Resource Strategy (previously the Industrial College of the Armed Forces), which is part of the premier professional military education institution.

Table 4. *Comparison of Air Force/Military Endstrength* (U.S. Congressional Research Service, 2002) (Department of Defense, 2012) *and Eisenhower School of National Security and Resource Strategy (previously the Industrial College of the Armed Forces) Student Body* (Industrial College of the Armed Forces, 2012).

Year	Air Force Endstrength	Military Endstrength	ICAF Students/Air Force ICAF Students
1981	570,000	2,082,000	221/56
1991	511,000	2,002,000	201/54
2001	354,000	1,385,000	289/55
2011	332,000	1,432,000	314/56

The number of Air Force students has remained constant despite the size of the force being reduced by nearly half. This trend demonstrates Air Force commitment to continuing to send

promising officers to military education options even when endstrength (the Congressionally authorized size of the military) decreases.

Adherents to the status quo school point out that nearly all officers currently earn master's degrees. This nearly universal education level across the officer corps ensures the majority of officers in leadership positions have completed some formal higher education (Andrus, 1985; United States Air Force, 2010b). Proponents of the status quo do not support increased emphasis on civilian higher education because they believe the current professional military education system meets the needs of the service.

Increased Graduate Education School of Thought. The increased graduate education school of thought places high value on advanced education and contends the current system falls short in preparing officers for strategic leadership positions. This school of thought values the traditional military War College education, but sees room for improving the preparation of senior leaders through the increased use of civilian graduate education. Some advocates of this school suggest that civilian programs are better equipped to provide an academically rigorous environment and that military schools have failed in this regard (Hughes, 2010; Ricks, 2011a). Proponents maintain strategic leaders need a broad-based social sciences education in addition to technical competency in their fields. Representative Skelton repeatedly championed this position in Congress, saying “We must also expand opportunities for mid-career graduate level education” (Skelton, 2005). Followers of this school believe that military culture does not currently value diverse educational experiences, even though those experiences have been identified as vital to the development of strategic leaders. General David Petraeus’ essay, “Beyond the Cloister,” summarizes the value this school of thought places on higher education by enumerating six reasons officers benefit from

civilian graduate school education (Petreaus, 2007). Among those reasons, he cites the greater exposure to divergent views that develop an officer's intellectual capital and communication and analytical thinking skills. Although military schools have an increasingly diverse population of students compared with previous generations, most are government employees with similar perspectives, unlike the broader academic population in civilian institutions (Industrial College of the Armed Forces, 2012).

Retired Major General Robert Scales' article, "Too Busy to Learn," warns of the dangers of a military that forsakes education (Scales, 2010), recounting the high price the British military paid for relying on combat experience rather than formal education to teach its leaders. At the beginning of World War II, the atrophy of the British professional military education (PME) system left the nation's military commanded by senior officers who relied on World War I experience as the model for success. This contributed to a series of costly defeats and eventual withdrawal across the English Channel as British forces failed to adapt to new developments on the battlefield.

Air Force Instruction 36-2640, *Executing Total Force Development*, suggests that the Air Force recognizes the dangers of relying too heavily on experience to educate leaders. Figure 2 illustrates that the Air Force places education and training as the foundation of development, complemented by experience gained during deployment.

Both the Secretary of the Air Force and two Chiefs of Staff of the Air Force have agreed that relying solely on experience is not an option for the Air Force (Wynne & Moseley, 2006; United States Air Force, 2014). The Air Force asserts professional development is composed of experience, training, and education in an appropriate balance (United States Air Force, 2010b). Gaining a deeper understanding of the lived experience of

the individuals at the center of this discussion about “appropriate balance” prompted the study reported here.

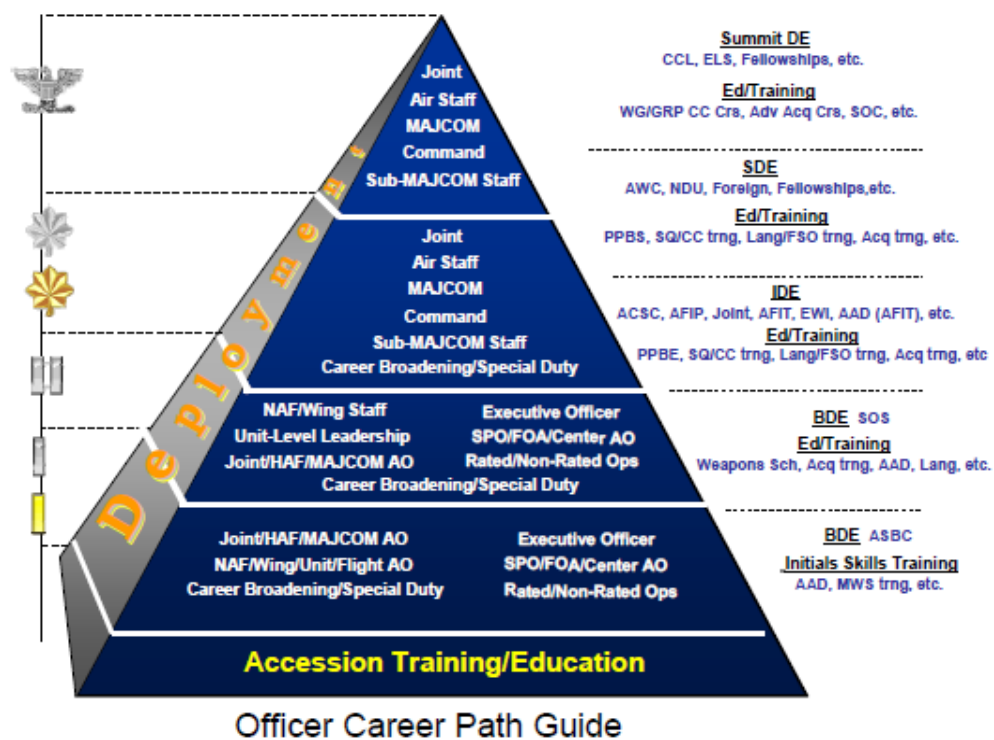


Figure 2. Air Force Officer Career Path Guide (United States Air Force, 2010b).

Statement of the Problem

As noted above, several broad schools of thought concerning officer education are described in the literature but none of these descriptions address the factors influencing the decisions made by officers living in this system about their participation at the highest educational levels.

Existing Air Force Programs to Increase Doctoral Degrees

The Air Force recently launched a pilot program to annually select three officers for doctoral programs at prestigious universities with the end goal of “developing a cadre of strategic thinkers” (Air Force Link, 2013; United States Air Force, 2012a). In addition to this

program, the School of Advanced Air and Space Studies (SAASS) sponsors an initiative to increase the number of rated officers with doctoral degrees. SAASS annually offers to sponsor doctoral studies for five to seven of its top students (Chiabotti, 2014). Those selected for this program complete 14 additional credit hours beyond those already earned at SAASS at a civilian academic institution. When these officers reach the point in their career where they should attend Senior Developmental Education schools, they are offered a one-year fellowship for the purpose of completing their dissertation. Once their dissertation is complete, they are awarded credit for SDE and a doctorate from SAASS. The school's goal is to produce enough highly competitive rated officers with doctorates that some of them will eventually be selected for promotion to general (Chiabotti, 2014). Despite the institutional commitment to produce a small cadre of doctoral Air Force officers annually, educational administrators at the School of Advanced Air and Space Studies believe the pool remains too small. Understanding why rated Air Force officers pursue doctoral degrees in this context was the purpose of this study.

Purpose of the Research

The purpose of this investigation was to determine the factors involved in rated Air Force officers' decisions to pursue doctoral degree.

Research Question

What factors influence rated officer's decisions to pursue doctoral degrees?

Significance of the Problem

Despite three initiatives to increase officer's participation in doctoral education, the Air Force lacks a deep pool of officers with doctoral degrees who could apply their knowledge to complex problems (United States Air Force, 2009). As described in Chapter II,

Air Force education policy has changed numerous times during the last two decades. Inconsistent guidance and policies from the Air Force may have contributed to the rise of the various schools of thought discussed above. Gaining a better understanding of the factors that influence rated officers' decisions to pursue doctoral education may allow the Air Force to adjust institutional policies to more rapidly establish a pool of officers. These factors may be either motivators or obstacles. Research has determined that both motivators and obstacles can be factors in career and educational decisions (Bullock-Yowell, Andrews, & Buzzeta, 2011; Magrane, et al., 2012; MacDonald & Cawood, 2012; Sheaffer, et al., 2008).

The military, including the Air Force, faces an austere fiscal environment at a time when innovation is required to address ever more complex military and social problems (Chiabotti, 2014). Creating more rated officers with doctoral credentials may be one way to increase the pool of innovative thinkers and leaders available to work on these problems.

Delimitations

Delimitations refer to how the study is narrowed in scope (Creswell, 2013). This study was subject to the following delimitation in order to keep the scope manageable and focused on the research question.

1. This study did not investigate whether doctoral degrees would benefit the military, but was conducted to determine what factors influence rated Air Force officers' decisions to pursue doctoral degrees.
2. This study's participants were drawn from the ranks of rated Air Force officers. Findings are generalizable exclusively to this branch of the military.

Acronyms and Definitions

AFSC – Air Force Specialty Code, the classification system used by the Air Force to describe Air Force career fields

BDE – Basic Developmental Education

CLO – Chief Learning Officer

ICAF – Industrial College of the Armed Forces

IDE – Intermediate Developmental Education

Nonrated Officer – Officers in support career fields such as logistics, maintenance, and medical specialties.

OPMEP – Officer Professional Military Education Program

PAJE – Process Accreditation for Joint Education

PME – Professional Military Education

Rated Officer – An officer whose AFSC is air battle manager, pilot, or navigator.

SAASS – The School of Advanced Air and Space Studies, an Air Force organization dedicated to producing “strategists through advanced education in the art and science of air, space, and cyberspace power to defend the United States and protect its interests” (Air University, 2014).

SDE – Senior Developmental Education

Researcher as Instrument

Researchers are not immune to the influence of their personal experiences; however, they can mitigate the impact of their experience on a study by openly addressing their potential bias (Cox, 2012; Maxwell, 2005). Qualitative researchers must create a conversational space with their research participants while being mindful of their own biases

in order to prevent skewing the research data (Pezella, Pettigrew, & Miller-Day, 2012). The impact of researcher bias can manifest in both data collection and data analysis phases of qualitative research (Ravitch & Wirth, 2007). As with any qualitative researcher, my personal experiences and interest in the subject area were potential sources of bias.

I am a recently retired rated Air Force officer, former squadron commander, former group commander, and am biased toward the value of formal education. I graduated from the United States Air Force Academy with a Bachelor of Science in Aeronautical Engineering. As a lieutenant, I attended night school to earn a Master of Aeronautical Science degree from Embry Riddle Aeronautical University. This degree is common among Air Force pilots because Embry Riddle Aeronautical University has satellite campuses on nearly every Air Force base. I later earned a Master of Systems Engineering degree from the Air Force Institute of Technology. Following that I earned a Master of Military Arts and Sciences degree from the United States Army's Command and General Staff College. Finally, I earned a fourth master's degree in National Resource Strategy from the National Defense University. The last three master's degrees were sponsored by the military, and it was my fulltime job to earn them.

I am now pursuing a Doctorate of Education (Ed.D.) from the University of Idaho. I believe education is important or I would not have earned these credentials and chosen education as the field for my own doctorate. However, I chose not to accept Air Force sponsorship of a doctoral degree because I believed that such sponsorship may negatively impact my desired future as a squadron commander and competitiveness for higher level command. The sponsorship I was offered would have required teaching for the sponsoring institution when I was of the required seniority to be considered for command. I am aware

my personal experiences and attitudes about education are a potential source of bias in this research and I remained vigilant to this possibility. I engaged in reflexivity throughout the research process including composing mental and written notes to myself regarding bias I may be introducing into data collection and analysis. In order to mitigate potential influence on participants, I did not share my rank or background with participants who were not already aware of them until after their interviews were complete. In addition to recording the interviews so I could capture the participants' exact words, I made notes of main points during the interviews. I ended each interview by summarizing the notes and giving the participants the chance to make corrections, if any, on those summaries.

Summary

Military officers are often presented with complex problems, relying on their experience, training, and education to develop solutions. Military leaders seek officers with credentials from military and civilian institutions of higher education to help solve those problems, but while Air Force policy has, to varying degrees, encouraged officers to pursue advanced degrees, few continue to the doctoral level. Few rated officers participate at the doctoral level and the factors involved in the decision making process of those who do is not currently understood.

The literature suggests three schools of thought about officer development and education that seem to be competing across the military and in the Air Force. The first school places the most emphasis on experience gained in the field, placing particular emphasis on combat experience. Previous studies as noted earlier indicate that this first school of thought may be most prevalent among Air Force officers. The second school of thought values both experience and the training gained through the military's professional military education

system. This status quo school of thought maintains that the mix of experience and professional military education is optimal for producing military leaders capable of meeting complex challenges. The final school of thought holds that more officers should pursue higher education. In this confusing context, the purpose of this study is to investigate the factors that influence officers' decisions to pursue doctoral degrees.

Overview of the Study

This dissertation consists of six chapters. Chapter I introduced this study, provided background of the problem, and detailed three schools of thought related to this issue. Chapter II presents a review of relevant literature about culture, socialization, and indoctrination and will discuss the potential relationship of each of these factors on an Air Force officer's decision to pursue a doctoral degree. Chapter III describes the methodology employed for this study. Chapter IV presents data from documents and interviews. Chapter V presents data analysis and interpretations. Chapter VI presents implications for practice and recommendations.

Chapter II – Review of the Literature

Introduction

The purpose of this review is to summarize the current literature relevant to Air Force officers' decisions about pursuing doctoral degrees. Few authors have directly addressed this subject, but two related areas provide a framework for understanding the subject and establish a need for the study. The first area is a comparison of military support for higher education with the support provided by business and educational administration professions. Second, a review of research on the effects of indoctrination and culture as they relate to the subject is offered.

Military Support of Education

Some professions view earning a doctoral degree, or terminal degree, as a requirement to enter the upper tier of leadership within the profession (Jablonski, 2001). However, no active Air Force general officer outside a highly technical or academic career field currently holds a doctoral degree. A review of the biographies of all current and recently retired Air Force general officers in operational leadership positions revealed that only three hold doctorates. Retired Lieutenant General Frank Klotz holds a doctorate in politics from Oxford. Retired Major General Mike Worden holds a Ph.D. in history from Duke and, also recently retired, Lieutenant General Robert Elder holds a doctorate in engineering from the University of Detroit (United States Air Force, 2012b). This biographical search did not include medical or law doctorates because officers holding those degrees are not rated officers considered for operational commands.

The literature available on general military support of higher education reveals backing for undergraduate and master's level education (Carrol, 2008); the military uses the

promise of education benefits as a recruiting and retention tool. Obtaining an undergraduate degree is a prerequisite to commissioning as an officer, and enlisted personnel are highly encouraged to pursue bachelor's degrees (Blumenstyk, 2006). Until 2014, promotion boards used an officer's level of graduate education to determine advancement to major and lieutenant colonel (Holmes, 2009). In 2014 Air Force, policy hid this information from major and lieutenant colonel promotion boards but placed importance on degree completion for colonel promotion boards (United States Air Force, 2014). In addition to encouraging some levels of civilian education, the military provides, at its own great expense, a system of internal professional military education. Despite this commitment, the military's comprehensive system of professional military education stops short of the doctoral level (McCausland & Martin, 2001). Career officers progress through four stages of professional military education: 1) Basic training, where officers are indoctrinated into military culture and taught the basics of their profession; 2) Between an officer's fifth and seventh year of service they attend basic developmental education, which prepares them for greater leadership responsibilities; and 3) At the 8- to 10-year point, officers are selected to attend intermediate developmental education. Most versions of intermediate developmental education last approximately one year and grant a master's degree. Finally, between 17 and 20 years of service, officers are once again competitively selected to attend developmental education. This training, which lasts a year, is called senior developmental education and generally results in a second master's degree.

During a successful career, an officer can expect to attend two to three years of developmental education. This level of internal education system, along with the half-billion dollar annual investment in undergraduate and master's level education (Blumenstyk, 2006),

signals a high level of commitment by the military to develop its officers. However, it also exposes the fact that the normal path to senior leadership requires only a master's degree and does not encourage pursuit of a doctorate. Recent research revealed that the Air Force manages advanced academic degrees based on short-term job requirements (Staats, Reynolds, & Troxell, 2007). The Air Force selection process for advanced academic degrees projects vacancies in positions that require a graduate degree one to two years before an opening, then selects officers to obtain degrees on their way to those positions. This approach suggests little institutional commitment to the long term value of having a corps of officers with doctorates (Staats, Reynolds, & Troxell, 2007). Results from this research suggest the Air Force uses a transactional model to produce officers with appropriate degrees just in time to fill critical billets rather than taking a longer term approach to develop a pool of qualified officers.

A 2013 review of the scholarly literature pertaining to the decisions rated officers make about pursuing post-master's education revealed no scholarship directly on this topic. Researchers LeMire and Williams (2011) surveyed Air Force officers who were serving as Reserve Officer Training Detachment commanders regarding their motivation to pursue Doctor of Business Administration degrees and the barriers they perceived to doing so. The study did not identify what portion of participants were rated or non-rated officers. More than 63% of the respondents indicated a desire to pursue the degree, citing time as the primary barrier to following through. This investigation sheds some light on the subject, but it did not focus on rated officers who have different careers than nonrated officers. Another study of both officers and enlisted personnel at an Air Force Base in Kansas determined a perceived lack of time as the greatest barrier to participating in higher education (Harrison, 2012). Harrison's investigation also did not identify whether or not the officers studied were rated.

Studies of enlisted military members from all services have documented available time, leadership encouragement, and financial concerns as factors in their decisions about higher education (Layne, 2008; Murphy, 2007; Zientek, 2009).

Although the preceding review describes research concerning military support for higher education and military members' attitudes toward and actions regarding pursuit of higher education, this literature does not focus on rated officers and the factors that influence their decisions about pursuing doctoral degrees.

Business Support of Education

A comparison to professional fields outside the military is revealing. The body of literature on business professional pursuit of doctoral degrees among business professionals is more comprehensive than that available on military personnel pursuit of these degrees. The business community places a premium on the master of business administration degree in terms of both salary and promotion (Baruch & Peiperl, 2000; Bruce, 2009). Often, this degree is a coveted qualification to the point that it is considered a requirement in the business world. Two recent trends show that doctoral degrees hold increasing value in the business world.

The first is the rise in the number of doctor of business administration (DBA) programs. The DBA was created to meet the demand for business professionals to continue their education beyond the master's level. Doctor of business administration programs generally cater to individuals who desire to increase their upward mobility (Utley, 1999; Servage, 2009). The Harvard Business School added a DBA because the institution thought this degree better met the needs of its students who intend to be practitioners rather than researchers (Harvard Business School, 2009). Research on doctoral degree candidates show they are motivated by earning a degree that will advance their profession (Wellington &

Sikes, 2006). Some newer doctoral programs for business professionals are designed specifically to increase promotion potential (Hartigan, 2002). Segments of the academic community take issue with some DBA programs, believing they are not academically rigorous enough (Attwood, 2008). Nonetheless, executives are seeking these degrees to advance their careers.

A second trend in business education that demonstrates a positive attitude toward doctorates is the increasing demand for doctoral degrees in human resources (LeMire & Williams, 2011). The concept of learning organizations has taken hold in the business community, evidenced by an increasing number of chief learning officer (CLO) executive level positions. Persons seeking this high-level position actively seek doctoral degrees since many CLO job descriptions now require a doctorate in organizational learning or a similar field. As of the mid-2000s, 30% of CLOs had earned doctoral degrees (Spiezer, 2006).

Still, portions of the business community value practical experience over degrees. The popular press commonly cites examples of successful business leaders who do not hold college degrees. Highly successful entrepreneurs who do not hold college degrees, like Richard Branson, founder of the Virgin Group, are cited as proof that any level of college degree is not required to succeed in business (Lorenz, 2006). Supporters of this position often argue that college not only results in debt, but also takes time that could be better used to gain experience (Anderson, 2012).

