



An investigation of learning strategies utilized by Air Force officers
by Daryl Lee Korinek

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University

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Abstract:

Air Force officers spend a considerable amount of time in the classroom environment. In an era of declining defense spending, every officer must have the skills necessary to learn as much as possible in the least amount of time. However, the use of learning strategies has never been identified as an educational issue with the Air Force. The purpose of this study was (a) to identify the learning strategies of United States Air Force adult learners in officer (leadership) positions; (b) to investigate the relationship of these learning strategies to career advancement, gender, age, education, and experience; and (c) to explore patterns of learning of distinctive groups of learners that may exist. The data were collected from the Self-Knowledge Inventory of Lifelong Learning Strategies (SKILLS), a demographic survey, and a follow-up qualitative questionnaire.

Discriminant analysis was used to deductively impose sense on the data to determine if different groupings made a difference in learning strategies used by Air Force officers. Variables such as age, gender, time in service, military rank, and attendance/performance at professional military education were originally thought to be worth examining. However, none of the demographic variables could discriminate one group of officers from another in this study.

Cluster analysis and one-way analysis of variance (ANOVA) were also used in this study to inductively determine if groups of learners could be identified based on SKILLS learning strategies. This process identified four distinct groups of learners. These groups were named Problem Solvers, Counselors, Teachers, and Executives. Problem Solvers tend to look for ways to improve their learning skills; Counselors rely on learning dynamics to advise and guide others; Teachers use learning preferences to train other officers; and Executives are officers who make decisions based on previously internalized data.

Two conclusions were made from this study. Four distinct groups of Air Force officer learners exist, and learning strategies are not a useful tool for discriminating among various demographic officer variables. Recommendations included learning strategy training during initial commissioning training, instructor training in learning strategies and preferences, and update regulations to reflect progressive learning strategy training.

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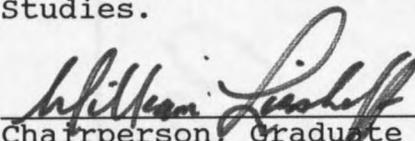
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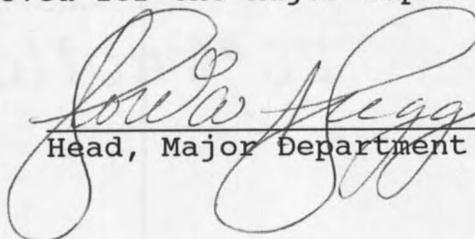
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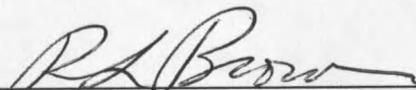
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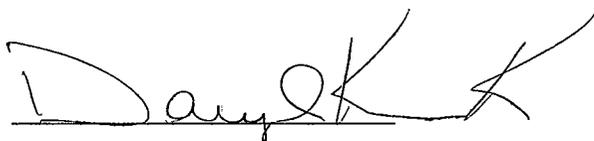
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ABSTRACT

Air Force officers spend a considerable amount of time in the classroom environment. In an era of declining defense spending, every officer must have the skills necessary to learn as much as possible in the least amount of time. However, the use of learning strategies has never been identified as an educational issue with the Air Force. The purpose of this study was (a) to identify the learning strategies of United States Air Force adult learners in officer (leadership) positions; (b) to investigate the relationship of these learning strategies to career advancement, gender, age, education, and experience; and (c) to explore patterns of learning of distinctive groups of learners that may exist. The data were collected from the Self-Knowledge Inventory of Lifelong Learning Strategies (SKILLS), a demographic survey, and a follow-up qualitative questionnaire.

Discriminant analysis was used to deductively impose sense on the data to determine if different groupings made a difference in learning strategies used by Air Force officers. Variables such as age, gender, time in service, military rank, and attendance/performance at professional military education were originally thought to be worth examining. However, none of the demographic variables could discriminate one group of officers from another in this study.

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Two conclusions were made from this study. Four distinct groups of Air Force officer learners exist, and learning strategies are not a useful tool for discriminating among various demographic officer variables. Recommendations included learning strategy training during initial commissioning training, instructor training in learning strategies and preferences, and update regulations to reflect progressive learning strategy training.