Educational Administration Support of Education

Doctoral degrees are valued for educational administrators, are viewed as the typical progression up the leadership ladder (Jablonski, 2001; Flowers & Baltzer, 2006), and are becoming increasingly common among these professionals (Rodriguez-Campos, Rincones-

Gomez, & Shen, 2005). A terminal education degree is now a standard requirement for upper level administrators in the profession (Guthrie, 2009). Those desiring to attain top positions in this field understand that a doctoral degree is a prerequisite (Servage, 2009). In a study examining the employment prospects of doctoral degree holders, the Bureau of Labor Statistics reported that: “Most Ph.D. workers in academia are college and university faculty; however, those who hold high-level administrative positions within academia, such as college and university presidents and deans, also typically must have doctorates” (Jones, 2002, p. 27). In 2000, 83% of executive officers in the California community college system held doctoral degrees (California Postsecondary Education Commission, 2000). Research also suggests that doctoral degree holders in educational administration attain and hold better positions with supervisory duties than those without advanced degrees (Sanders, 2004; Flowers & Lazaros, 2009). While some people attain leadership positions in the educational administration field without doctoral degrees, evidence suggests that the majority of higher-level positions require a doctoral degree.

Comparison of Education Support between Professions

A preponderance of literature identifies the value of doctoral degrees for educational administrators and business leaders. Some business leaders are actually encouraging educational institutions to develop doctoral programs that fit their needs while others accept experience in place of education (Bidwell, 2014). More and more leaders in educational administration pursue a doctoral degree. Unlike the conflicting messages currently competing in the military, support for doctoral level education in the educational administration and business professions is increasingly evident.

This literature review finds that further research into the reasons rated Air Force officers pursue doctoral degrees is warranted. Research could result in changes in policy and culture with respect to sponsorship of doctoral degrees.

State of Doctoral Education

An examination of the current state of doctoral education in the United States also provides context for this study. Doctoral education programs in the United States have experienced significant growth since the 1950s. American academic institutions produced fewer than 9,000 doctorates in 1957 compared to between 40,000 and 50,000 graduates in 2011 (Balaram, 2013; Walker, Golde, Jones, Bueschel, & Hutchings, 2013). Student demographics in these programs now include far more foreign students (Anastas & Kuerbis, 2009). Foreign students earned over one third of the doctorates awarded in the United States in 2011 with half of those earned by students from Asian countries (Balaram, 2013). The rapid expansion of doctoral programs in the United States reflects increased demand for graduates from both academia and industry.

Doctoral programs are evolving in response to technological and societal changes. Students increasingly seek online programs that are compatible with full-time employment and family responsibilities (Columbaro, 2009). Improved online education delivery platforms and student acceptance of the technology have expanded enrollment in online programs (Lee & Nguyen, 2007), making pursuit of online degrees far more acceptable (Servage, 2009). With the increased availability of online graduate education, students who otherwise may not have participated in graduate education because of perceptions of racial or gender discrimination can now pursue doctoral degrees with fewer of these concerns (Columbaro, 2009). Although the availability and popularity of doctoral education has increased, high

attrition continues to be a dominant characteristic of terminal degree programs in the United States. Up to 57% of doctoral students fail to complete their degrees (Council of Graduate Studies, 2008; Walker, Golde, Jones, Bueschel, & Hutchings, 2013), but completion rates vary by field of study and institution (Church, 2009). Degree-granting institutions seek to improve completion rates because, in part, higher completion rates contribute to the perception of higher quality programs (Gardner, 2009). Numerous factors influence student attrition rates. Because student attrition is costly for colleges and universities, significant research has been focused on identifying its causes.

Why People Pursue Doctoral Degrees. Doctoral students have a variety of motivations for pursuing their degrees. Numerous studies conducted in various academic fields have examined student motivation to pursue terminal degrees.

A study of doctoral education in social work identified work-related influences as the primary reason students enter doctoral programs. The social work field is different from other fields because the master of social work is considered a terminal degree (Anastas & Kuerbis, 2009). Doctoral level social workers comprise only 2% of active social workers (Whitaker, Weismuller, & Clark, 2006). Anastas and Kuerbis (2009) found, “Despite their limited numbers, however, doctoral level social workers are key professional leaders in practice, policy, research, and scholarship” (pp. 71-72). Survey results from 570 participants in social work indicated that half of graduates did not intend to pursue positions in academia, but rather planned to use their degrees for professional advancement in either private or government social work (Anastas & Kuerbis, 2009). This study found that the desire for career advancement is a significant reason people pursue doctoral degrees in social work.

An interview-based study of 17 educators pursuing doctorates at a small private university in the Northeast United States found two major motivating themes among individuals seeking their degrees. More than 50% of respondents stated personal goals such as pursuing their dream as the initial motivation for doctoral studies (Jablonski, 2001). The second factor was the desire for career advancement or the requirement to obtain a doctorate to continue holding their current employment (Jablonski, 2001). A similar study of 29 doctoral students in education from a university in Great Britain sought to determine why they chose their program. Participants provided written responses to survey questions designed to explore the students' motivations. The investigation found employment considerations, desire for advancement, and the attraction to a challenge as the main motivators for this group (Wellington & Sikes, 2006).

A study of students enrolled in a counseling doctoral program resulted in the development of four motivation themes. Participants responded to an emailed survey and agreed to participate in semi-guided interviews. Analysis of the surveys and interview transcripts determined passion, expectations, voice, and personal development as the major reasons for individuals seeking doctorates in counseling (Silvester, 2011). Respondents who cited "passion" as a motivation were passionate about different aspects of the process; some had a passion for academia, others for research, and others about overcoming the challenge of earning the degree. The "voice" theme related to students' desire to have more ability to influence their field once they achieved the doctoral credential. The third theme addressed student expectations that learning material in their classes would be a degree benefit. Personal development was the final motivation; students in this program sought to learn about themselves during their doctoral journey.

Numerous research projects related to higher education but not focused on student motivation have also uncovered reasons students pursue advanced degrees. While examining the growth of professional doctorate programs, Costley and Lester discovered students desired the doctorate “as a vehicle for professional extension” (2012, p. 258). Another study focused on professional doctorate programs linked the growth of doctorate programs to student perceptions of employability resulting from increased corporate demand for graduates (Kot & Hendel, 2012). While investigating high doctoral student attrition, researchers found “students indicated a desire to gain knowledge, personal development, and advancement in professional careers as reasons for attending the doctoral degree program” (Church, 2009, p. 310). Research into student retention found prestige is a factor in graduate programs attracting and keeping high-quality students and faculty (Gardner, 2009). Graduates from prestigious programs have better access to employment as academic professionals in higher ranked universities. Increased professional opportunities and a desire for career advancement are common motivations for students to pursue doctoral degrees.

In summary, research suggests people pursue doctoral degrees for a variety of reasons. Some doctoral students seek knowledge. Others are motivated by potential career or financial benefits. A desire for prestige also motivates some students to pursue doctoral degrees.

Why People Quit Doctoral Programs. A wide variety of factors influence student decisions to leave doctoral programs. An interview study of 60 doctoral scholars across six colleges at a major American university organized student departure under three major themes: “(a) personal problems, (b) departmental issues, and (c) wrong fit for the program” (Gardner, 2009, p. 105). Personal problems identified in this study generally concerned the difficulty of completing the program while maintaining outside relationships and family

responsibilities. Departmental issues dealt with politics in the students' respective colleges including the distribution of financial aid. Financial considerations contributed to 29% of withdrawals in one study (Gardner, 2009). Finally, some students decided that completing the program no longer aligned with their personal or career goals. Additional studies also identified a lack of financial aid or financial resources as factors contributing to doctoral student attrition (Anastas & Kuerbis, 2009; Council of Graduate Schools, 2004). Completion rates are directly related to the amount and type of financial aid afforded to doctoral students with research assistantships positively correlating to degree completion (Ampaw & Jaeger, 2012).

Why People Choose Not to Pursue Doctoral Degrees. Little research has been conducted to determine reasons why students who desire a doctorate do not pursue one. Researchers LeMire and Williams (2011) surveyed Air Force officers who were serving as Reserve Officer Training Detachment commanders about their motivation to pursue doctor of business administration degrees and the barriers they perceived to doing so. Some sixty-three percent of the respondents indicated a desire to pursue the degree, citing lack of time as the primary barrier. Other researchers determined some students do not pursue doctoral degrees based on historical racial discrimination and cultural issues that reduce access to higher education (Dodson, Montgomery, & Brown, 2009). While scant research exists in this area, the limited research about why people start programs and why they quit them provides context to the current study.

Different motivations fuel each student. As noted above, some students enter doctoral programs for career progression and the desire to accept a challenge. Students satisfied with their current career track and not seeking another challenge are unlikely to seek a doctoral

degree. Since most students incur debt while earning their degree (Anastas & Kuerbis, 2009), a desire to avoid debt or the inability to secure enough financial sponsorship may also contribute to the decision not to seek a terminal degree.

Shift toward Professional Doctorates. Social and economic forces have contributed to the rapid growth of professional doctorates in the United States (Servage, 2009).

Professional doctorates emphasize the connection between industry, government, higher education, and graduates (Boud & Tennant, 2006), allowing students to connect their professional practice with program research (Fenge, 2009). At least 32 distinct professional doctorate programs were available in 2007 (Kot & Hendel, 2012). Graduates are using their doctorates to pursue a wider variety of careers, applying pressure to universities to reshape doctoral programs to meet student aspirations and industry expectations (Boud & Tennant, 2006). Both students and industries are seeking doctoral programs that prepare graduates for endeavors outside academia. Professional doctorates prepare graduates for non-academic endeavors, whereas Ph.D. programs focus on preparing graduates to enter academia (Servage, 2009; Borell-Damian, 2009).

The debate over the differences and relative value of professional doctorates versus traditional doctorates continues (Jablonski, 2001). “A common theme and key tenet of reform manifestos is that doctoral education has failed to meet the needs of industry, and has created misalignments and inefficiencies in the employment market for graduates” (Servage, 2009, p. 765). In addition to pressure from industry, government continuing education requirements have also increased the number of potential students seeking professional degrees (Jablonski, 2001). While this debate is unlikely to be settled soon, colleges and universities are responding to ongoing pressure by offering more professional doctoral programs.

Culture

Organizational culture has been shown to influence the perceptions and behaviors of military organizations (Terriff, 2006). Air Force culture may effect a rated officer's decisions and actions about pursuing doctoral degrees. The process of indoctrinating new officers into the Air Force may also factor into their later decisions about pursuing doctoral degrees. The next two sections will expand on theoretical models of culture and the existing research about the effects of indoctrination into new cultures. Particular emphasis will be placed on indoctrination into military cultures.

Models of Culture. Researchers from different disciplines have proposed multiple models or theories of culture, attempting to define it through lenses suited to their research. Anthropology has produced numerous definitions of culture. Anthropologist W.C. McGrew (1998) proposed that culture is the process by which a new behavior is learned, taught, and maintained through a group across generations. His definition suited anthropological studies of societies across generations. Another anthropologist, Edward Tylor, defined culture as “that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society” (2010, p. 1). This broader definition takes into account more influencing factors than McGrew's (1998) theory. Anthropological researchers frequently cite Kroeber and Kluckhohn's assertion that:

Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be

considered as products of action, on the other as conditioning elements of further action. (Kroeber & Kluckhohn, 1952, p. 181)

Cultural anthropologists Barnett and Lee define culture as:

a property of a group. It is a group's shared collective meaning system through which the group's collective values, attitudes, beliefs, customs, and thought are understood. It is an emergent property of the member's social interaction and a determinant of how group members communicate...Culture may be taken to be a consensus about the meanings of symbols, verbal and nonverbal, held by members of a community. (Barnett & Lee, 2002, p. 277)

Corporate culture researchers have also developed models of culture. Researcher Daniel Denison (1990) proposes that mission, adaptability, involvement and consistency are the four basic dimensions of culture. Denison provides further subcategories for each of his dimensions that fit into his research on organizational effectiveness well. While researching the relationship between corporate culture and corporate profitability, Flamholtz and Randle found that corporate culture consists of the five key dimensions of "customer orientation, employee (or people) orientation, performance standards and accountability, innovation and openness to change, and company process orientation" (Flamholtz & Randle, 2011, p. x).

Schein Model of Organizational Culture. Edgar Schein defines organizational culture as:

A pattern of shared tacit assumptions that was learned by a group as it solved its problems of external adaption and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as

the correct way to perceive, think and feel in relation to those problems
(Schein, 2009, p. 27).

Schein (2009) proposed that organizational culture is composed of three levels: artifacts and behaviors, espoused values, and assumptions. Each level shows important aspects of a culture that influence the actions of all members of that culture. Figure 3 illustrates Schein's notion that these three levels are the building blocks of an organization's culture. In a journal article written after his book on organizational culture, Schein further explained the levels of culture. He states that artifacts are readily observable upon encountering a new culture and that artifacts include "everything from the physical layout, the dress code, the manner in which people address each other, the smell and feel of the place, its emotional intensity, and other phenomena, to ... company records, products, statements of philosophy, and annual reports" (Schein, 1990, p. 111). In the case of the United States Air Force, cultural artifacts are indeed readily observable. The custom of standardized uniforms and formal patterns of speech when addressing superiors provide a look into the organizational culture rated officers experience. However, Schein (1990; 2010) warns artifacts are hard to interpret correctly. For example, uniforms may be worn in an effort to preserve a long-standing heritage, or they might alleviate safety concerns related to performing dangerous work. Thus, developing an understanding of an organizational culture requires more than just observation of its artifacts.

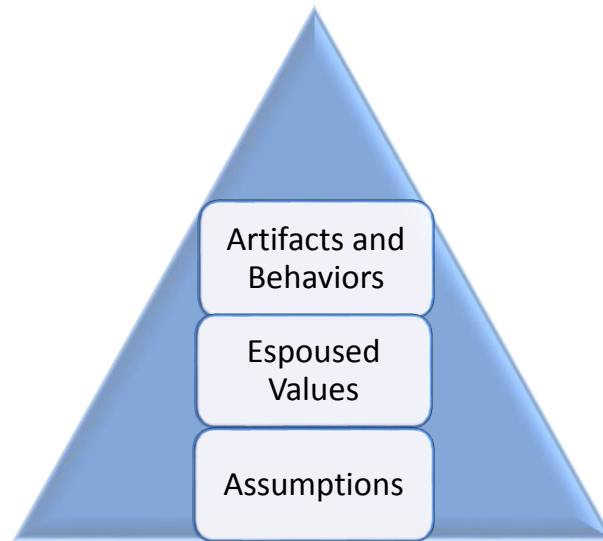


Figure 3. Schein's Levels of Organizational Culture

A thorough understanding of organizational culture relates artifacts and behaviors to the values and assumptions held in a culture. Deciphering the relationships between artifacts and values can be difficult, but is vital to eventually understanding the underlying assumptions (Pondy, Boland, & Thomas, 1988; Schein, 2009). Ascertaining a culture's values and assumptions requires detailed observation and dialogue with members of the culture, including in-depth interviews with open-ended questions that allow participants to discuss the assumptions they hold (Schein, 1990; Schein, 2010). Understanding all three levels of a culture allows a researcher to identify conflicts within a society and possibly explain observed contradictions between actions and values.

A culture's values impact the decisions and behavior of individuals. Research conducted in the California State University system showed that the perceived value of a doctoral degree significantly influenced the decision to enter a doctoral program (DeAngelo, 2010). This research was comprised of 130 interviews of doctoral candidates and faculty members. The study concluded that the three main factors influencing the decision to pursue

a doctorate for this population are, “the effects of the institutional culture of the California State University, faculty interactions and influences, and perceptions of the value of a degree from the California State University” (DeAngelo, 2010, p. 1). Although this study focused on a civilian population, it highlights the impact of perceived value on decisions to pursue doctoral level degrees.

Research into Military Education Culture. Scholarly research documents researchers’ efforts to examine each level of military, including Air Force, organizational culture with respect to educational pursuits. Several studies examine what motivates Air Force officers to pursue master’s degrees. A study of more than 3,300 Air Force Academy graduates showed a positive correlation between attaining a master’s degree and promotion to the ranks of lieutenant colonel and colonel (Andrus, 1985). This study used a combination of statistical methods and interviews with officers to determine the impact of master’s degrees on promotion. The study concluded that a master’s degree positively correlates to promotion. Similar research conducted at the University of Denver also found a positive correlation between possession of a master’s degree and career advancement for a broader demographic of officers not limited to Air Force Academy graduates (Duvall, 1964). The Air Force Personnel Center’s most recent demographic snapshot reveals that 91.7 % of officers in the rank of major and above hold at least master’s degrees (Air Force Personnel Center, 2013). Officers recognize the need for a master’s degree because the institution has made a master’s degree a de facto requirement for promotion (Dickinson, 1984; Switzer, 2011).

Research on the impact of doctoral degrees on Air Force officer careers produced mixed findings. A study on the career implications of doctoral degrees using a multivariate statistical approach found that attainment of a doctorate negatively correlates with promotion

to colonel (Cubero, 1984). The study delved deeper to find that the underlying cause of this negative correlation is likely the amount of time spent away from an officer's primary duties while pursuing a doctoral degree. The research found that "overall military performance was paramount in promoting officers to high rank," which confirms the hypothesis that time spent pursuing a doctoral degree harms an officer's promotion opportunity (Cubero, 1984, p. 110). However, the research revealed that there are exceptions to this finding. The timing of an officer's pursuit of a doctoral degree seems to make a difference. The negative impact of the time spent away from military endeavors is intensified if the hiatus occurs immediately before promotion consideration (Cubero, 1984). Officers who pursue doctorates immediately prior to their Colonel Promotion Board fare worse than those who earn their degrees earlier and who are in operational or academic leadership positions immediately prior to their promotion board. As with the master's degree studies, this study was limited to Air Force Academy graduates and included both nonrated and rated officers.

A comprehensive historical study of the development of Air Force organizational culture focusing on the period after World War II to the post-Vietnam War era found that rated officers are surrounded by a culture that places primary importance on technical competence in the air through repeated, realistic training (Michel, 2006). The shift toward placing higher value on technical competence was especially noticeable after the Air Force's initial dismal performance in air-to-air combat over North Vietnam. Further studies focused on both rated and nonrated officers found that technical competence, not level of education, was the most significant factor in deciding which officers were selected for leadership programs (Chandler, 2011; Ozbun, 2011). A quantitative study of 92 nonrated officers found "competence in the organization's mission functions is a critical criterion for selecting

officers to lead technical, complex, high-risk organizations” (Chandler, 2011, p. v). Similarly, a phenomenological study of 20 rated officers found low-level officers are expected to concentrate on developing technical competence rather than on developmental activities that could better prepare them for complex command assignments (Ozbun, 2011).

Rated officer’s own perceptions of their culture can also affect their decisions about pursuing doctoral degrees. Those desiring advancement within the culture strive to model behaviors they perceive as important to the culture. A historical study of rated officers who flew in the Vietnam War concluded that the pilots perceived themselves as members of a culture of bravado forged by taking decisive action in dangerous combat situations (Andrews, 2010). This cohort comprised the senior leadership of the Air Force well into the 1990s. This perception actually predates the Vietnam War and extends back to Air Force infancy. A study concentrated on Air Force efforts to project its image through film found that, from the origins of the Air Force as a separate service, the institution deliberately strove to project and adopt a culture of masculinity based on action (Cunningham, 2009).

Current scholarly literature surrounding Air Force culture with respect to educational pursuits shows that rated officers receive mixed messages. On one hand, educational pursuits through the master’s degree level are encouraged and rewarded through promotion. On the other, respect and leadership positions are gained through technical competence in specific mission areas.

Indoctrination/Organizational Socialization. All organizations have a process to indoctrinate or socialize new employees into their culture. Members of a culture can become so totally indoctrinated that they may be blind to their own culture unless exposed to another (Schein, 1996; Schein, 2009). Van Maanen and Schein defined organizational socialization as

“the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role” (Van Maanen & Schein, 1979, p. 211). They further explained organizational socialization as “the fashion in which an individual is taught and learns what behaviors and perspectives are customary and desirable within the work setting as well as which ones are not” (Van Maanen & Schein, 1979, p. 212). The process of organizational socialization assimilates new members by inspiring a commitment to maintain the core essence of an organization’s culture (Tuttle, 2001).

Research indicates that effective organizational socialization processes have beneficial effects for both new members and the organization (Cooper-Thomas, Anderson, & Cash, 2012; Korte & Lin, 2013). Good processes contribute to lower turnover, better organizational commitment, and employee task mastery (Ashforth, Sluss, & Saks, 2007; Copper-Thomas, Van Vianen, & Anderson, 2004; Ostroff & Kozlowski, 1992). Additional research on the relationship of social capital to organizational socialization indicated that new members’ desires to achieve status and social acceptance in the organization led them to assimilate into the organization’s culture by adopting behaviors the organization values (Fang, Duffy, & Shaw, 2011; Saeed, Abu Mansor, Siddique, Anis-ul-Haq, & Ishaq, 2012). While researching Taiwanese organizations, Tsai concluded that beliefs and values inherent in organizational culture influence the behavior of staff and leadership and contribute to job satisfaction and mission accomplishment (Tsai, 2011).

There is a significant body of research on the success of organizational socialization programs. A qualitative research study into the orientation processes for five public universities in Florida determined that efforts to explain the goals and values of an organization are a common part of new employee orientation program (Harmon, 2012).

Research suggests that new employee orientation programs can improve employee performance and commitment to organizational goals (Klein & Weaver, 2000; Dunn & Jasinski, 2009). The effects of indoctrination efforts can influence employee behavior both within and outside the workplace environment (Mohanty & Rath, 2012). Additional quantitative research found new employee orientation programs influence new employees' attitudes and values (Schmidt & Akdere, 2007). The military conducts organizational socialization through basic training for its new members, resulting in successful changes in attitudes and behaviors (Williams, 2010).

Indoctrination into Military Culture. The purpose of military basic training is to indoctrinate new inductees into the organization. The United States Air Force uses basic training to impress the importance of its core values on inductees, including “1. Integrity always. 2. Service before self, and 3. Excellence in all we do” (United States Air Force, 2012c, p. 1). While these values are straightforward, they may also unintentionally influence officers' decisions about doctoral degrees. Since pursuing advanced education may primarily be perceived as an individual effort to improve one's self, officers may have difficulty reconciling this with the indoctrinated value of “service before self.” Air Force Instruction 1-1, *Air Force Standards*, states, “*Service before Self* states that professional duties take precedence over personal desires” (United States Air Force, 2012c). The same type of internal conflict may be present if officers view time spent pursuing individual education as detracting from their ability to achieve “excellence” in their primary duties. A review of existing scholarly literature dealing with the military indoctrination process and its effectiveness provides context.

Researcher J. Bornmann (2009) found that basic training is effective at molding diverse individuals into military members with a common sense of identity and an acceptance of military culture and traditions. Bornmann's in-depth investigation of the United States Army's basic training process concluded, "Basic Training is an introduction to the institution of Army life, through the accumulation of skills and knowledge of how to properly negotiate that institution" (Bornmann, 2009, p. vi). The participants for Bornmann's study were comprised of enlisted soldiers and nonrated officers, who undergo a somewhat different basic training process than the one administered by the Air Force.

Another recent study of enlisted Army soldiers selected for duty as military policemen concentrated on the change in their moral attitudes and values. The research used analysis of variance testing to compare responses for 122 trainees before they entered their 19-week training program and upon graduation from the program. The researcher concluded that the training methods employed in military basic training programs successfully shape core values, behaviors and attitudes (Williams, 2010). These two studies concluded that military indoctrination can change attitudes and behaviors among inductees; however, the populations for both studies were enlisted soldiers, so while the conclusions are of interest to the proposed study, they may, or may not, be entirely germane to the Air Force rated officer population.

A study of Naval Reserve Officer Training Corps (ROTC) cadets during their Naval Aviation Indoctrination Field Tours revealed similar results. This population resembles Air Force rated officers much more closely than the enlisted soldiers who participated in the previously mentioned studies. The United States Navy sponsored this research to examine the attitudes and perceptions of two cohort years' worth of Naval ROTC cadets and found the indoctrination program successfully altered their perceptions and attitudes about naval

aviation (Ambler, 1963). While this study of a group similar to the rated officer population targeted by this dissertation found that military indoctrination effectively changes attitudes and perceptions, it did not address the area of advanced education decision making.

Further study using Air Force officers as the target population found that indoctrination training is effective with this audience. Research prompted in 1986 by concerns that the quality of Air Force officer inductees was declining revealed that initial Air Force officers' professional military education near the beginning of military service altered their personal values to match those commonly held by the institution (Antenen, 1986). A multivariate analysis revealed statistically significant differences in officer values before and after initial professional military education programs. This research did not focus solely on rated officers, but they are included in the population who attended initial professional military education courses.

Existing research focuses on the changes in attitudes and behaviors related to military standards and moral beliefs when military personnel are trained, but no studies are known to exist that concentrate on the impact of this training and indoctrination on rated officers' higher education decisions.

Summary

This review of the literature suggests that further study of rated Air Force officers' decisions about pursuing doctoral degrees is warranted. In the entire United States Air Force, fewer than 50 rated officers are known to be pursuing doctoral degrees, and only 13 rated officers are known to have completed a doctoral degree (Air Force Personnel Center, 2013; Chiabotti, 2014). Limited research has explored U.S. Air Force policies and practices regarding higher education, and is supplemented here with a review of literature documenting

support for higher education in other professions. Research on different groups of military members has identified factors that influence their pursuit of higher education at the undergraduate and graduate levels. Existing research into indoctrination and organizational culture does not address the impact of these activities on the targeted population of this study. Since the targeted population represents the type of officers that rise to senior leadership within the Air Force, the proposed research will increase understanding about the reasons officers choose to pursue doctoral degrees.

Chapter III – Methods

Research Design

A qualitative research approach was selected for this dissertation because the objective of this study was to develop a:

...complex, detailed understanding of the issue. This depth can only be established by talking directly with people, going to their homes or places of work, and allowing them to tell their stories unencumbered by what we expect to find or what we have read in the literature (Creswell, 2007, p. 40).

This research was conducted as a qualitative study because this method allows the researcher to build “a complex, holistic picture, analyze words, and report detailed views of informants” (Creswell, 2007, p. 15). Lincoln and Guba (1985) note that, “if you want people to understand better than they otherwise might, provide them information in the form in which they usually experience it” (p. 120). A qualitative approach to answering the research questions presents results in a format similar to what readers would obtain if they personally sought answers. The researcher collected personal accounts from multiple rated Air Force officers intentionally selected to capture different viewpoints. Since the purpose of this study was to collect and analyze personal accounts from rated Air Force officers, an interview-based approach was appropriate. As designed, the focus of the study evolved in response to data collected during initial interviews.

Rationale for Collective Case Study

This research was conducted as a case study because it aimed to be “an in-depth exploration of a bounded system (e.g. an activity, event, process, or individuals) based on extensive data collection” (Creswell, 2008, p. 476). Schein’s model of culture helped to build an understanding of the system within which rated officers make their decisions. Merriam

notes that, “a case study is an in-depth description and analysis of a bounded system” (Merriam, 2014, p. 40). She further indicates that case studies are “employed to gain an in-depth understanding of the situation and meaning for those involved. The interest is in process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation” (Merriam, 1998, p. 19). “Case studies take the reader into the setting with a vividness and detail not typically available in more analytical reporting formats” (Marshall & Rossman, 2014, p. 164). The intent of this study was to provide a vivid and detailed understanding of why a group of rated officers pursued doctoral degrees. As little research exists on this topic, selecting a method that sought to provide a baseline understanding of the situation was appropriate.

Specifically, the activity reported here was a collective case study since “multiple cases [are] described and compared to provide insight into an issue” (Creswell, 2008, p. 477). Stake (1995) maintains a collective case study is appropriate when collecting data on multiple cases simultaneously in order to obtain a broad understanding of an issue. Collective case studies provide an in-depth understanding of an issue and allow for within case and cross-case analysis. (Yin, 2003) For this study, individual rated officers were the cases and their stories comprised a collective case. Researchers can gain a better understanding of their case by comparing the information gleaned from multiple related cases.

The subject area of a case study must be bounded or delimited (Merriam, 2014). Establishing a boundary for a case study “fences in” (Merriam, 2014, p. 40) what is included in the study and simultaneously identifies what is not. This case study included rated officers who were, at the time of the study, pursuing or have earned a doctoral degree. The Air Force Personnel System reports that fewer than three dozen rated officers hold doctoral degrees (Air

Force Personnel Center, 2013). Understanding these officers' individual stories and comparing those stories to gain a better understanding of why rated officers pursue doctoral education was the objective of this study.

Case studies allow researchers to develop better understanding of complex systems (Yin, 2003). Merriam (1998) contends that, "insights gleaned from case studies can directly influence policy, practice, and future research" (p. 19). This study aimed to inform Air Force and Department of Defense decision makers and potentially influence Air Force policy.

This collective case study was intended to be basic research into a practical problem the Air Force faces. Despite two initiatives addressing a perceived need for doctoral-level officers, the Air Force continues to have a shallow pool of such officers (United States Air Force, 2009). The study reported here, therefore, intended to answer a practically based research question, "What factors influence rated officer's decisions about pursuing doctoral degrees?"

Sources of Case Study Data

Case studies depend on multiple sources of data to arrive at their findings. Yin (2014) describes six potential sources of data for this research approach. Documents are a source of data that includes "letters, memoranda, e-mails, and other personal documents ... proposal, progress reports, and other internal records" in this category of data. (Yin, 2014, p. 106) Yin's second category of data is archival records, which are collections of data already stored for historical purposes. Yin cautions that the researcher must be careful not to automatically trust the accuracy of archival records, which may have been produced for another purpose. Interviews and surveys comprise Yin's third data source category. He suggests that interviews "resemble guided conversations rather than structured queries" (Yin, 2014, p. 110).

Yin's fourth source of data for case studies is direct observation. This type of data collection allows the researcher to record details that can only be seen or sensed and might be missed using other methods. For example, Yin notes "the location or the furnishings of an interviewee's office may be one indicator of the status of the interviewee within an organization" (Yin, 2014, p. 114). Participant observation is Yin's next method of data collection. Participant observation differs from direct observation because the researcher "may assume a variety of roles within a fieldwork situation and may actually participate in the actions being studied" (Yin, 2014, p. 115). Participant observation is challenging because the mere presence of the researcher may change the dynamics of a situation. Lastly, Yin includes physical artifacts as a source of data for case studies. Artifacts may help tell the rest of a story or confirm the story told by other sources of data.

This case study employed three of the six sources of data Yin describes. Documents were reviewed to gain insight into the topic under examination. The researcher requested access to internal records, emails, and memoranda associated with both programs the Air Force currently uses to support officers pursuing doctorates. Archival records were scanned for relevant demographic data. Census-like data from the Air Force Personnel Center provided contextual data. Interviews were the primary source of data collection as they provided the best method to collect detailed information from the participants. Direct and participant observations were not appropriate for answering the research question and physical artifacts relevant to this research question do not exist.

The participants in this study were rated Air Force officers who were pursuing or have earned a doctoral degree. Officers were considered to "be pursuing" a doctoral degree if they had been formally admitted into a doctoral program. The researcher obtained contact

information for potential participants through the Air Force Personnel Center and organizations within the Air Force that sponsor doctoral study. Potential participants who were deployed on combat missions were not interviewed due to difficulty establishing reliable communications and the risk of distracting them from their ongoing mission. Retired rated officers were also included in the study.

Interview Procedures

Data collection was conducted through individual semi-structured interviews. Interviews are “a process in which a researcher and participant engage in a conversation focused on questions related to the research study” (deMarrias, 2004, p. 55). This method was selected because “Interviewing allows us to put behavior in context and provides access to understanding their action” (Seidman, 2015, p. 13). Data collection focused on the participants’ decisions related to pursue a doctoral degree. An interview allows the researcher to understand a participant’s view of a subject when an actual event cannot be replicated for observation (Merriam, 2014). Using a semi-structured method allowed the interviewer to explore each participant’s experience by adjusting follow-up questions to discover data that would otherwise require an unreasonably long written survey to capture. Interviews allow the researcher to gain a deep understanding of the participant’s experience that is not always available through survey instruments (Marshall & Rossman, 2014).

This research used Creswell’s framework for conducting interviews. Specifically, the following steps were followed:

1. Use purposeful sampling to identify interviewees with relevant knowledge.
2. Determine the most appropriate type and style of interview.
3. Decide how to record interviews (i.e. digital recording or note taking).

4. Design an interview guide (included as Appendix A).
5. Pilot test the interview guide.
6. Secure an appropriate site for interviews.
7. Obtain informed consent from the interviewee and conduct the interview according to the interview guide. (Creswell, 2007, p. 132)

Following these steps resulted in the capturing of data required to answer the research question.

Interview Procedure Step One. The first step in Creswell's interview framework is to purposefully select participants (Creswell, 2007). The participants in this study included 13 rated Air Force officers who have attained, or were pursuing, a doctoral degree at the time of the study. These officers were able to speak firsthand about the factors that influenced their decisions to pursue a terminal degree.

Data were collected through personal interviews with members of the targeted population. This purposeful sampling approach seeks to identify and interview participants with familiarity with and experience in the Air Force (Patton, 2002). Participants were purposefully selected because they "have stories to tell about their lived experiences" (Creswell, 2007, p. 128).

Interview Procedure Step Two. The second step of Creswell's interview framework is to determine the most appropriate type and style of interview (Creswell, 2007). Semi-structured interviews are a common method to allow a participant to explain their experiences fully while the interviewer keeps the conversation focused on the relevant issues (Minister, 1991; Miles, Huberman, & Saldana, 2014). Merriam stated the most common form of interview is "the semi-structured interview that is guided by a set of questions and issues to be

explored, but neither the exact wording nor the order of questions is predetermined” (2014, p. 114). During the interviews, some participants essentially answered all the follow-up questions in their response to the first question. When this occurred, they were still asked the planned follow-up questions but the wording was sometimes modified based on their previous responses.

Interview Procedure Step Three. Creswell’s third interview step is to decide how to conduct and record interviews (Creswell, 2007). All interviews were digitally recorded to allow for accurate transcription afterwards. Interviews were conducted face-to-face when practical. Four interviews were conducted face-to-face while the remainder were conducted telephonically. Dynamics observed during the interviews are actually a part of the data collection (Creswell, 2007) and these types of details are easily forgotten if not recorded quickly (Merriam, 2014). Thus, I also took notes during and immediately after interviews.

When face-to-face interviews were not possible, telephone interviews were conducted. Interviews conducted via telephone prevent the collection of data about non-verbal cues mentioned above (Shuy, 2003). However, researchers have found that telephone interviews can successfully establish rapport and collect required data (Stephens, 2007). Telephone interviewees are more likely than face-to-face interviewees to ask for clarification of questions (Irvine, Drew, & Sainsbury, 2013), which may lead to better data collection. Though the dynamic between participant and research is different in telephone interviews, this method of interviewing produces acceptable results (Holt, 2010).

Interview Procedure Step Four. The fourth step of Creswell’s interview process is to design an interview guide (Creswell, 2007). Appendix A contains the interview guide for this study. Interviews commenced with a series of standard demographic questions and then

the interviewer guided the discussion with semi-structured questions. Data collection focused on the participant's decisions related to pursuing a doctoral degree. Because the purpose of the interviews was to collect as much relevant data as possible from each participant, the process varied slightly across interviews. Participants' answers to interview questions generated follow-up questions not listed in the interview guide. The order of questions varied as the participant's answers informed the order and substance of follow-up questions. Using a semi-structured interview approach allows the researcher to adjust each interview as the interview proceeds based on the participants' responses (Merriam, 2014, p. 90).

Designing the interview guide was an iterative process. Multiple versions of the interview guide were written in an attempt to produce a guide that would elicit data best suited to answering the research question. Early versions of the guide asked detailed questions about the areas expected to be relevant to officers' decisions to pursue a doctoral degree. Extensive discussions with Dr. Kroth and Dr. Henscheid resulted in a more open-ended guide. Avoiding researcher bias was a major reason for this shift in focus. The researcher and committee members realized the narrow questions included in earlier guides steered participants to provide answers associated with the "expected" factors involved in their decisions versus allowing them to tell their story. A more general guide allowed participants to tell their story on their own terms.

Interview Procedure Step Five. Creswell's fifth procedural interview step is to pilot test the interview guide (Creswell, 2007). The limited number of potential participants for this study made pilot testing the interview guide prior to data collection impractical. Instead, the interview guide was tested and retested throughout data collection and evolved between

interviews to improve its usefulness. Additionally, the researcher vetted the guide with two Air Force doctoral program administrators before scheduling the remaining interviews.

Interview Procedure Step Six. Securing an appropriate site (comfortable, distraction-free, etc.) for interviews is the sixth step of Creswell's interview process (Creswell, 2007). In order to facilitate the open sharing of data and capture participants' personal experiences, the researcher attempted to establish rapport with the participants and put them at ease by conducting interviews in neutral settings (such as restaurants and the participant's homes) and at times convenient to the participants (Creswell, 2007). When face-to-face interviews were not possible, interviews were conducted by phone. In order to reduce distractions during telephone interviews, they were conducted outside of normal business hours to encourage more thoughtful responses from participants.

Interview Procedure Step Seven. Creswell's final step is to obtain informed consent from participants and conduct the interviews using the interview guide (Creswell, 2007). Appendix B contains this study's informed consent form, which conforms to University of Idaho research requirements. Once informed consent was obtained, interviews commenced.

Data Analysis Plan

Data analysis for this collective case study occurred in two stages. Initially, each case was examined individually. After each case was analyzed on its own merits, the cases were examined collectively and compared.

Individual Case Analysis. The study followed the data analysis methodology outlined by Merriam (2014). Specifically, the process of data analysis occurred concurrently with data collection. Themes emerging from this ongoing analysis were used to shape subsequent data collection. Concurrent analysis "helps the field-worker cycle back and forth

between thinking about the existing data and generating strategies for collecting new, often better, data” (Miles, Huberman, & Saldana, 2014, p. 70). Waiting to begin analysis until all the data is collected runs the risk of missing important information while trying to wade through significant amounts of data (Maxwell, 2005). Data were managed through a system of coding by “assigning some sort of shorthand designation to various aspects of your data so that you can easily retrieve specific pieces of the data” (Merriam, 2014, p. 173). Codes were selected to ease the process of “retrieving and categorizing similar data chunks so the researcher can quickly find, pull out, and cluster the segments relating to a particular research question” (Miles, Huberman, & Saldana, 2014, p. 72). Next, the collected data were categorized into groupings that helped make sense of the data by “consolidating, reducing, and interpreting what people have said and what the researcher has seen and read—it is the process of making meaning” (Merriam, 2014, pp. 175-176).

The process of data analysis was recursive as each new interview revealed new codes and categories. Once identified, these codes and categories necessitated a review of previously examined interview transcripts. This recursive process helped sift through the entire data set for those pieces of data relevant to the research question (Lindlof & Taylor, 2002; Miles, Huberman, & Saldana, 2014). The recursive process of data review also helped identify data unique to a particular participant rather than common across more than one participant. Data analysis occurred immediately after each interview in order to identify important information while still fresh in the researcher’s memory (Marshall & Rossman, 2014).

The initial step in analyzing the data was to review the interviews for comments relevant to answering the research question. During initial review of transcripts, important

words that relate to the research question were identified. Identifying and coding these key points is known as “open coding” (Merriam, 2014, p. 178). As the researcher developed more understanding of the data during subsequent reviews of the transcripts, additional coding occurred as individual terms identified in the open coding process are combined into “axial codes” (Merriam, 2014, p. 180).