CHAPTER 1

INTRODUCTION

Background

Adult learning encompasses a great number of programs and an ever increasing interest from the education community. Demographically, the population of the United States is becoming older and older with a continued increase of adults in educational situations. Learning in adulthood should be considered a personal activity that may involve a great deal of time and money.

Yet at the same time, a multibillion-dollar enterprise has arisen in response to adult learning interests--an enterprise that spends more dollars than elementary schools, high schools, and post-secondary schools combined (Merriam & Caffarella, 1991, p. xi).

With all of this interest being focused on the adult learner, it is important to address how to best facilitate the process of learning.

Self-directed adult learning is an issue at the focal point of education. "Self-directed learning from this perspective is a form of study in which learners have the primary responsibility for planning, carrying out, and evaluating their own learning experiences" (p. 41). This concept can and should be taken several steps further.

As a field of practice, the emphasis in research and conceptual development had been on providing services, with learning viewed simply as one component of educational programs. But a shift to a field of study with the individual learner as the central concern opened whole new realms, such as self-directedness and individual development, to the field (Fellenz & Conti, 1989, p. 1).

A shift to the focus on the learner in education is becoming more prevalent in today's society. This shift to the learner is an important issue for adult education because adults can have the greatest impact on the direction their education takes. Learning strategies that adults use to determine what and how they will learn is the next logical step upon which adult educators need to focus.

Learning Strategies

Regardless of the type of setting, learners use various strategies to accomplish their learning needs. Learning strategies are those techniques or specialized skills that the learner has developed to use in both formal and informal learning situations (McKeachie, 1980). There is a subtle difference between learning styles and learning strategies. While learning styles refer to the inherent ways that people process information, learning strategies deal with the way people approach specific learning situations (Conti & Kolody, 1995). Not all learning strategies are available or at the disposal for every learner.

It is important to be able to distinguish between different learning strategies and to quickly recognize what

strategy the learner is using. This will help the adult educator facilitate the learning process and guide the adult learner in their desired direction. Research in the area of learning strategies in adult education has centered on five areas (Conti & Fellenz, 1991; Fellenz & Conti, 1989). These are metacognition, metamotivation, memory, critical thinking, and management of resources. Metacognition can be thought of as the executive control of learning. It is composed of planning how to go about learning, monitoring how well the learning plan is being carried out, and adjusting the plan depending on progress toward the learning goal. Metamotivation deals with how individuals build and maintain internal motivation to complete learning tasks. Memory as it relates to learning strategies involves (a) how a learner organizes new information into knowledge already known, (b) the use of external memory aids such as item lists, and (c) self-knowledge about personal memory and knowledge of strategies that are useful in remembering (Fellenz & Conti, 1993, pp. 5-8). Critical thinking involves how one discriminates and reflects upon learning material. Management of learning resources relates to how learners identify and critically use appropriate sources of information. All of these aspects of learning strategies are thought to play an internal part in how much and how well students achieve in learning situations (McKeachie, 1980).

Since the recent development of the Self-Knowledge Inventory of Lifelong Learning Strategies (SKILLS), researchers such as McKenna (1991), Hill (1991), Yabui (1993), Hays (1995), Moretti (1995), Conti and Kolody (1995), and Kolody and Conti (1996) have found that various groups of learners can be distinguished by the learning strategies which they use. This dramatic breakthrough for adult education now empowers not only the adult learner but the adult educator to more effectively interact in the learning environment. Many adult educators feel that the military education system has been making great strides in following the current trends in education. The learning strategies that military officers use should be the next trend in education in which military education experts participate.

Military Leadership Training

Officers in the Air Force attend numerous educational classes that must be successfully completed in order to be promoted or to function in their work environment. Due to the high cost of education, most learning situations are fast paced and encompass a wide range of topics. These topics include leadership, technical training, team building and cooperative learning. "Performance is the ingredient that will get you promoted. Performance is the ingredient that will get you that next job" (Head Quarters Air Force

Space Command [HQ AFSPC], 1995, p. 7). Competition and performance are the key to the Air Force educational system. Because of the high cost of education and the time spent away from the workcenter, not everyone will participate in advanced or intermediate training. Therefore, competition is a constant variable in the military educational system. The better the officer does in the learning environment determines how likely that officer will be promoted or be able to attend any further training. With increased training received by an officer, the more of a chance that officer has to attain increased leadership positions and promotion.