Collective Case Analysis. The cases were then explored for common themes or categories that were identified and assigned labels (Merriam, 2014; Strauss & Corbin, 1990). Miles, Huberman and Saldana refer to these stages of coding as first cycle coding that “summarizes segments of data” (2014, p. 86) and second cycle coding that “groups those summaries into a smaller number of categories, themes, and constructs” (2014, p. 86). Each theme was converted into common categories because each participant used their own lexicon to describe certain experiences. However, original language was preserved as it contained the individual experiences of the participants (Clandinnin & Connelly, 2000). This conversion process allowed the oral data and field notes to be expanded and grouped into broad themes (Lincoln & Guba, 1985; Miles, Huberman, & Saldana, 2014). The process of coding and compiling data was conducted manually to avoid computer bias created by limiting the coding process to particular key words (Merriam, 2002). Coding and categorizing data continued iteratively until the categories were exhausted, mutually exclusive, helped the reader make sense of the data, and were all of the same level of abstraction (Merriam, 2014).

Once the data analysis plan described above identified relevant data points for each individual case through coding, Stake’s collective case study data analysis methodology was utilized. The individual cases were subjected to “cross-case analysis with some emphasis on the binding concept or idea.” (Stake, 2006, p. 8) This collective case analysis considered data

collected from interviews, documents, and archival records. The use of a matrix (see example in Figure 4 below) of individual cases and the relevant data points each contains allowed the researcher to determine “what binds the cases together.” (Stake, 2006, p. 9) The analysis of each individual case revealed the themes in that case or a row in the matrix. Reviewing themes across cases for commonalities allowed a portrait across cases to emerge.

CASE	Theme A	Theme B	Theme C	Theme D	Theme E
Officer A	X	X			X
Officer B		X		X	X
Officer C			X		X
Officer D		X	X	X	X
Officer E	X	X	X	X	X

Figure 4 - Sample Collective Case Study Matrix

Discovering commonalities across cases answers the research question in a collective case study. The individual cases are the pieces of the puzzle (as depicted in Figure 5) that can be used to understand part of the overall picture. However, when the puzzle pieces are analyzed to determine how they fit together, a much clearer understanding of the phenomenon emerges.

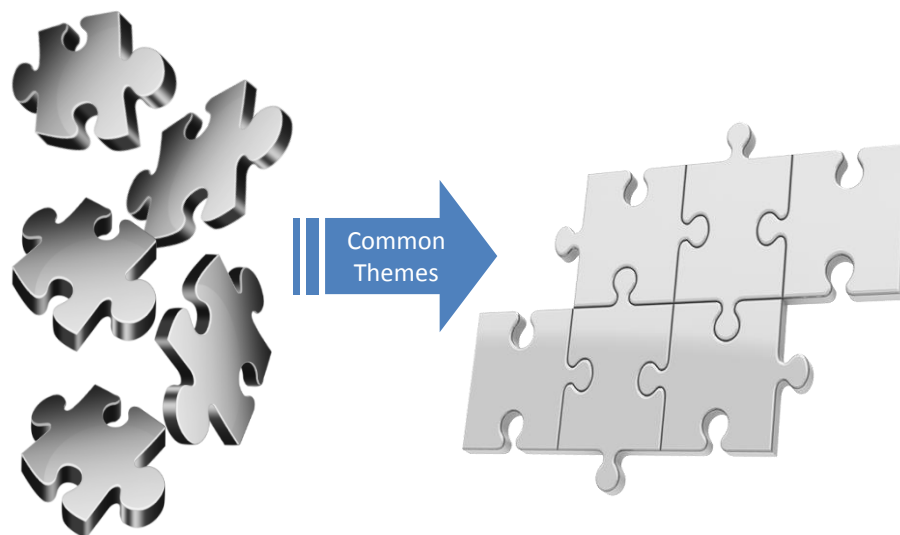


Figure 5 - Pieces of Collective Case Study

Bind Together for Complete Picture

Trustworthiness

Reliability and validity are concerns when conducting research. Since qualitative research deals with human behaviors, memories, and perceptions, it is sometimes not possible to replicate the data (Lindlof & Taylor, 2002). The nature of the data collected does not lend itself to standard statistical methods used to verify validity. However, trustworthiness of the data can be verified through in-depth examination of carefully collected rich data sets (Lincoln & Guba, 1985; Miles, Huberman, & Saldana, 2014). Triangulation of collected data from multiple data sources also enhances the validity of the study (Creswell, 2007). The researcher triangulated data “from people with different perspectives or from follow-up interviews with the same people” (Merriam, 2014, p. 216) and from other sources of data as described above. Trustworthiness is also enhanced by using the participants’ actual words when analyzing data to avoid over-simplification of the collected data (Yin, 2003). Participants were also offered the opportunity to review the transcripts of their interviews to ensure collected data accurately reflected the participant’s intended meaning. Allowing participants to “member check” the data they provided reduced the risk of researcher interpretation bias. Member checks improve the internal validity of study findings by making sure they “ring true” to participants (Merriam, 2014, p. 217).

Potential researcher bias can also affect trustworthiness. Revealing the researcher’s background and potential bias lends credibility to the research (Maxwell, 2005). My potential sources of bias were addressed in Chapter I. Potential bias in this qualitative research project was also addressed by peer checking the data and any conclusions (Marshall & Rossman, 2014).

Ethical Considerations

This research did not use any deception or coercion. Participants signed an informed consent form (Appendix B) before interviews were conducted. This research project was approved by the University of Idaho Institutional Review Board before interviews were conducted. Participants had the right to refuse to answer any question they chose not to answer for any reason without providing justification.

In order to protect participants' privacy and preclude any possibility of repercussions from their participation, pseudonyms were used in all written and electronic records. Pseudonyms were selected from a list of common American surnames and randomly assigned to participants. The researcher digitally encrypted the interview transcripts and will destroy them upon successful defense of this dissertation to further guarantee the confidentiality of collected data. Furthermore, in order to preserve the participants' anonymity, demographic details were generalized to prevent identification of individual participants. For example, the researcher only identified types of airplanes participants have flown and broad geographic regions where they have been assigned as opposed to specific aircraft and bases. In addition, because the pool of female rated officers in the Air Force is so small, the risk is potentially greater that female study participants could be identified if female pronouns were used in this report. The decision to use male pronouns in reference to all participants was made as an additional precautionary measure. If gender related issues had arisen during data collection this decision would have been revisited. These issues did not emerge. These and other generalizations did not adversely impact data collection or analysis and will prevent readers from associating particular data with individuals.

Summary

Chapter III described the methods and processes that were used during and after data collection in order to answer the research question. Semi-structured interviews with purposefully selected participants were conducted and data were gathered from relevant documents and other artifacts. Data analysis occurred simultaneously with data collection. Collected data were examined and coded by individual case and across cases to identify themes that contribute to answering the study's research question.

Chapter IV – Findings from Individual Cases

This chapter will present the study's findings. A demographic overview of the study population is presented first. The data gathered through review of relevant documents and archival records is then presented as a "case." This case is presented first because it provides context for some of individual participant cases. The individual stories captured during interviews will be presented as individual cases next. Finally, the cross case analysis of all cases is presented.

The Interviews

Thirteen interviews were conducted as described in Chapter III. Three interviews were conducted in-person while the remaining ten were conducted via telephone. As predicted in the literature, there was no appreciable difference in the types and quality of data captured from the two types of interviews. Interviews ranged from 16 to 41 minutes in length. Most interviews were about 30 minutes long.

The Participants

All participants were offered confidentiality through the informed consent notification form. Some participants expressed significant concern about maintaining confidentiality while others were not concerned about confidentiality and were comfortable with revealing their identities. This study used pseudonyms and generalized identifiable data (gender, specific schools attended, specific assignments, etc.) for all participants. Because the number of potential participants was small, identifying any of the actual participants makes the identification of other participants easier through the process of elimination.

The participants included ten men and three women. Three participants were members of ethnic minority groups. The youngest participant was 36 years old and the oldest

was 60 years old. Three participants were recently retired officers and the remaining ten were still on active duty. The lowest ranking interviewee was a major and the highest ranking was a colonel. Collectively the participants flew most of the aircraft in the Air Force inventory during their careers.

Documents and Archival Records

Four documents were examined for information relevant to the study. In addition to detailing the information they contain, this section details portions of the conversations and archived emails that preceded development of the documents. In some cases, discussions with the authors of the documents provided more valuable data than that captured in the documents and records. The documents and archival records serve as part of the context within which rated officers make decisions about pursuing advanced degrees.

School of Advanced Air and Space Studies (SAASS) Student Handbook. The SAASS student handbook was a key source for nine of the thirteen study participants who are graduates of this school. The handbook contains thirty-one pages of administrative details about the school and, as with most student handbooks, it contains details about grading policies, academic calendars and other matters new students need to learn. Two sections of the Student Handbook are particularly relevant to this study. The opening paragraph of the Student Handbook presents the school's mission. The mission of SAASS is "to educate strategists for the Air Force and the nation" (School of Advanced Air and Space Studies, 2014, p. 1). The Student Handbook also details three foci of the curriculum:

First, it presents a core of knowledge useful in future planning and execution of military strategy and policy. Second, it provides cognitive, learning, and analytical methodologies that enable students to acquire and analyze specialized knowledge and make

decisions quickly and effectively. Third, it provides students with opportunities to learn and apply various written and oral communication techniques. (School of Advanced Air and Space Studies, 2014, p. 1)

Second, the Student Handbook describes the requirements to graduate with either a Certificate in Military Strategy, a Master of Philosophy in Military Strategy or, as a candidate for the Doctor of Philosophy in Military Strategy. These are presented in increasing order of prestige as the requirements are stricter at each level. The required grade point average and quality of the thesis produced increase for each of the three levels. In addition to meeting the grade point average and thesis requirements, students wishing to be considered candidates for the Doctor of Philosophy in Military Strategy must be recommended by the SAASS faculty and complete a weeklong workshop on proposal writing and research plans. The Student Handbook also states that normally no more than ten students will be awarded candidacy status. The SAASS student body is competitively selected from the most promising field grade officers.

The faculty member who provided the Student Handbook for this dissertation verified that SAASS seeks to encourage its most promising students to complete the requirements for candidacy. Appointment to the SAASS faculty requires operational experience and a Doctorate. The faculty recognizes that the pool of individuals with the required credentials is quite small so they actively encourage students who they view as potential future faculty to enter the program.

SAASS Self Appraisal Questionnaire.

The Self Appraisal Questionnaire was submitted in 2010 by SAASS to the Department of Education in conjunction with its request to be allowed to grant doctoral degrees. The

school's successful application designated 46 credit hours of SAASS coursework for students to satisfy all coursework requirements. In addition to coursework, candidates must form a committee and complete a dissertation within seven years of their graduation from SAASS. SAASS also established partnerships with faculty at civilian institutions to serve as committee members and help safeguard the rigor of the program.

The Executive Summary in this document notes that “of SAASS students who meet a selection board to the rank of colonel, 98 percent are promoted, and 33 percent who meet a general officer board achieve flag rank” (School of Advanced Air and Space Studies, 2010). This document later reveals, “However, in its 20-year history, the school has sent 32 of its graduates to civilian institutions for Ph.D.s, and not one of these officers has been promoted to the rank of general. The additional three years out of the normal progression of command and staff duties has thus far proven detrimental to career advancement – at least to the rank of General” (School of Advanced Air and Space Studies, 2010, pp. 19-20). The hybrid Ph.D. program SAASS proposed and was approved to deliver was an attempt to address this issue. “Since strategy is most properly the province of Generals and it is reasonable to assume that several officers with the earned doctorate will be promoted to flag rank, the Ph.D. program will then help fulfill the SAASS mission to ‘educate strategists for the Air Force and the nation’” (School of Advanced Air and Space Studies, 2010, p. 20). SAASS’ assumption in 2010 that the benefits of their hybrid program (namely officers not leaving the typical career progression) would result in several of their graduates with Doctorates being promoted to general has not yet proven true. To date, none of the graduates of this program has been promoted beyond colonel.

The Self Appraisal Questionnaire also details the faculty development pipeline. “SAASS is allocated two or three advanced academic degree faculty development manpower authorizations each fiscal year by the Air Force Education Resources Board” (School of Advanced Air and Space Studies, 2010, p. 37). SAASS did not replace this program when it was granted the authority for its hybrid Ph.D. program. The SAASS Deputy Commandant confirmed during personal communication with the researcher that they “intend to proceed with both options” (Chiabotti S. , 2015). The document proclaims and the Deputy Commandant confirms SAASS must grow its own pool of potential faculty members.

Background Paper on Chief of Staff of the Air Force (CSAF) Prestigious Degree Program. This background paper traces the evolution of the program from when it was written in 2010 to the present. First, the program is now named the CSAF Prestigious Captains Ph.D. Program. Prior to 2010, the program was not limited to captains. Initially, the program included options for both master’s degrees and doctorates at prestigious universities. The master’s degree option is no longer offered (United States Air Force Personnel Directorate, 2010). In its inaugural year the program was limited to five universities but now includes over a dozen.

The background paper cites a 2008 quote from the Chief of Staff of the Air Force as the genesis for the program. Specifically, his direction was, “Let’s look to do something systemic with regard to targeting our most promising officers/graduate students to the most prestigious universities” (United States Air Force Personnel Directorate, 2010, p. 1). As detailed in this document, the program is designed to:

1. Develop a cadre of officers with critical thinking skills relatively early in their career

2. Produce broad AF and joint “strategists” – leaders who have the ability to communicate at a strategic level with civilian leadership across enterprises
3. Expose rising officers to a unique learning/networking opportunity at top-tier universities (United States Air Force Personnel Directorate, 2010, p. 1).

The first students entered this program in fiscal year 2011. Each year three students have been selected to earn doctorates. Shrinking budgets eliminated the master’s degree option before it started.

CSAF Captains Ph.D. Program Call for Nominations. Each year the Air Force Personnel directorate issues a Call for Nominations for the CSAF Captains Ph.D. Program. The Call for Nominations states the purpose of the program is “to build a cadre of strategic thinkers. Intellectual development of officers, especially in critical thinking skills, relatively early in a career, will result in Air Force and joint leaders who have the ability to communicate at a strategic level with civilian leadership across enterprises. This program will expose rising officers to a unique learning opportunity at top-tier universities” (Air Force Personnel Center, 2015, p. 1).

The Call for Nominations details the required steps for officers to apply for consideration. The main components of the application are a personal essay “indicating how this program benefits career goals and the Air Force” (Air Force Personnel Center, 2015, p. 2) and four letters of nomination. The first letter must be from the four star general in their chain of command, the next two letters must be from faculty familiar with their ability to succeed at a prestigious university, the final letter can be from any Department of Defense leader familiar with the applicant. Applicants must also secure permission from their Air Force Personnel Center assignment team to apply.

The final paragraph announces that Steven Wright of the SAASS faculty will serve as an academic advisor to applicants. Wright told the researcher that his role is to serve as a mentor for the students while also serving as their conduit back to the Air Force. Students selected for the program attend universities not collocated with Air Force bases so he keeps his advisees connected with developments in the Air Force that affect them. Wright also keeps the CSAF informed about what the students are accomplishing while working toward earning their doctorates. He is responsible for submitting a semi-annual report to the CSAF on the students' research and progress toward graduation (Wright, 2015). . Wright provides the CSAF updates on the career progress of program graduates as well. Since there have only been six graduates to date, it is too early to determine how selection for the program will influence careers. While the Chief of Staff of the Air Force lends his name to the program, he is not directly involved in the selection of students or other affairs of the program. The CSAF commands an organization of 300,000 Airmen so it is not surprising that he does not exercise hands-on management of the nine officers enrolled in the program at any given time.

Individual Case Studies

Thirteen rated officers who earned or were pursuing doctorates were interviewed for this study. The next sections present analysis of those interviews.

Smith. Smith is a highly decorated active duty colonel. His career has alternated between flying fighter aircraft and academic assignments. Smith was competitively selected for command on multiple levels and successfully completed those commands. He accumulated three master's degrees during his academic assignments and professes that he enjoys learning. He graduated from the School of Advanced Air and Space Studies (SAASS). Following SAASS he accepted Air Force sponsorship to pursue a terminal degree. He

recently completed his Ph.D. in history from a prestigious university. In total, Smith spent seven years of his 23-year career pursuing higher education.

Smith's Motivation to Pursue a Doctorate. The opportunity to become a member of the faculty at SAASS was Smith's primary motivation for pursuing a doctoral degree. Smith was "impressed and enthusiastic about the curriculum, students, and ... really the teachers" at SAASS. A terminal degree is a prerequisite for instructor duty at SAASS so he knew he needed to obtain one to meet his goal of returning to the school. Smith went so far as to say he probably would not have pursued a doctorate if it did not come with the opportunity to return to SAASS. He was "very focused towards a particular position" and returning to SAASS was "the driving factor" in his decision. Smith viewed his decision to pursue a doctorate as a crossroads in his career. He saw the decision to enter the "faculty development track" as mutually exclusive from a track that could lead to high levels of command. He was very surprised when his assignment following the completion of his doctoral coursework was back on an operational career track. His goal remains to pursue an academic track within the Air Force and he has informed the personnel system of his desires.

Other Factors in Smith's Decision. Smith's family does not have a rich history of higher education. Neither of his parents graduated from college. His father chose to complete a GED and go into the workforce rather than attend high school. Despite their own lack of college educations, they encouraged all three of their children to attend college. Smith and both of his siblings graduated from college but he is the only one to go beyond the undergraduate level.

Intellectual curiosity also contributed to Smith's decision to pursue a doctorate. Smith enjoys academic debate. In his own words, he "loves reading and arguing." He feels a

terminal degree is a requirement to be taken seriously in the academic arena. Smith intentionally chose a prestigious university for his doctorate to strengthen his academic marketability. He sought out a well-known expert in his field to serve as his dissertation advisor to further strengthen his resume when he enters academia fulltime.

Smith also commented some SAASS faculty members helped guide him toward a terminal degree. They approached him about the possibility based on the quality of his work at SAASS. He viewed these faculty members as mentors and credited their encouragement as a contributing factor in his decision. These mentors helped him make the choice to enter an academic career track. Smith identified his choice as a “career-stemming” moment. He knew he was entering a different path and was “at peace with not ever flying again because I just assumed that was what would happen.” By Smith’s account, the decision to pursue a doctorate “has been an almost unmitigated disaster career-wise for guys” in his peer group. Smith believed that entering the academic track would prevent him from returning to fly for two reasons. First, he would lose contact with senior leaders in his flying community. He assumed that once he was out of sight doing something different he would no longer have the sponsorship required to return to flying leadership positions. Second, he described his belief that senior leaders in the Air Force display selection bias when choosing their replacements. Specifically, he felt leaving the standard career path would make him look different and that difference would make him not competitive for flying leadership positions.

Smith indicated that the time spent away from the cockpit earning a doctoral degree could damage a rated officer’s career if they were interested in a command. He noted that a typical career path already includes time away from the cockpit to complete professional military education and serve staff assignments. He believes there is enough time in a career

for either a terminal degree or the standard career track but not for both. Smith suggested that more officers might pursue doctoral degrees if the Air Force considered them equivalent to professional military education and staff tours.

Brown. Brown is an Air Force colonel serving in a command position who commanded a flying squadron as a lieutenant colonel. Brown started his career as a support officer before attending pilot training. Through off duty and professional military education avenues Brown earned four master's degrees including degrees in both engineering and social science. Brown was selected for early promotion to both lieutenant colonel and colonel. He graduated from SAASS near the top of his class and has a consistent track record of superior performance. Brown is currently working on his dissertation and hopes to finish his Ph.D. in political science within the next two years. He elected to pursue his doctorate at his own expense after duty hours even though Air Force sponsorship would likely have been available had he chosen to ask for it.

Brown's Motivation to Pursue a Doctorate. Brown identified two motivations for pursuing a doctoral degree. First, he viewed the degree as "a move toward a higher degree of self-actualization and understanding of the world around me." Second, while at SAASS he had the opportunity to interact with a large number of General Officers. In his opinion, the majority of them displayed "an absence of the ability to conceptualize at higher levels...at times their inability to think critically at higher levels was almost embarrassing." He asked that illustrative examples he offered not be used in the narrative of this study. Brown said he was pursuing a doctorate because he did not want to be caught short intellectually if he advances to higher leadership echelons in the Air Force. The knowledge and skills gained

through the process of obtaining a doctorate and the credibility associated with it were prime motivators for Brown.

Other Factors in Brown's Decision. Brown's family values education and imparted its importance to him. Both sets of his grandparents credit their educations with allowing them to survive and prosper through the Great Depression. In Brown's family education is viewed as a vehicle to "move beyond one's station." He fondly remembered summers at his grandparent's home that were filled with reading Encyclopedia Britannica volumes and instilled a lifelong desire to learn more about the world around him. Brown's wife has also earned a master's degree and they plan to emphasize the importance of education to their children.

Brown noted that a strong personal interest in political science also motivated him to pursue a terminal degree in the subject. He is intellectually curious about the topic and feels a doctorate will better prepare him to engage in serious intellectual pursuits in the field. Brown sees a close relationship between the profession of arms and political science. Seeking a terminal degree is a means to improve his understanding of his chosen profession and open new opportunities.

Brown views employment opportunities in the Air Force as an added bonus but they were not motivating factors for him. He views a doctorate as an entry ticket into academia when his Air Force career concludes. Brown was quick to point out that while a doctorate potentially opens doors after the Air Force, he believes it closes some doors while still serving. Brown feels officers who pursue a doctorate run the risk of being "pigeon-holed into an academic track." His personal belief is that officers with doctorates are better prepared for operational command billets. However, he feels the Air Force forces them into instructor

duties and that the institution “does not value” those positions. Brown feels there is a “stigma” associated with instructor duty that pulls promising officers off the command track. Consequently, Brown has only confided in a few of his closest mentors that he is pursuing a doctorate and has not informed the personnel system.

Brown volunteered that more rated officers would likely pursue doctorates if the personnel system and Air Force organizational culture provided them the opportunity to do so without risking their operational career goals. He proposed “hybrid assignments” where officers serve a staff assignment while working toward their degree. He felt officers might be more likely to pursue terminal degrees if they received credit for traditional staff assignments while working on their degrees. As an example, Brown proposed allowing air attaches to work part time at embassies while also working on their doctorates. This option would provide both academic and practical experience in some fields of study. He also mentioned that the rules associated with granting equivalency credit for professional military education could be reevaluated to consider terminal degrees the equivalent of senior developmental education. He thinks the prospect of earning a doctorate only to then be required to complete professional military education deters some rated officers from pursuing terminal degrees.

Bell. Bell recently retired from the Air Force as a colonel. He spent the majority of his career flying fighter aircraft. Bell graduated from the Air Force’s Fighter Weapons School and later served as an instructor there. He also served an assignment as an instructor teaching new navigators and a couple of staff assignments. Bell’s career included command tours at the squadron and group levels. Upon retirement Bell took no time off and immediately went to work for a defense contractor doing work that was directly related to what he did on active duty.

Bell's undergraduate degree was in an engineering discipline. He later earned a graduate degree in aviation science because it was "required for promotion." Higher education was not initially Bell's life goal but it became important to him later. He recently successfully defended his doctoral dissertation in strategic leadership. Bell is proud of the accomplishment and noted, "There will be a lot of shocked faces at my college reunion when people find out I earned a doctorate."

Bell's Motivation to Pursue a Doctorate. Bell unequivocally stated his motivation for pursuing a doctorate was that "I thought that's what God wanted me to do." While attending a Christian men's group event in Atlanta he happened upon an information booth about the program he eventually completed. He intended to start the program immediately but major life events delayed him several years. During that period, he felt God was still guiding him toward a doctoral program as a means of self-improvement but he did not have the time to follow through while still in the military. The demands of his staff job "precluded anything outside of my military job." Once he retired, "every door that could possibly have been closed was flung wide open and I was almost getting shoved in. I felt like God was pushing me and opening all the doors." Bell said other factors also contributed to his decision but God's direction was his primary motivation.

Other Factors in Bell's Decision. Bell also cited the desire to use his G.I. Bill benefits as a motivation to pursue his doctorate. The G.I. Bill paid the majority of his tuition, a housing allowance and a book stipend while he was working on his degree. Bell reasoned that his only investment was his time since the government would cover the financial costs. Bell stated, "It seemed foolish not to take advantage of my benefits since I felt God was

leading me down this path anyway.” Once he realized just how generous his benefits were, Bell said the decision to start the program was easier.

Family support also contributed to Bell’s pursuit of a doctoral degree. His wife and children encouraged him to follow his calling. They willingly made sacrifices so that he could concentrate on his studies and his dissertation. His family went into the program knowing that they would have to step up and fill household functions he performed prior to becoming a student. In addition to the support of his immediate family, Bell noted that his upbringing also encouraged education. His parents saw education as a way to provide a better future for oneself and encouraged Bell and his siblings to become as educated as possible. Bell followed their advice but struggled through high school and his undergraduate degree. He said by the time he entered graduate school his attitude toward education had evolved and he was a much better student.

Bell also mentioned that he viewed a doctoral degree as a way to prepare himself to make a difference in American society. He has an interest in politics and thinks he will have more credibility when he eventually decides to run for elected office because of his doctorate. Bell feels his degree taught him how to examine complex problems and gives his answers more credibility. Bell did not start a doctorate as a stepping-stone to a political career but he feels it will make him better able to represent people if he eventually enters that arena.

Before closing the interview, Bell wanted to emphasize that he was not motivated by money, promotion possibilities, or any worldly factor. While he recognizes there may be benefits in these areas and acknowledges they may have influenced him to continue with his program once he started, they were not a motivation for him to start his pursuit of a doctorate.

Wood. Wood is a lieutenant colonel currently serving as a squadron commander. He flew fighter aircraft for the majority of his career. Wood excelled at his primary job and was rewarded with selection to attend SAASS. In addition to the master's degree he earned at SAASS, he also earned a master's of business administration, which he pursued during after-duty hours. Wood had the option to complete some extra coursework while attending professional military education that would have resulted in a third master's degree but chose not to do so. He felt another master's degree would have been wasted effort and any potential benefits did not outweigh the time commitment required to earn the degree. Instead, he took elective courses that interested him. Wood recently put his doctoral pursuits on hold because his current job and family commitments do not leave enough time in his schedule.

While at SAASS Wood started the process of applying for an Air Force sponsored PhD program. He later decided that he did not want the commitment to return to SAASS as an instructor and withdrew his application for sponsorship. Wood decided to go it alone until his operational career reaches its apex. At that point, he will reevaluate sponsorship and the associated commitment.

Wood's Motivation to Pursue a Doctorate. Wood identified two primary motivations for starting the doctoral journey. First, he stated, "it was a challenge—number one. It interested me to see if I would be able to do it and I think it's something that you can be proud of." Wood said he is highly competitive by nature and views the doctorate as an obstacle to take on and conquer. Second, Wood feels a doctorate "opens doors." He further clarified, "when I said 'opens doors' I meant in the Air Force side. But, of course, the Air Force doesn't last forever. So it is definitely something you can use in the civilian world if you want to keep on the academic side." Wood was quick to add that the Air Force doors he

referred to were career options he was personally interested in utilizing. He is unsure if he will eventually use those doors once he returns to civilian life but knows that finishing a doctorate is a requirement to enter academia at the level he is interested in.

Other Factors in Wood's Decision. Wood graduated with honors from his undergraduate and graduate programs. He looks forward to learning opportunities and enjoys the challenge of learning new material. He stated, "I have enjoyed it and I haven't shied away from it. Whenever I have the opportunity to educate myself, I have done so." Intellectual curiosity and a desire to constantly improve himself also played a role in Wood's decision to start a terminal degree.

Although personally motivated to pursue a doctorate, Wood said that he has faced organizational obstacles. First, Wood recognized that time spent pursuing a doctoral degree would have to come out of the time he reserved to be with his family. In order to continue on a career trajectory toward command jobs he felt he could not devote less time to his primary duties so his family would have to suffer. Second, Wood felt that his chances to command would be reduced if he stepped off the typical career path for rated officers. He felt time spent away from mentors and leaders in the flying community makes one an unknown commodity when those leaders are selecting the next generation of commanders. Wood pointed out that some absences from one's flying community are considered acceptable and encouraged while others are frowned upon. He felt absences for standard staff tours and professional military education could actually improve one's odds for command. However, diverting one's attention to pursue a doctorate could very likely result in being forced into an academic career track. In the end, Wood placed his doctoral aspirations on hold because he "wasn't willing to hang up his combat boots just yet."

Jones. Jones holds the rank of major and is a fighter pilot with combat experience in Afghanistan and several other overseas assignments. Jones concentrated his efforts on intercollegiate sports while pursuing his undergraduate degree at the United States Air Force Academy. He was more interested in success on the soccer field than achievements in the classroom. “I wasn’t the biggest student you could call it...I was an intercollegiate athlete and that was my primary focus. I just got through the academics as necessary.” Jones considers himself extremely competitive and funnels maximum effort into areas where he wants to excel. After pilot training, Jones concentrated on gaining credibility in his flying community and advanced up the qualification ladder to become an instructor pilot and flight examiner. During this period, Jones completed an online master’s program in order to remain competitive for promotion. Even while a graduate student, his primary efforts remained focused on advancement in his flying career.

Jones did so well that he was selected for a prestigious fellowship in Washington. The outstanding record he amassed along with the fellowship served as a springboard to SAASS. Although not directly related, superior performance in the cockpit opened academic doors for Jones. His work ethic and academic track-record caught the eye of the SAASS faculty who eventually offered him sponsorship to pursue a doctorate and return to teach. Jones earned a PhD in international relations in 2014. In early 2015, he was expecting an assignment to the SAASS faculty upon completion of his current staff tour.

Jones’ Motivation to Pursue a Doctorate. Jones identified two major motivations for pursuing his doctorate.

The first reason was his discovery of a love for learning while at SAASS. Jones credits the SAASS faculty with changing the way “I see learning. They caused you to view

everything differently and that really opened my eyes to everything. The biggest part being the way we make decisions, the way that we see the world is so wrapped up in our world views, in how we were educated growing up.” His experience at SAASS sparked a desire to learn that had not previously been present. Prior to SAASS, education was a means to an end but not a destination for Jones. He viewed education as a requirement to play soccer at the undergraduate level and a stepping-stone to promotion at the master’s level. Jones said the faculty at SAASS awakened a desire to pursue academics full time. His decision to pursue a doctorate was strongly motivated by a newfound desire to become educated and expand his viewpoint.

Jones also reported his observation of Air Force leadership motivated him to improve himself through a terminal degree. He stated, “I feel the Air Force is really lacking decision makers...we really lack the ability to think critically about really important topics that are facing our nation.” Jones viewed a doctorate as a way to fill the void in critical thinking ability he perceives in many current senior Air Force leaders. He feels his doctoral program armed him with a worldview and thinking skills that has better prepared him to lead the Air Force through tough problems.

Other Factors in Jones’ Decision. Jones’ family is more educated than most. Both his parents and the majority of his extended family earned graduate degrees. He also has a cousin who earned a Ph.D. in Chemistry. His immediate family supported him during the process of earning his doctorate but did not push him to enter the program. Jones’ family values education but he said this did not directly motivate him. Once he started the doctoral journey, he felt family support was important but it did not contribute to his decision to pursue a doctorate.

A desire to help shape the next generation of officers also contributed to Jones' decision to pursue a terminal degree. Jones' mentors "definitely told me up-front, right away, that a doctoral degree would not be a career-enhancing move and to not expect to be promoted above colonel; to get any promotion would be more luck of the draw or positional than a result of actual effort or career experience. Going into it, I already knew that I wasn't going to get a promotion bonus in my record." The chance to improve himself and influence others outweighed any potential career impacts for Jones.

Jones identified three cultural factors that could have prevented him from starting a doctoral degree if his personal motivation had not been strong. The first cultural factor Jones addressed was the perception that Air Force leadership does not value input from individuals with advanced academic credentials. He believes top-level leadership "is not accepting of alternate views or ideas, which includes the idea that someone coming from the outside world has something important to say, whether it is from a civilian or a person with an academic degree." Jones believes Air Force leadership automatically gives more credence to ideas coming from officers with standard career paths. Since pursuing a doctorate is, from Jones' vantage, an alternate path, he feels any officer choosing to do so must come to terms with this view and determine if their personal motivations will prevail.

The promotion process is the second cultural factor Jones sees as a barrier to pursuit of a doctoral degree. Officers receive one of three designations on their promotion recommendation form, which is a summary of the officer's career and, the most important document in their record when it meets a promotion board. The highest rating is "definitely promote" and historically results in a promotion rate of nearly 100%. The middle rating is "promote" and results in between a 40% and 60% promotion rate depending on the rank under

consideration. The final rating is “do not promote” and is reserved for officers with disciplinary problems. A ‘do not promote’ rating always results in non-selection for promotion. Senior leaders are given a percentage quota of “definitely promote” ratings and choose which officers receive them from among the officers assigned to them who are meeting a particular promotion board. This process results in senior leaders rank ordering their subordinates for the board. Officers who are also students are rated against each other. Jones pointed out that the pool of officers competitively selected for advanced schooling are generally in the top tier of their peer groups. Thus, when they are ranked against each other, some officers who were clearly deserving of “definitely promote” ratings in their operational units fall below the cut line when ranked in a strong officer/student pool. The process makes no adjustment to the senior officer’s quota to account for an especially strong pool of candidates. Jones feels this is common knowledge among rated officers and influences their decisions about doctoral degrees (and other educational programs) because they are risking a lower rating than they might get if they stay on an operational track.

The final cultural factor that Jones views as a potential impediment to academic pursuits is the value senior Air Force leaders place on these pursuits. Jones believes senior leaders view “academics as a break from operations. There is a clear distinction between operations and academics that gives people the idea that academics is not hard. It’s not worthy of the weight that an operational assignment is.” He believes this perception can influence officers who are considering a doctoral degree. Those officers have to overcome “that mentality, that cultural vision...the cultural vision that a guy sitting behind a computer versus flying a jet can’t actually be engaged in some operational task.” Jones doesn’t see this

culture shifting anytime soon so he suggests that officers interested in doctoral pursuits accept that they are not taking a standard path.

Price. Price is an active duty lieutenant colonel serving as squadron commander. He earned an undergraduate degree in history. After commissioning and pilot training Price went on to fly two types of cargo aircraft. He achieved the highest qualifications available in both aircraft and was qualified to perform special operations missions. A very small percentage of cargo pilots earn this qualification. Following his flying assignments, Price requested and received an assignment as a history instructor at the United States Air Force Academy. The Air Force sent him to earn a master's of history en route to his teaching assignment. Price earned two more master's degrees while attending the Advanced Studies and Air Mobility School and then SAASS. Price accepted Air Force sponsorship for a Ph.D. in history as part of the SAASS faculty development program. In early 2015, Price expected to return to SAASS as part of the faculty once his time as a squadron commander is complete.

Price's Motivation to Pursue a Doctorate. Price's response when asked why he pursued a doctoral degree was, "because it was offered." At the 15-year point of his career, he realized he had spent too much time away from flying that:

I was no longer competitive for flying squadron command or something like that. So I decided to take advantage of the opportunity and pursue personal and professional goals. In my estimation, I would be able to complete the Ph.D. and, for outside the Air Force, it would set me up to do a career in education or consulting or policy. For inside the Air Force, it would give me a chance to contribute either to an educational area, at Air University or at SAASS. Or it would widen my opportunity for a command track that was

somewhere outside of straight up operations because, at that point, I wasn't really competitive.

Price saw a doctorate as an investment in his future. He felt his previous choices to spend so much time away from flying had limited his chances of returning to a flying leadership position. Price saw a doctorate as a way to compete in a different arena in the Air Force as well as prepare himself for the transition to civilian life.

Other Factors in Price's Decision. Price's family is highly educated and stressed the importance of terminal degrees. He rapidly listed more than a dozen relatives who had terminal degrees in their fields. Some had multiple master's degrees, medical doctorates or juris doctorates. Education is stressed in his family to the point that when he finished his own master's degree in history, he "felt I was sort of half way to where I would have professional credibility in that arena." Price also mentioned that he had the advantage of watching siblings and relatives go through the process of earning their own terminal degrees so he had a sense of what he was getting into when he started.

Price also mentioned a desire to help influence the next generation of officers as a factor in his decision. He wants to be in a position to identify talented young officers and help equip them with the knowledge and skills to solve tough problems and "to ask the right questions." Price feels the Air Force needs big thinkers to address the types of problems it will face but does not want to invest in producing those thinkers. He opined, "The Air Force definitely wants its own Petreaus. So they have these programs to sort of send people off to get doctorates and then they turn around and penalize folks for taking three years off of what a traditional officer development career path would look like." Price feels officers considering

pursuing a doctorate must come to terms with what he characterized as “schizophrenic” Air Force attitudes about education.

Price said he believes the Air Force could address the problem of time away from a traditional career path by streamlining the process of offering equivalency credit for career milestones to officers who earn a doctorate. At the time of his interview, Price was undergoing an appeals process to receive credit for senior developmental education. He believes his doctoral program was clearly more rigorous than Air War College, which is the normal route officers use to complete senior developmental education, and voiced frustration at the amount of time required to justify receiving equivalency credit prior to his upcoming promotion board. If officers knew going into a program that they would receive equivalency credit for other events they might miss, the decision to earn a doctorate might be easier.

Parker. Parker is an active duty lieutenant colonel working in a command and control organization. His career included stints as a pilot training instructor, fighter pilot and as an exchange officer with the Army. He commanded a squadron in combat and his overall record has made him highly competitive for a command position at the group level. He currently holds a position normally reserved for a colonel. Parker earned his undergraduate degree in an engineering field and “did not enjoy the process at the time but later realized I (he) enjoyed the learning.” Parker later earned three master’s degrees. He earned the first on his off duty time while assigned to a pilot training billet. His second and third master’s degrees were earned in conjunction with professional military education assignments. Parker has been admitted to a doctoral program at a university in the southeast United States. He intends to complete the program on his own time. He has not decided if he will inform the personnel system once he earns his degree.

Parker's Motivation to Pursue a Doctorate. Parker is pursuing a doctorate because he “feels it is where life is pulling” him. His Air Force career included several assignments as an instructor pilot in two formal school settings. During those assignments, he discovered “I just always liked teaching and instructing.” Parker describes himself as intellectually curious and enjoys interacting with others who are also academically inclined. He said earning a doctorate is a way to satiate his desire to learn and to be in an environment where learning is valued.

Parker foresees that his post-Air Force career will involve teaching in some way and he wants to be prepared when he leaves the Air Force. He is certain “a doctoral degree is a mark of credibility that will help me” enter academia. Parker added that the degree is “an indicator that you are an expert in your field. That’s valued in many ways – reputation, credibility, and credentials.” He believes he needs a doctorate to have a legitimate chance of being employed in higher education at the level he desires.

Other Factors in Parker's Decision. Parker delayed starting his doctorate for several years because he said he did not have the time available to commit to education. He reported that the demands of his career, especially his assignment as a squadron commander, were too great to allow for off-duty educational pursuits. Parker served as a squadron commander in the Middle East and felt that job demanded all his concentration and efforts. The consequences for potentially making a mistake because he was overextended outweighed his desire to earn a doctoral degree during that time period.

Parker indicated that he was concerned that pursuing a doctorate might foreclose his opportunities on the operational track. He feels “there are multiple avenues for the military to provide you with a Ph.D. and provide you with the opportunity to get that education as part of

your job. If you go and do that, there is a payback that will pigeon-hole you into an academic field or a scientific field or something like that. You are probably going to get locked into it.” Parker noted that, “the Air Force is going to utilize that education for its own needs.” Parker decided to personally finance his doctoral degree to avoid being locked into an academic track in the Air Force even though he intends to pursue an academic career after he leaves the service. Parker said he is not opposed to entering an academic track in the Air Force but that he only wants to do so when the opportunity to continue progressing in an operational track is no longer available.

Parker’s immediate family supports his decision to pursue a doctoral degree. His father has a Ph.D. in counseling and his mother is a career counselor at a college. Parker feels his parents had “an indirect influence [on his decision] because that was just what I dealt with and what I am used to.” Their knowledge of the commitment required to earn a doctoral degree and their willingness to discuss the process made the decision easier. Parker also mentioned a supervisor who served as a mentor as an influence in his decision. His mentor earned a Ph.D. during his off-duty hours. He said his mentor did not directly encourage him to pursue the degree but showed him that it was possible to do so.

Parker thinks more rated officers are capable of earning terminal degrees but the pressure of their primary jobs and a “perceived penalty for leaving their flying career tracks” prevents them from doing so. He believes that those rated officers who pursue doctorates are, like him, internally motivated. In his opinion, the Air Force does not reward earning a degree beyond a master’s. He believes the Air Force professes education and strategic thinking as important but the service is not “backing the rhetoric up with actions to show ‘Hey, we think this is important.’ Okay, well show me it is important because I can’t see anybody getting

promoted after they are done with this program. I can't see anybody...those are the things you have to back up if it is important to the service.” His belief that the Air Force is not clearly supportive of doctoral pursuits among rated officers motivated Parker to work on a terminal degree on his own time and at his own expense.

Miller. Miller is active duty Air Force colonel who has spent the majority of his career flying bombers where he specialized in electronic warfare. Miller served as the squadron commander for a unit that achieved an impressive combat record in both Iraq and Afghanistan. Miller was on track to become a group commander but decided to pursue academic endeavors instead. This choice resulted in Miller spending eight years of his career as a fulltime student.

His undergraduate degree is in general engineering. Miller has accumulated four master's degrees throughout his career. The first, in international management, was a byproduct of an internship he served while a captain. The remaining three were earned in association with his professional military education and are in subjects related to military strategy and operations. Miller is a SAASS graduate but did not seek doctoral sponsorship through the faculty development pipeline program. He said he intends to use the knowledge he gained earning his PhD in engineering systems to address emerging electronic warfare and cyber defense issues for the Air Force.

Miller's Motivation to Pursue a Doctorate. Miller pursued a doctorate because he “felt like that was required for me to do the things that I wanted to do for the rest of my career. It is really difficult as an operator --- I believe that our operational perspective is valued in some circles but not in others. To really be able to affect change, you kind of need a Ph.D.. That's what I believe.” Miller wants to be a leader in the emerging Air Force cyber

warfare community. He believed a doctorate was required “given that I’m working in cyber and I’m not a so-called ‘cyber guy,’ a Ph.D. was my ticket for a trip.” Miller’s firmly believed that he would not be taken seriously in the cyber warfare community if he did not bring a doctoral credential with him to the discussion. Miller expressed some frustration about this since he feels experienced operators bring invaluable combat experience but their viewpoint sometimes is discounted because they rarely have the academic credentials required to take a seat at the table where cyber warfare policy is written.

Miller is currently the head of an Air Force task force dealing with cyber warfare strategy and policy. He is convinced he would not have been offered the position without a doctorate. He views the work required to attain his doctorate as “the price of admission” to leadership in his chosen field. He knew he was giving up the chance for operational command when he left to earn a doctorate but his aspirations were more academic in nature so he was comfortable with the tradeoff.

Other Factors in Miller’s Decision. Miller’s family values education but he is the first to earn a doctorate. His parents both attended but did not finish college. Nonetheless, they encouraged Miller and rewarded him when he excelled academically. His wife supported him through many years of schooling as well but she did not pressure him to pursue a doctorate. Miller credits a supportive family with making the process of earning a doctorate easier.

Miller believes rated officers who pursue doctorates do so for their own reasons because the Air Force does not encourage them to do so. In his opinion, “I think the Air Force wants educated Airmen but the Air Force doesn’t value educated Airmen.” When asked why he felt this way, Miller responded, “it’s really hard to educate someone and then

expect them to only use that education when you want them to. For example, education promotes curiosity. I think we value that curiosity when pointed outwards, but not so much when that curiosity is pointed inwards. It's okay to critique the other services, but it doesn't help you if you critique the Air Force." Miller identified this mixed messaging as a factor he considered before pursuing his own doctorate.

Miller believes a rated officer who leaves an operational position for non-operations activities, including pursuit of a doctorate, may be seen by the Air Force as a loss of investment in that officer's training for operational duties. He pointed out that, "the Air Force spends a bunch of money on training a rated officer. The notion that a rated officer would not be in the cockpit and providing a return on that investment is a difficult organizational pill to swallow." Miller believes the Air Force would be better off if it allowed more rated officers to "get a terminal degree and then sow those insights back into the organization." The organizational desire for a return on investment through a standard rated officer career progression may influence rated officers' decisions about terminal degrees. Miller believes the Air Force rewards standard career paths and rated officers who pursue terminal degrees "do not have a valid career path." Rated officer assignments are heavily influenced by developmental teams. These teams of senior leaders from each flying community meet annually to vector officers to particular assignments. Miller believes the developmental teams do not value rated officers with doctorates and consequentially set their careers on paths that damage their chances for promotion and command opportunities. Miller does not hold the developmental teams in high esteem and referred to them as narrowly focused "crime families" that "wield all the real power." He routinely advises other rated

officers who are considering pursuing a doctorate to prepare for the possibility of being sidelined if they choose this path.

Foster. Foster is a recently retired Air Force colonel. He flew the same type fighter aircraft for his entire career with the exception of two staff assignments. Foster achieved squadron command in his flying community and served in highly coveted staff positions when he was not actively flying. He considers his Air Force career a successful chapter of his life story.

Foster's undergraduate degree is in computer science. While still on active duty he earned two master's degrees in social science fields. He considered pursuing a doctorate before retirement but did not think he had the time available to perform his Air Force job and meet the demands of a doctoral program. He intended to start his doctorate immediately after retirement but took a year off to concentrate on his new job and "decompress" before he began. Once he started his studies, he rapidly earned a Doctor of Divinity degree and uses that degree in his current line of work developing church organizations.

Foster's Motivation to Pursue a Doctorate. Foster pursued a doctoral degree "as a way of gaining additional input and expertise in my chosen field ...mine had to do with leadership and that was really important as well as a credibility factor that opened a lot of doors in the places I was going." Foster noted that throughout his career as a fighter pilot, the Air Force "stressed training and being equipped" for challenges. In Foster's mind, "That's kind of what the terminal degree does in a non-flying world. It was all about getting better equipped and becoming at least a subject matter expert in what I would be dealing with." Foster pursued a doctorate because he viewed it as enabling him to meet his career goals.

Other Factors in Foster's Decision. Foster's family background was a source of encouragement when he was considering starting a doctoral program. Foster is one of seven siblings and most of them have earned master's degrees. Two of his siblings earned doctorates before he did. He placed a strong emphasis on education in his own family and all of his children are either college graduates or on track to graduate. The entire family knew they would have to sacrifice when he started his doctorate and they agreed to do so. Foster made sure he had "family buy-in" before he started.

Foster felt his Air Force career continually emphasized the importance of leadership. He was drawn to his particular doctorate because the program emphasized the study of leadership from many angles. Although he did not have a mentor who specifically prompted him toward a doctorate, he felt his entire Air Force experience made him thirst to learn more about leadership. Foster thinks the Air Force would have benefitted had he completed his doctorate while still on active duty but he "ran out of career before I got it done." Foster thinks more rated officers might pursue doctoral degrees if they had time to do so. In his opinion, the time demands on rated officers are too great to pursue a doctorate unless "the Air Force specifically selects you to get a doctorate and sends you there."

Fischer. Fischer is an active duty colonel who currently commands a Reserve Officer Training Corps unit at a private university. Fischer served in a non-rated specialty for two years as a lieutenant. He then spent almost 15 years flying fighter aircraft before moving on to academic endeavors. He was selected for, and graduated from the Fighter Weapons School, which marked him as a tactical expert in his aircraft. Fischer commanded a fighter squadron in Afghanistan. He was promoted to lieutenant colonel two years early based on the strength of his record.

Fischer's undergraduate degree is from a prestigious Ivy League school. The first of his three master's degrees is from a second Ivy League school. He earned the other two master's degrees in conjunction with Air Command and Staff College and SAASS. Upon graduation from SAASS he did not seek sponsorship for a doctorate. However, several years later he approached the SAASS faculty for sponsorship and was accepted into the faculty development Ph.D. pipeline. After earning his doctorate, Fischer spent the next five years on the faculty of various professional military education schools.

Fischer's Motivation to Pursue a Doctorate. Fischer cited two reasons for pursuing a doctoral degree, both related to the time he spent deployed to combat zones in the late 1990s and early 2000s.

Fischer's first motivation to pursue a doctorate was to answer nagging questions about why the United States was involved in two wars in the Middle East. Fischer never questioned his role as a fighter pilot but he wanted to know "Why am I doing this? What is the overall political outcome?" He was not satisfied with the answers he got from his leadership. "Nobody could ever answer that for me. That is actually the dissertation question I answered. So I used the process of getting a doctorate to answer that question." Fischer's dissertation was converted to a book about foreign policy and international relations.

Fischer's family was his second motivation for pursuing a doctorate. After several years of being deployed during the holidays, Fischer was home for Thanksgiving in 2004. As his family sat around re-telling family stories he realized, "I wasn't in any of them. I had been deployed for the last ten years." Fischer decided he needed to do something to rectify the situation and he saw the faculty development pipeline as a potentially stabilizing assignment

for his family. He is happy with the decision and thinks “the Ph.D. has given me and my family a little bit more of a stable life for the last ten years.”

Other Factors in Fischer’s Decision. Fischer felt remaining on the operational command track gave control of his life to the Air Force. He discussed his desire to enter an academic track with his mentors before venturing into fulltime academia. When he made the decision, “I knew when I was doing it that I was never going to command an operational unit again.” He also felt he was at a crossroads in his career. If he stayed on the fast track to operational command, he would never be able to go back and ask for sponsorship for a doctorate again. Fischer saw his desire to stabilize his family life as a good match with an academic career path and willingly gave up the opportunity to continue down the operational command track.

Fischer also viewed a doctorate as a mark of credibility that would give greater weight to his work in academic environments. He felt a doctorate is the academic equivalent of being a Fighter Weapons School graduate. Fischer attended Fighter Weapons School because he felt it gave him the platform to be taken seriously and make improvements in his fighter squadron and the broader fighter flying community. He believed he was the same person when he returned from Fighter Weapons School but he was in a better position to make a difference because he possessed the right credential. This previous experience also entered into Fischer’s decision making when he was considering pursuing a doctoral degree.

Wright. Wright is an active duty lieutenant colonel currently working as a faculty member for a professional military education school. Wright flew fighters and trainers for the first part of his career. He was an instructor in two different types of aircraft before

transitioning to academic assignments. Based on his record, he was selected for early promotion to both lieutenant colonel and colonel.

Wright earned four master's degrees. His first master's was part of an internship he completed as a captain. The next two were associated with professional military education schools. Wright also graduated from SAASS. His final master's was earned concurrently with his Ph.D. in international relations.

Wright's Motivation to Pursue a Doctorate. Wright identified three motivations for pursuing a doctorate. Wright's mentioned his upbringing as a significant motivating factor. "My Dad was an Army officer who was an engineer for the first half of his career then he did a doctorate in education and was on the faculty at West Point. So I'd seen that modeled for me as far as a way one could pursue higher education within the military to contribute tactically as a junior officer and strategically as a field grade officer." Wright viewed SAASS as "a nice pivot point in my career." While he said he had experienced success in the tactical arena, his upbringing motivated him to use a terminal degree to cross into a strategic role. Wright saw his father use a doctorate as a means of self-improvement and sought to follow his example.

Wright's second motivation for pursuing a doctorate is that he thought it was the "best use of my gifts and talents." Wright enjoys academic endeavors and thinks an academic career track is "broadly consistent with my appraisal of my strengths." He believes entering an academic track provides him the best opportunity to make a difference in the Air Force over the long term.

A desire for family stability also motivated Wright to pursue a doctorate. While at SAASS, Wright married an aspiring doctor. Her career path required stability to complete

medical school and a residency. Wright knew that returning to tactical level jobs would not provide the stability his new family needed. He knew that a faculty development career path would allow him to complete multiple assignments at the same location. Wright indicated that he was already leaning toward an academic career transition but the desire to provide stability greatly influenced his decision.

Other Factors in Wright's Decision. While Wright saw his Dad take an academic path to a rewarding career in the Army, he did not see similar examples in the Air Force. He feels he arrived at the decision on his own because “no one in the Air Force system--no senior officer--ever recommended it to me. It was always in my mind a countercultural, going against the grain kind of thing to do.” He said when he applied to the faculty development pipeline, the SAASS faculty warned him that he was giving up the operational track.

Wright said he hid his desire to pursue a doctorate from his leadership until he was absolutely certain it was the path he wanted to pursue. He mentioned two reasons for keeping quiet about his plans. The first was that he did not want to say he wanted to pursue a doctorate only to back away from it later. He wanted to be completely convinced himself before asking to enter the faculty development pipeline. Wright compared his situation to mountain climbers who declare they will climb Mount Everest then never do it. He did not want to be viewed as someone who talks about lofty goals but does not follow through. The second reason Wright mentioned for initially hiding his intent was “some sense that there is a real or implied counter pressure against such a move within the Air Force: The sense that you are sort of taking yourself off the fast track by doing that.” Wright carried through with his decision to earn a doctorate because, as he said, “I’ve always been comfortable in my own skin as far as pursuing a counter cultural Air Force career—going against well-intentioned

career advice that people have given me to stay on the ‘fast track.’” Wright added that as a squadron commander he advised his students, “I don’t recommend doing what other people think is good for your career. It’s actually bad for your life because you know your life better than they do. So pursue the right opportunities that maximize your gifts and talents and allow your family to flourish.” He acknowledged, “I know that wasn’t always the most popular opinion or perspective among more senior officers so maybe I didn’t talk about it because I didn’t want to air my tone of ‘counter-culturalness’ too flagrantly.” By early 2015 Wright expected his next assignment to be as a member of the SAASS faculty. He said he desires a faculty assignment so he is satisfied with the potential career tradeoffs he made to pursue a doctorate.

Butler. Butler is a retired Air Force colonel who started his career as a pilot training instructor then transitioned to fighters. He flew two different types of fighters during his career and his final flying assignment was as a fighter squadron commander. Butler earned a master’s degree in his off-duty time as a captain and a second master’s in conjunction with professional military education at National War College. While at National War College, he was diagnosed with cancer that ended his flying career. Despite being unable to return to flying, Butler successfully battled cancer and went on to several high profile staff assignments before he retired and transitioned to working for a defense contractor. Butler’s Ph.D. is in organizational leadership.

Butler’s Motivation to Pursue a Doctorate. Butler cites his experience working on the Air Combat Command staff as the genesis of his desire to complete a doctorate. He observed an organization staffed by very high functioning performers that was not operating efficiently. In his opinion, new technologies were disrupting the connections between people

that enable an organization to operate efficiently. For example, he felt people spent too much time striving to answer emails immediately and not enough time strategizing and deeply considering a right answer before providing a well-considered response. Butler saw a Ph.D. in organizational leadership as a path to allow him to help improve his organization. He wanted to research and write about the phenomenon he was observing. Butler said that, unfortunately, he was subject to the same inefficiencies he described so he could never find the time to start his doctorate while on active duty. Once he retired, he rapidly finished his doctorate.

Other Factors in Butler's Decision. Butler emphasized that he desired a doctorate for personal reasons. He did not expect any career boost from his doctorate. He also pointed out that “the Air Force values how you perform your primary job foremost and may use education for a tiebreaker at best.” By the time he considered a doctorate on active duty he already knew his “window to command” had passed because of his medical struggles. Butler knew he was no longer competitive for promotion so he allowed himself to entertain opportunities beyond his primary job. Once he transitioned back to the civilian world his peers and friends told him “‘you’re crazy to do this’ and ‘you don’t need to do this’” but his personal desires overrode that advice. Butler noted that he did not receive any type of raise or increase in responsibility when he finished his doctorate.

Using his GI Bill benefits was also a factor in Butler's decision to pursue a doctorate. Butler felt it would be a shame to let his benefits go to waste. His GI Bill benefits also meant starting the program would be a low-risk proposition. If he discovered he did not like the program he could step away from it and not have spent any of his own money in the process.

Butler said he probably would have pursued the degree without GI Bill benefits but they made the decision easier.

Long. Long is a recently promoted active duty Air Force colonel. He was promoted to lieutenant colonel two years early based on a strong performance record. After navigator training, he started his career as a weapons systems operator flying fighter aircraft. Long rapidly progressed to become an instructor weapons systems operator then was selected for a prestigious internship in Washington, D.C. There he earned the first of two master's degrees. After his internship, Long attended pilot training and returned to flying fighters. His second master's degree is from SAASS. Although he completed the prerequisites while a student, Long did not intend to pursue a doctorate upon completion of SAASS and returned once again to flying fighters. He was the operations officer and later commander for a fighter squadron in combat.

Long's Motivation to Pursue a Doctorate. Long said he pursued a doctorate because the opportunity was handed to him. As he was finishing his squadron command assignment another officer who was slated to attend a doctoral program was assigned to a different job. This left an unfilled sponsored doctorate position. The faculty at SAASS remembered Long had completed the Ph.D. program prerequisites and offered him the last minute vacancy. Coincidentally Long was scheduled to attend a professional military education school at a location that was undesirable for his family so he took the opportunity to earn a doctorate at a better location.

Long said his intellectual curiosity makes him a good fit for a doctorate. He said he knew this when he completed the Ph.D. program prerequisites at SAASS but continued education did not interest him at the time. Before accepting the late notice doctorate program

sponsorship, Long carefully considered what he would be getting into. He decided that a doctorate was a good opportunity to “go in-depth on a topic” and answer some questions that interested him. Long reflected, “I think I enjoyed writing and I do enjoy the academic research. It was a good way to take a pause from Air Force life.” The fact that he would not have to move his family to a location they did not want “was icing on the cake.”

Other Factors in Long’s Decision. Long’s family was very supportive of his decision to pursue a doctorate. His wife faced very limited employment opportunities if he had accepted his original professional military education assignment due to the school’s rural location. She was able to continue her career when he accepted the doctorate opportunity. Long said accepting a sponsored doctorate improved his family’s quality of life.

Long also considered the potential career impacts of pursuing a doctorate before he accepted sponsorship. His mentors advised against it saying, “Why would you go do that? Why would you go to a real school? A real voluntary school. Go be someone’s aide-de-camp or go do an operational job.” Long had actually given similar advice to junior officers but the benefits to his family outweighed this cautionary advice at the time. In hindsight, Long feels the decision cost him the opportunity to command at the group level. His mentors explained that he was a locked into the doctoral program when he was at the “sweet spot” of his career to command a group. They also attribute his on-time promotion to colonel to his decision to leave the standard career path. They told him he looked too different to be selected early for colonel even though he was among the very small percentage of officers who make lieutenant colonel two years early. Long feels he traded in any chance he had to be a general when he elected to pursue a doctorate but he is happy with the decision.

Summary

Chapter IV presented the data gathered from four Air Force documents and related archived emails. This chapter also presented summaries of interviews with 13 rated officers who have earned or are pursuing doctoral degrees. The next chapter will discuss the collective case analysis across all 13 individual cases and the associated documents and archived records.

Chapter V - Collective Case Analysis

Chapter IV presented the individual cases and provided a detailed examination of the factors that influenced study participants to pursue a doctorate. Chapter V presents the collective case analysis which reveals the themes that bind the cases together (Stake, 2006) and attempts to paint a single picture across cases. The collective case analysis addresses this study's research question: What factors influence a rated officers' decisions to pursue doctoral degrees? The collective case analysis revealed five factors that motivate rated officers in the U.S. Air Force to pursue doctoral degrees including (in descending order of importance): 1) job opportunities in the Air Force; 2) job opportunities after the Air Force; 3) intellectual curiosity; 4) self-improvement, and 5) family considerations. The collective case analysis also revealed two interrelated obstacles Air Force rated officers must overcome to pursue their doctoral degrees: Air Force ambivalence toward doctoral education and actual or perceived career penalties against rated officers who pursue doctoral degrees. Each participant discussed motivational factors relevant to their decision to pursue a doctorate as well as obstacles they faced and overcame during the decision-making process. This chapter begins with a display of data relevant to each of the five factors and two obstacles by case (Table 5) then presents data sorted by each of the five factors that emerged during the collective case analysis (Table 6). Similar tables and a discussion of two obstacles common across cases conclude the chapter.

Table 5 displays results from individual interviews and document review and "summarizes segments of data" (Miles, Huberman, & Saldana, 2014, p. 86). In accordance with the methodology described in Chapter III, Table 6 displays the results of a second cycle

of coding that “groups those summaries into a smaller number of categories” (Miles, Huberman, & Saldana, 2014, p. 86).

Table 6 groups participant motivational factors into a smaller number of categories and assigns common language to the themes that emerged.

Table 5 *Participant Motivational Factors and Obstacles*

Case	Motivational Factors	Obstacles
Smith	Opportunity to join SAASS faculty Intellectual curiosity - “love reading and arguing”	“Career stemming moment” Distance from mentors detrimental Loss of flying credibility
Brown	Self-actualization Prepare for Air Force senior leadership position since he feels current leaders are disappointing Family support of education Post Air Force employment options	Risk of pigeonholing
Bell	Calling from God to improve himself Desire to use GI Bill for self-improvement	
Wood	Conquer a challenge Post Air Force employment	Reduced chances for command Distance from mentors detrimental
Jones	Love of learning Prepare for Air Force senior leadership position because he is disappointed in current leadership Strong family commitment to education Desire to shape next generation of officers	Feeling that Air Force leadership does not value academia Perceived promotion disadvantage while earning Ph.D.
Price	Investment in future Open Air Force academic leadership opportunities Desire to shape next	“Schizophrenic” Air Force attitudes toward education Loss of flying credibility

	generation of officers Family supports education	
Parker	Intellectual curiosity Prepare for post-Air Force career Family supports education	Perceived pigeonholing “penalty for leaving flying” Air Force does not value in promotion process
Miller	Open Air Force job opportunities Supportive family	Feels Air Force does not value educated Airmen Feels developmental teams penalize rated officers with Ph.D.s Feels rated officers do not have a “ valid career path” with doctorate
Foster	To become a recognized expert in his field Strong family support	
Fischer	Answer questions Desire to spend less time deployed (family time) Desired credibility in academic debates	Ph.D. and operational command are mutually exclusive
Wright	Family role model “Best use of gifts and talents” Desire for family stability Interest in academia	Earning doctorate is “countercultural” Perceived career penalty
Butler	Desire to improve organization with knowledge gained Desire to use GI Bill benefits for self-improvement	
Long	Intellectual curiosity Desire not to squander “golden opportunity” for self-improvement	Perceived career penalty Promotion penalty
Documents and Archival Records	Prepare officers for senior leadership	Career penalties

Table 6 *Motivational Factor Collective Case Analysis*

Factor	Data	Case
Job in Air Force	Opportunity to join SAASS faculty	Smith
	Prepare for senior leadership	Brown
	Prepare for senior leadership	Jones
	Open Air Force academic leadership opportunities	Price
	Open Air Force job opportunities	Miller
	Desire to improve organization with knowledge gained	Butler
	Prepare officers for senior leadership	Documents and Archival Records
	Job after Air Force	Post Air Force employment
Job after Air Force	Investment in future	Price
	Prepare for post-Air Force career	Parker
	Prepare for post-Air Force career	Brown
	Prepare for academia	Fischer
	Prepare for academia	Wright
	Minor consideration of politics	Bell
	Intellectual Curiosity	Conquer a challenge
Love of learning		Jones
Intellectual curiosity		Parker
Answer questions		Fischer
“Best use of gifts and talents”		Wright
Intellectual curiosity		Long
Intellectual curiosity/”loves reading and arguing”		Smith
Self-Improvement	Self-actualization	Brown
	To become a recognized expert in his field	Foster
	Desire not to squander “golden opportunity”	Long
	Family role model used Ph.D. for self-improvement	Wright
	Calling from God to improve himself	Bell
	Desire to use GI Bill benefits for self-improvement	Bell and Butler
Family Considerations	Desire to spend less time deployed	Fischer
	Desire for family stability	Wright
	Family stressed education	Brown
	Strong family commitment to education	Jones
	Highly educated family	Price
	Family support	Parker
	Supportive family	Miller
	Strong family support	Foster

Discussion

Collective case analysis revealed five motivational factors in rated officers' decisions about pursuing doctorates.

Motivational Factors. Per the methodology described in Chapter III, coding and categorizing data continued iteratively until the categories were exhaustive, mutually exclusive, help a reader make sense of the data, and were all of the same level of abstraction (Merriam, 2014, pp. 185-186). The categories presented in Table 6 meet these criteria. Table 7 presents a collective case study matrix of motivational factors.

Table 7 *Collective Case Study Matrix of Motivational Factors*

Case	Job in Air Force	Job after Air Force	Intellectual Curiosity	Self-Improvement	Family Considerations
Smith	X		X		
Brown	X	X		X	
Bell		X		X	
Wood		X	X		
Jones	X		X		X
Price	X	X			X
Parker		X	X		X
Miller	X				X
Foster				X	X
Fischer		X	X		X
Wright		X	X	X	X
Butler	X				
Long			X	X	
Documents and Archival Records	X			X	

Job in Air Force Motivation. Preparation for a job in the Air Force motivated just under half of the interviewees to pursue a doctoral degree. Smith, Miller, and Butler identified preparation for a job in the Air Force as their sole motivation. Brown and Jones were disappointed in the intellectual abilities of current Air Force leaders and viewed their

doctoral efforts as preparation for their later senior leadership positions. Jones and Price mentioned a desire to shape the next generation of officers in later jobs as an important factor in their choice to pursue a doctoral degree. This motivation exhibits internal congruence since the participants and the Air Force have a common goal. The documents and archival records case indicated preparing officers for follow-on jobs in the Air Force is the institution's motivation for sponsoring doctoral degrees (School of Advanced Air and Space Studies, 2010; School of Advanced Air and Space Studies, 2014). Both parties benefit when a rated officer's motivation to pursue a doctoral degree is to prepare themselves for a job in the Air Force. In this case, the Air Force receives return on its investment if it offers sponsorship for the officer's degree. Two of the participants were motivated to pursue their doctoral degree because earning it is a prerequisite to the academic job they desire in the Air Force. The other four viewed a doctoral degree as preparing them for leadership positions that do not require the degree. In their own estimation, the knowledge gained earning a doctoral degree will be useful later in their careers even though the Air Force does not require it for the positions they were seeking.

Job after Air Force Motivation. Seven participants cited preparation for job opportunities outside the Air Force as part of their motivation to pursue a doctoral degree. These officers were looking beyond their Air Force careers when making decisions about pursuing a doctoral degree. Two of these participants also identified preparation for a job in the Air Force as a motivator. While Bell firmly stated his motivation for pursuing a doctorate was to answer God's calling, he also mentioned that the doctorate was good preparation to enter the political arena. He has been approached about campaigning for elected office but has not made a decision to do so. Fischer and Wright specifically mentioned preparation for

careers in academia as motivations for their doctoral studies. The remaining four participants identified less specific post-Air Force career options as factors that influenced their decisions. These officers felt the Air Force would benefit from what they learned in the process of earning their doctorates but considered this an incidental benefit

Intellectual Curiosity Motivation. Intellectual curiosity motivated six participants to pursue a doctoral degree. Two strains were apparent as part of this factor. First, some participants were motivated by a desire to answer questions they perceived as important. They desired a deeper understanding of the world around them. In some cases, the participants were focused on military problems they observed first-hand. Other participants sought better understanding of broader geo-political problems. Second, some participants simply enjoyed learning. They derived satisfaction from gaining new knowledge and applying it. For example, Parker stated he enjoyed learning so much that he felt “life is just pulling me toward” a doctorate. These participants frequently said they also enjoyed teaching others once they mastered new material.

Although Smith unequivocally stated his motivation for earning his doctorate was to be eligible for a job on the SAASS faculty, he also discussed intellectual curiosity as an influence. He “loves reading and arguing” but felt he could satiate this personal desire without earning a doctorate. His intellectual curiosity helped sustain him through the process but did not motivate him to earn a doctorate. Smith found the process of earning a doctorate satisfying because it allowed him to indulge his intellectual curiosity. The participants described intellectual curiosity as a deeply personal motivation. They were not encouraged by external factors to seek new knowledge. Rather, they were internally motivated to do so.

Self-improvement Motivation. Five individual cases contained a common theme of self-improvement as a motivator for pursuing a doctoral degree. The review of documents and archival records also revealed that the Air Force desires to improve rated officers who are destined for senior leadership positions. Some rated officers pursue doctorates because they want to improve themselves and view doctoral studies as an avenue to do so. Others are presented with self-improvement opportunities they feel are too good to pass up. In either case, self-improvement is a factor in these officers' decision making process.

Family Considerations Motivation. Seven participants discussed family support as a factor in their decision to pursue a doctorate. Half of those discussed support from their immediate family as a factor that encouraged them to pursue a doctorate. Their families did not urge them to pursue their degree but they felt knowing their family was supportive made the decision to embark on a doctoral journey easier. Wright and Long both discussed the stability of three years without moving while earning their doctorates as attractive to their families. This longer assignment provided their spouses better career opportunities. Family support was a factor for several participants as they considered pursuing a doctoral degree.

The remaining participants highlighted their immediate and extended family orientation toward higher education. Wright, Foster, Parker, Price and Jones all referenced family exemplars who had earned terminal degrees in their field as relevant to their thought process concerning their own degree. Long, Bell and Brown did not have family members with doctorates but they discussed the importance their families placed on education in general as a significant influence on their orientation toward higher education. Bell stated, "In my family you are expected to educate yourself as a way to improve your conditions in life." These participants' families valued education and instilled that value in them.

Summary of Motivational Factors. Analysis of data from fourteen cases revealed five motivational factors as discussed above. In the process of describing their motivations, the participants also discussed obstacles they faced and overcame during the decision-making process. Obstacles, along with the motivations discussed above, will be the basis of the recommendations in Chapter VI. The same coding process applied to the participants' motivations was applied to obstacles participants discussed.

Obstacles. Two obstacles rated officers contend with when pursuing doctoral degrees became evident during the collective case analysis. The review of related literature and the participant interviews document an environment of shifting Air Force policy with respect to higher education. This shifting context gives rise to obstacles that are factors in rated officers' decisions to pursue doctorates. Table 8 presents these obstacles as the participants expressed them. Table 9 presents a collective case study matrix of these obstacles.

Potential for Negative Career Impacts. The greatest obstacle rated officers faced in making the decision to pursue a doctorate was the perceived potential for negative career impacts. Eight of the thirteen participants discussed this obstacle during their interviews. The review of documents and archival records also revealed data confirming the participants' perceptions. None of the officers SAASS sponsored for doctorates has been promoted to general. (School of Advanced Air and Space Studies, 2010) A majority of the participants believed pursuing a doctoral degree placed them at a career disadvantage for a variety of reasons. This obstacle took many forms for participants.

First, rated officers who pursue a sponsored doctorate do not fly while doing so. The participants felt this made them less competitive when they returned from academia because their peers had accumulated more flying hours and higher qualifications in the interim.

Table 8 *Obstacles*

Obstacles	Factors as Expressed by Participants	Case	
Potential for negative career impacts	Loss of flying credibility Reduced chances for command Perceived promotion disadvantage while earning Ph.D.	Smith Wood Jones	
	Loss of flying credibility “penalty for leaving flying” Air Force does not value in promotion process	Price Parker Miller	
	Feels developmental teams penalize rated officers with Ph.D.s	Miller Wright	
	Perceived career penalty	Long	
	Perceived career penalty	Long	
	Promotion penalty	Documents and Archival	
	Career penalties	Data	
	Distance from mentors detrimental	Smith	
	Distance from mentors detrimental	Wood	
	Feeling that Air Force leadership does not value academia	Jones	
	“Schizophrenic” Air Force attitudes toward education	Price	
	Feels Air Force does not value educated Airmen	Parker	
	Earning doctorate is countercultural	Wright	
	Inflexible Career Tracks	Risk of pigeonholing	Brown
		Perceived pigeonholing rated Ph.D.s	Parker
		Ph.D. and operational command are mutually exclusive	Fischer
“career stemming moment”		Smith	
Feels rated officers do not have a “ valid career path” with doctorate		Miller	

Table 9 *Collective Case Study Obstacles*

Case	Potential for Negative Career Impacts	Inflexible Career Tracks
Smith	X	X
Brown		X
Bell		X
Wood	X	
Jones	X	
Price	X	X
Parker	X	X
Miller	X	X
Foster		X
Fischer		X
Wright	X	
Butler		
Long	X	
Documents and Archival Records	X	X

Modern aircraft undergo nearly constant upgrades and the participants felt they lost touch with evolving capabilities and tactics. This resulted in a perceived loss of credibility within their flying communities when they returned to flying. In some cases, the participants were either advised not to return to flying for this reason or chose not to return on their own.

Second, many participants felt the promotion process does not recognize the value of obtaining a doctoral degree. Participants described a promotion system that rewards officers who remain on a traditional operational career path. They felt the current system is susceptible to selection bias because senior officers tend to select junior officers who look like them for advancement. One participant went so far as to say earning a doctorate is “countercultural.” Leaving the normal path to pursue a doctorate identifies an officer as different from the norm and results in less favorable consideration for preferred assignments. Without those assignments, officers feel they are less competitive for command billets and

subsequently for promotions. Additionally, some participants noted that the current process forces those officers who pursue doctorates to compete against each other for promotion spots rather than compete against the broader pool of all officers. They believe they are disadvantaged because they are competing against a cohort they believe is more motivated and of higher quality than the broader pool.

Third, rated officers who leave their flying communities to earn doctorates risk losing contact with senior leaders in their community. The participants felt distant from their mentors at key times in their careers. Several participants believe being out of sight results in being out of mind when selections for choice assignments are being made. They also expressed the belief that their mentors do not value doctorates. They cited rapidly changing Air Force policies concerning higher education as an indicator that senior leaders do not agree on the value of education.

Inflexible Career Tracks. Seven participants discussed inflexible career tracks as a consideration in their decision to pursue a doctorate. These participants felt the Air Force views the decision to pursue a doctorate as an announcement of intent to enter an academic career track. They described entering an academic career track as an irreversible decision. Several participants shared that their mentors specifically warned them they would enter a different career trajectory if they choose to pursue a doctorate. Their mentors unequivocally warned them that they would no longer be viable candidates for operational command positions if they entered an academic track.

As discussed above, a few participants were motivated to earn their doctorate precisely because they wanted to enter academia in the Air Force. However, others did so despite what they viewed as “risk” of being forced onto an academic path. Smith described the decision to

pursue a doctorate as a “career stemming moment.” Ironically, Smith was the only participant who actually did manage to achieve an operational command position after undertaking his doctorate. Brown and Parker both described a perceived risk of being “pigeonholed” into an academic career track. Miller felt rated officers who earn a doctorate are not left with a viable operational career track and are therefore forced onto a non-command track. The participants who expressed concern about inflexible career tracks proposed several ways to address this issue. Chapter VI will discuss their recommendations along with other possibilities.

Summary of Obstacles. The potential for negative career impacts and inflexible career tracks were obstacles participants faced when deciding to pursue doctoral degrees. Every participant discussed one or both of these obstacles during their interviews. The documents and archival records reviewed also discussed these obstacles. Chapter VI will discuss efforts the Air Force can undertake with respect to these obstacles.

Chapter VI – Implications for Practice and Recommendations

The purpose of this study was to explore the factors that influence Air Force rated officers' decisions about pursuing doctoral degrees. Methodologies consistent with the qualitative collective case study design were employed and involved semi-structured interviews with 13 rated officers who either had received or were pursuing doctoral degrees and data collection from documents and archival records. Data analysis was iterative and conducted concurrently with data collection. This investigation revealed five motivational factors that influence rated officers' decisions to pursue doctoral education and two obstacles rated officers face and overcome during the process of deciding to pursue a doctoral degree. The collective case analysis in Chapter V presented evidence related to these five motivational factors and two obstacles. Several practical and policy-level implications arise as a result of this study. These implications and several recommendations to the Air Force relevant to doctoral education among rated officers are offered below. An assumption underlying each of these implications for practice and policy and recommendations is that the Air Force embraces the notion that there is a need to increase the pool of rated officers who complete doctoral degrees. The existence of two Air Force Ph.D. sponsorship programs suggests the Air Force desire to support terminal degree attainment but the obstacles described by the participants present a conflicting story.

Implications of “Job in Air Force” Motivational Factor and Policy Recommendations

The implication of this motivational factor is that there are more individuals in the entire population of rated officers who could be motivated to earn doctoral degrees by the promise of a desired position. Six participants were motivated to pursue doctorates because they desired specific jobs within the Air Force. The participants related either these jobs

required a terminal degree or they thought they would not be competitive for the job unless they obtained a doctorate. The Air Force can make policy changes based on this motivational factor that could increase the pool of rated officers with doctorates over time.

One approach related to this factor is to make jobs that currently require a doctorate more attractive to rated officers. Numerous approaches are possible to increase the desirability of assignments that currently require doctorates. Potential policy changes that introduce salaries associated with these positions might make them more attractive and motivate more rated officers to pursue this path. The Air Force already uses financial incentives to gain and retain other skills sets it needs. Language proficiency payments and special pays for doctors with specific board certifications are two examples of pay policies designed to encourage Airmen to earn a qualification. Changes in advancement policy may also encourage more rated officers to pursue doctorates. Federal law currently mandates that joint qualified officers be promoted at a rate at least equal to non-joint qualified officers. (Goldwater-Nichols Department of Defense Reorganization Act of 1986, 1986) The Air Force could establish a similar policy to protect rated officers who pursue doctorates. Other related potential promotion and personnel policy actions are discussed later in this chapter. Making jobs that currently require a doctorate more attractive from the perspective of rated officers may induce more of them to earn doctorates.

The Air Force can also leverage this motivation by requiring doctorates for attractive jobs. Most of the Air Force positions that currently require a doctorate are academic in nature. The Air Force could identify select operational positions where a doctorate would be useful and make the degree a prerequisite for the position. Political-military advisors and strategists positions are two jobs where this prerequisite might be appropriate. If the Air

Force adopts this approach, a phased approach would be necessary because it will take time to generate enough rated officers with doctorates to fill the positions. Gradually increasing the number of desirable positions that require a doctorate may lead to a corresponding increase in officers earning doctorates.

The knowledge that some rated officers are motivated to pursue doctorates by a job in the Air Force can be used to adjust personnel policies. Making those jobs more attractive to rated officers or adding a doctoral prerequisite to jobs that are already sufficiently attractive could result in more rated officers with doctorates.

Implications of “Job after Air Force” Motivation and Policy Recommendations

Collective case analysis revealed some rated officers pursue doctorates in order to prepare themselves for jobs after their Air Force careers. The implication of this motivational factor is that some rated officers earn doctoral degrees for reasons not associated with the Air Force at all. The Air Force may temporarily benefit from the knowledge those officers gain while earning their doctorates but the officers are destined to move on to other employers to meet their personal goals. Since the Air Force considers sponsorship of advanced degrees through a transactional lens (Staats, Reynolds, & Troxell, 2007), this motivation is problematic. The Air Force reasonably expects some pay back for the resources it expends when sponsoring degrees. In addition to the financial cost associated with a degree, the Air Force bears an opportunity cost because it is short an officer for several years while they earn their degree. Though each case is different, based on the amount of time a rated officer remains in the Air Force after earning their doctorate, the Air Force should be cautious about additional sponsorship if this theme is an officer’s motivation. When

preparing for a job after the Air Force motivates an officer to pursue a doctorate, the individual's and the institution's goals are not fully congruent.

That said, policy changes could still result in a mutually beneficial situation when job opportunities outside the Air Force motivate an officer to earn a doctorate. Structuring sponsorships to recoup the institutional investment while simultaneously preparing rated officers for their transition to the civilian world is possible. Most Air Force educational sponsorships include an active duty service commitment designed to retain the expertise the sponsorship produced. Several policy measures could be investigated to meet the needs of both parties. First, the Air Force can adjust the length of the required active duty service commitment to guarantee recoupment of investment. The Air Force could conduct a study to determine the optimal length of commitment that balances the investment with officer's desire to transition to civilian employment. Too long of a commitment might reduce the number of rated officers willing to accept sponsorship. Too short of a commitment would not justify the expense of the sponsorship. Second, the Air Force might consider a hybrid commitment structure to entice more rated officers motivated by outside employment to earn doctorates. These officers might be more willing to accept sponsorship if their commitment was wholly or partially to the Air National Guard or Air Force Reserve. This arrangement could be mutually beneficial because the officers could seek the civilian employment they desire while the Air Force retains them in the total force structure. The Air Force could utilize their expertise in as part-time Guardsmen or Reservists. Because this commitment would be on a part-time basis, the Air Force may actually be able to demand longer commitments resulting in longer access to the talent pool it invested to create. The Air Force should investigate the

policy changes concerning both the length of active duty service commitments it expects for doctoral sponsorship and the structure of those commitments.

Collaborating with civilian employers or other government agencies may also provide an avenue for the Air Force to build a larger pool of rated officers with doctorates at lesser cost. The participants who were motivated to pursue their doctoral degree by potential jobs after the Air Force identified academia and policy think tanks as potential employers. The Air Force could investigate cost-sharing arrangements with these follow-on employers.

Sponsorships could be structured to provide an officer with a guaranteed transition to their preferred employer after a specified active duty service commitment. The Air Force and the follow-on employer would both benefit by reducing their investment costs. The officer would benefit through both the education they receive and the assurance that they will be able to transition to their desired employment after completing their commitment to the Air Force.

The “job after the Air Force” motivation initially appears opposed to the goal of developing a pool of rated officers with doctorates. However, through creatively structured sponsorships and collaborating with follow-on employers, the Air Force may be able to build at least a transitory pool of such officers.

Implications of “Intellectual Curiosity” Motivation and Policy Recommendations

Intellectual curiosity was identified as a motivational factor for rated officers in this. Participants discussed their intellectual curiosity in two different ways. Some described an event that awakened their intellectual curiosity while others felt they were just naturally curious. Each description provides the Air Force opportunities to develop more rated officers with doctorates. The existence of the “intellectual curiosity” motivation implies that some

rated officers will seek opportunities to satisfy that curiosity through doctoral education. The Air Force can position itself to take advantage of this motivation through policy changes.

Several participants described a long-term desire to understand how things around them operate. Terms like “since I was a kid” and “I’ve always” were repeatedly used when participants discussed their intellectual curiosity. For rated officers who enter the Air Force with a pre-existing intellectual curiosity, the institution simply needs to provide avenues for them to pursue doctoral degrees and encourage them to do so. This is essentially the status quo wherein these officers self-identify and seek out opportunities to earn their degrees on their own.

Other participants described events that awakened their intellectual curiosity as adults. In each case, this awakening occurred in a challenging academic setting. Participants discussed particular respected instructors or classes that motivated them to pursue a doctorate. Professors at the Air Force Academy or SAASS encouraged these participants to consider doctoral studies once they recognized their academic potential and intellectual curiosity. The same participants were quick to opine that the traditional PME schools were not intellectually challenging and were not exclusively staffed by high quality professors. The Air Force could inspire more rated officers to pursue doctorates by creating academic circumstances that incubate intellectual desire. Investing in the PME system to create environments that encourage continued academic pursuit may encourage additional rated officers to earn doctoral degrees.

Implications of “Self-Improvement” Motivation and Policy Recommendations

The fourth motivational factor uncovered by was a desire for self-improvement. Participants viewed the pursuit of a doctorate as a method to improve their ability to address

issues around them. The Air Force benefits when officers improve themselves before they enter the echelons of senior leadership. Senior military leaders face problems without clear solutions. Their actions directly influence national objectives. The lives of both military personnel and civilians depend on the quality of their decisions. The Air Force and the officers concerned mutually benefit if the officer has invested time and effort into self-improvement before they are placed in critical leadership positions. Much like the intellectual curiosity motivation discussed above, the participants conveyed that the desire for self-improvement is an internal motivation. This motivation is internally congruent since both the individuals and the institution benefit when a desire for self-improvement motivates officers to pursue a doctoral degree. The implication is that the Air Force should continue to espouse the value of self-improvement and reward those who undertake such efforts.

Continuous improvement is already embedded in Air Force culture. Rated officers operate in a professional system of progressive qualifications from the time they enter the service. New rated officers work to advance from basic qualifications to instructor or evaluator status from the time they enter their squadrons until they leave the service. Each career field has career pyramids (see example in Chapter II) describing improvement milestones throughout a career. The Air Force does not need policy changes to encourage self-improvement. However, few rated officers currently view pursuit of a doctoral degree as a valued self-improvement effort. Those officers might be influenced to pursue doctoral degrees if their mentors advised them to do so. This organizational culture phenomenon and potential remedies will be discussed in the following sections about obstacles.

Implications of Family Considerations and Policy Recommendations

The collective case analysis in Chapter V revealed family support was a consideration for participants as they weighed their decision to pursue a doctorate. None of the participants went so far as to state family support was the primary factor in their decision but seven participants mentioned family support as a factor in their decision. The implication of over half of the participants discussing family considerations as a factor in their decision is that the Air Force should consider policies that support this motivation if it desires more rated officers with doctoral degrees.

Two veins of discussion arose for participants who mentioned family support. The first concerned the general support of and importance placed on higher education during their upbringing. The second concerned stability for their immediate family at the time they made their decision. Both veins potentially have implications for the Air Force.

The Air Force might consider recruiting rated officers whose family background supports higher education. Current Air Force recruiting efforts do not mention the possibility of sponsored doctorates. Advertising the possibility may attract a few candidates who eventually become rated officers and earn doctorates. Air Force recruiting efforts are largely successful and do not need to be overhauled but advertising the potential to earn a doctoral degree later in one's career may attract candidates interested in that career path. Recruiting efforts should remain focused on the immediate needs of the service but recruiters and commissioning program officials could be instructed to look for recruits who meet those needs and have a family background of support for higher education.

The participants' desire for family stability also presents the Air Force with an opportunity to entice more rated officers to pursue doctorates. Participants discussed the

stability associated with a longer assignment while earning their doctorate as beneficial to their families. They also considered a break from deployments while earning their doctorates as a chance to spend quality time with their families. The Air Force can use this knowledge to structure doctoral sponsorships that are attractive to families. The Air Force could sponsor doctorates at universities located near bases where rated officers are assigned. This could prevent additional moves and provide continuity for spousal employment and children's schools. Doctoral studies might be more attractive to rated officers if they result in four to five years of stability for their families. Participants in this study did not identify family stability as a motivational factor but the Air Force may be able to structure sponsorships in a manner that makes family stability a motivation rather than a consideration.

Implications of “Potential for Negative Career Impacts” Obstacle and Policy Recommendations

Collective case analysis revealed the potential for negative career impacts was an obstacle for the majority of participants when they considered pursuing a doctorate. This obstacle has implications for Air Force policy and culture. The major implication is that rated officers currently receive mixed messages with respect to how the Air Force values higher education. Though the participants overcame this obstacle, other rated officers who consider doctoral studies may arrive at a different decision and never pursue a doctorate. The perceived potential for negative career impacts potentially reduces the number of rated officers with doctorates.

Participants felt the Air Force says it values higher education to include doctorates but its actions often do not match those values. Schein's model of culture as introduced in Chapter II holds culture is comprised of three levels. As depicted in Figure 6, these levels are artifacts and behaviors, espoused values, and assumptions. Rated officers assert there is a rift

between the top two levels of Air Force culture. They do not feel Air Force behaviors and artifacts are congruent with the Air Force's espoused values. These officers cite lack of operational command opportunities and the recent absence of rated officers with doctorates being selected for promotion to General as evidence the Air Force does not actually value their efforts. They further cited the precautionary advice they received from their mentors while considering doctoral pursuits as evidence of this rift. Even while encouraging them to pursue doctorates, their mentors cautioned that they were doing so at the risk of their careers. The organization's espoused values and behavior are not currently congruent.

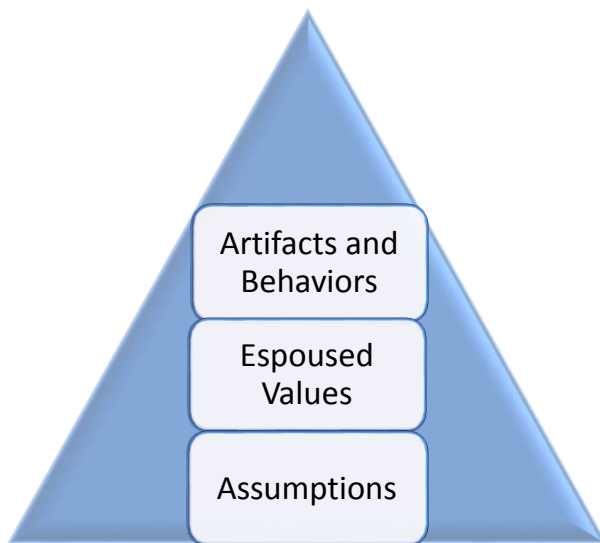


Figure 6 - Schein's Levels of Culture

There are numerous means available to address this perceived obstacle. Foremost, any cultural change requires buy in from leadership. Air Force leaders must create a sense of urgency and build a coalition to initiate cultural change (Kotter, 2008). High potential officers are currently not encouraged to pursue doctoral degrees. Cultural change to address this issue must include mentors advising their mentees that the Air Force values rated officers with doctoral degrees. As described in Chapter II, messaging from senior Air Force leaders has been mixed over the past 15 years. It is not surprising that rated officers perceive

potential career risks based on the shifting emphasis on higher education demonstrated by senior leaders. Cultural change is not easy and does not happen quickly. In addition to providing a clear, consistent message, senior Air Force leaders could enact policy changes to alleviate some of the perceived potential negative career impacts discussed by participants.

Participants expressed that distance from their mentors contributed to missed career opportunities while they pursued doctorates. They felt that being out of sight resulted in being out of mind when leadership considered candidates for career enhancing assignments and command opportunities. Assigning dedicated mentors to rated officers who pursue doctorates could alleviate this concern. A mandated connection between officers who are engaged in academic pursuits and operational leaders could be mutually beneficial. The officers' endeavors would not go unnoticed by senior leaders who might value the experience the officer would bring back to the operational Air Force. Where appropriate, mentors could provide research problems important to the Air Force as subject matter for doctoral research. Regular contact with senior leaders would also keep officers pursuing doctorates up-to-date on changes in the Air Force while they earn their degrees. A formalized mentorship program for rated officers pursuing doctorates could reduce the sense of isolation participants described and keep them competitive for career enhancing opportunities.

Study participants felt disadvantaged because they left flying positions for extended periods to earn their degrees. Many were advised, or surmised on their own, that they lost credibility within their flying communities during their extended absence. Price said one of the toughest parts of deciding to pursue a doctorate was the realization that his chances of flying again were reduced and he would lose credibility in his flying community because he

would be gone for so long. He believes this does not have to be the case and proposed the Air Force could find ways to keep rated officers qualified in their airframes while they earn their degrees. He sees the advantage of this as allowing them to maintain credibility in their flying communities while simultaneously preparing themselves for leadership at higher levels through doctoral studies. Allowing doctoral students to continue flying would also keep them in contact with their mentors and commanders in the community. Even a greatly reduced flying rate could prevent rated doctoral students from falling victim to the “out of sight, out of mind” phenomenon when leadership positions are being filled.

Some officers serving on staffs currently fly on a part-time basis when their staff duties warrant staying up-to-date on changes in their flying community or when squadrons need their expertise. These staff officers are called “attached” flyers. Attaching rated officers who are pursuing doctorates to flying squadrons on a part-time basis is an available method for them to maintain flying credibility while they earn their degrees. The Air Force should analyze the costs involved in attaching at least some rated doctoral candidates to flying squadrons.

A third policy option available to reduce the deterrent effect of negative career impacts is to provide specific guidance to promotion boards and developmental teams. Boards currently receive instructions covering a wide variety of topics before they select personnel for promotion or assignments. Instructions to these bodies could highlight the need to develop a pool of rated officers with doctorates. As mentioned earlier, federal law already provides some guidance with respect to joint officers. Air Force leadership could quickly reduce the deterrent effect of negative career impacts by ordering the boards responsible for those effects to value rated officers with doctorates. A similar effect can be achieved by

ordering boards to consider a doctorate as equivalent to other career milestones the boards currently value. Perceived and actual negative career impacts currently serve as an obstacle when rated officers consider pursuing a doctoral degree. A cultural change effort championed by senior Air Force leaders coupled with a few policy changes could potentially reduce the impacts of this obstacle.

Implications of “Inflexible Career Tracks” Obstacle and Policy Recommendations

Rated officers in this study referenced inflexible career tracks as an obstacle in their decision to pursue a doctorate. This obstacle deters some rated officers who consider doctoral degrees from pursuing them. The Air Force should consider methods to reduce or eliminate this obstacle.

Air Force Instruction 36-2640, *Executing Total Force Development* describes career paths and milestones for officers. Figure 2 in Chapter III presents an officer career path guide from this Air Force Instruction. Rated officers understand they must achieve certain milestones on time to remain competitive for promotion to the next rank. Participants felt there is simply not enough time in a career to achieve all of the suggested milestones and earn a doctorate. Some went so far as to say that pursuing a doctorate is “countercultural” because it is not a part of a standard career path. At least three methods can be used to reduce the impact of this obstacle.

First, the Air Force could offer more flexible equivalency credit for earning a doctorate. The Air Force already has a process whereby some officers receive credit for PME when they earn either a graduate degree or a doctorate. PME schools are one-year long while earning a doctorate generally takes several years. Thus, an officer effectively loses time relative to his or her peers when they receive equivalency credit for a shorter duration event.

Staff tours are normally between two and three years long. Staff tours at major command headquarters or the Pentagon are milestones officers are expected to complete in their career. During a three-year period an officer can complete PME and serve two years of a staff tour. An officer who completes a doctorate in three years currently receives equivalency credit only for PME. Thus, the other officer's resume shows more career milestones achieved in the same period. Equivalency credit for doctorates could be redefined to equate to events of similar length. If the Air Force directed selection boards to consider these doctorates and staff tours as equal alternatives, officers might view a doctorate as an acceptable route rather than a countercultural option.

Second, the Air Force could develop hybrid staff tours in cooperation with academic institutions. Foster, Brown and Price all discussed hybrid staff tours as a method to combat the inflexible career path obstacle. Foster proposed hybrid staff tours where "you work on your classwork and staff work for two years. Then we give you a year to do your dissertation addressing a problem you've been dealing with in your staff work." If the Air Force considers this option, it should carefully study the potential conflict of interest when a sponsoring institution is involved in the dissertation process.

Officers could be assigned to part-time staff duty while earning on their doctorates. Hybrid staff tours could serve to keep officers apprised of changes in the Air Force. Part-time presence at the staff could reduce separation between these officers and their mentors described in a previous section. Interweaving a staff tour with academic pursuits could reduce the time officers spend away from their flying communities. As with the equivalency discussion above, selection boards would need to be instructed to consider hybrid staff tours as equal to standard staff tours.

Third, the Air Force could modify the existing Career Intermission Pilot Program to accommodate sponsored doctorates. This program was originally intended to allow female Airmen to put their careers on hold while starting a family. (Losey, 2014) The program was later extended to allow high potential Airmen “to meet personal and professional needs outside the service while providing a mechanism for seamless return to active duty” (Losey, 2014, p. 1). Participants in this program essentially place their careers on hold and reenter the Air Force in a later peer year group. Allowing rated officers pursuing doctorates to place their careers on hold would allow them to complete their doctorates and still complete other expected milestones before they meet promotion boards or developmental team panels.

Current participants in this program receive minimal stipends while their careers are on hold for personal reasons. A modified program would be much more attractive if officers retained their pay and benefits in addition to doctoral sponsorship while their careers were placed on hold. Inflexible career tracks currently serve as an obstacle when rated officers consider pursuing doctorates. Targeted personnel and promotion policy changes could reduce the effects of this obstacle at relatively low cost to the Air Force.

Summary

This investigation sought to determine the factors that influence rated officers’ decisions to pursue doctoral degrees. The Air Force currently lacks a deep pool of rated officers with this qualification and efforts in place to sponsor rated officer pursuit of doctoral degrees would suggest that these degrees are valued. The research was conducted as a collective case study. Transcripts from 13 participant interviews along with relevant documents and archival data were analyzed. The collective case analysis revealed five motivational factors and two obstacles that are factors in rated officers’ decisions to pursue

doctoral degrees. The five motivational factors identified closely resemble factors identified in studies of civilian populations. However, the discovered obstacles have not been discussed in the literature concerning civilian populations. Further investigation of these obstacles and related phenomenon with these populations is suggested. The five motivational factors influencing rated officers' decisions to pursue doctoral degrees are jobs in the Air Force, jobs after the Air Force, intellectual curiosity, a desire for self-improvement, and family considerations. Each of these motivational factors presents the Air Force with opportunities to potentially entice more rated officers to pursue doctoral degrees.

The potential for negative career impacts and inflexible career tracks were identified as obstacles that factor into rated officers' decisions to pursue doctoral degrees. The presence of these obstacles indicates ambivalence in the Air Force with respect to how the institution values higher education and doctorates. Despite the existence of three programs to sponsor officers to pursue doctoral degrees, officers in the field receive mixed messages that create obstacles they must decide to overcome if they pursue doctoral degrees. A week prior to the defense of this dissertation Secretary of Defense Ashton Carter announced he is considering changes to the military personnel system that may remove some of the obstacles participants reported (Tilghman, 2015). The changes considered include increase civilian graduate education, sabbatical leaves to pursue education, and changing the promotion system to allow officers more time to accomplish career milestones. Removing these obstacles could increase the pool of rated officers with doctoral degrees giving the Air Force a diverse pool of expertise to draw upon in times of crisis as General Petraeus did in Iraq.

The author recommends several policy changes that could potentially increase the number of rated officers with doctoral degrees. Future research is warranted to explore cultural issues that give rise to the obstacles described by the participants.

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Appendix A – Interview Guide

Name

Rank

Age

Education

Questions

Please tell me about yourself.

Why did you pursue a doctoral degree?

Follow up Questions:

If family or personal reasons were a factor, please tell me about those.

If personal or career interests were a factor, please tell me about those.

If organizational culture was a factor, please tell me about it.

Is there anything I've missed asking you about that influenced your decision to pursue a doctorate?

Appendix B – Informed Consent Form

Dear Study Participant,

The purpose of this investigation is to determine the factors involved in why Air Force rated officers pursue doctoral degrees. Participants in this study will be asked to participate in a semi-structured interview containing questions about higher education in the Air Force which will last about one hour. There are no foreseeable discomforts or risks associated with participation. Participants may chose not to answer any question. The University of Idaho Institutional Review Board has certified this project as exempt.

Possible benefits from this study are improved Air Force policy related to higher education. All data obtained from interviews will be kept confidential. All efforts will be made to protect your information and maintain confidentiality to the extent allowed by law. Only the researcher will know who provided which responses. The HHS protection of human subjects regulations require institutions to retain records of IRB activities and certain other records frequently held by investigators for at least three years after completion of the research (45 CFR 46.115(b)). Questions or concerns about the study can be directed to the researcher at any time.

Any participant who desires a copy of the final study results will be provided one at no cost. Participation is voluntary and participants may withdraw at any time by verbally notifying the researcher of their intent to do so with no penalty.

Thank you for agreeing to take part in this valuable study.

Sincerely,

John Schaefer
Ph (208) 590-3229