There are basically two types of training or educational opportunities in the Air Force for an officer. The most prevalent type is job training and is required for every new officer. Job training is used to teach officers what they need to know in order to perform their particular entry level job. This training could take place in the normal classroom environment with part or all of the training in the work environment. Each position to which an officer is assigned after this initial training could and oftentimes requires additional training or education. "Preparation for work with adult learners ranges from on-the-job training to formal graduate course work, but a key component of all the different modes of preparation is

understanding adult learners and how they learn best"

(Merriam & Caffarella, 1991, p. xi).

In the past, the Air Force has tended to neglect the role the adult learner plays in one's own education and how that individual learns best. The Air Force apparently does this in an effort to present a standardized educational format that everyone will have an equal opportunity to achieve and compete for promotion.

Finally, the traditional lecture method is ill-suited for meeting many of today's broader educational objectives. In an age where greater emphasis is placed on teaching students how to learn, using critical and creative thinking skills, stimulating writing across the curriculum, and cultivating independent, yet cooperative, learners, it is questionable whether the use of the traditional lecture method can accomplish any of these goals. (Shakarian, 1995, p. 22)

Yet, the traditional lecture method is widely used in the Air Force educational system with little apparent regard for the learner.

The second type of education or formal adult learning activity that an Air Force officer can participate in is professional military education (PME). "PME builds a solid foundation of officership and it is crucial to recognize its importance" (HQ AFSPC, 1995, p. 8). Therefore, professional military education is a natural place to start applying the principles related to learning strategies. However, to date, research using tools such as SKILLS that measure an officer's learning strategies has not been conducted.

Factors such as cost and lack of need for every officer to have the advanced training contribute to the lack of data on learner strategies.

Professional military education is broken down into three different time periods or stages. They are Squadron Officer School (SOS), Air Command and Staff College (ACSC), and Air War College (AWC). These schools are offered to officers depending upon their rank and overall competitiveness throughout their career.

Squadron Officer School is the first professional military educational opportunity for the officer and is accomplished at the 4-7 year point on active duty. Approximately 95% of active duty officers attend SOS. The intent of this 7-week course is to familiarize the officer with the many different aspects of military leadership and how this leadership relates to the work environment. Academic testing is a significant factor for the SOS student along with stressful physical challenges that task the officer's ability to learn quickly. SOS is competitive in nature with the top 10% receiving "Distinguished Graduate" recognition. A distinguished graduate from SOS is much more likely to attend the next type of PME.

Air Command and Staff College or Intermediate Service School (ISS) is the next step or type of professional military education for the advancing officer. "Once selected as a major, an officer is eligible to start ACSC by

either correspondence or seminar. Selection for ISS in residence is extremely competitive" (HQ AFSPC, 1995, p. 11). Approximately 20% of the active-duty officer force attends this school in residency. Selection to attend ACSC and the curriculum are both very competitive with past performance in PME being used as a selection criteria. An officer with 9-13 years of experience has the opportunity to compete for an ACSC slot. Those who are not chosen for school before their 13 year point are not eligible to attend that particular school.

Air War College or Senior Service School (SSS) is the third and final step in an officer's professional military education. "Senior Service School should be completed by correspondence or seminar at the earliest opportunity to remain competitive with your contemporaries. The goal is to be selected for SSS in residence" (HQ AFSPC, 1995, p. 12). If the officer did not attend Air Command and Staff College, then that officer has a substantially lower chance of attending AWC. Selection for Air War College is even more competitive than SOS or ACSC. An officer who is not promoted to the next rank will also be ineligible for Air War College. Officers who attend AWC do so at their 15-23 year point on active duty. Approximately 12% of the officers in the Air Force attend Air War College, and this is used as an indicator for future promotion. Officers

attending Air War College are either at the colonel or lieutenant colonel rank.

Officers can also participate in distance learning by accomplishing their professional military education through correspondence. Squadron Officer School is a 3 to 12-month course depending upon the speed at which the officer can learn the material. Speed at which an officer learns is a relevant issue because completion of SOS by correspondence will make the officer more competitive for the residency program. Air Command and Staff College is designed to be accomplished in 12 months with regular meetings with other students in the course. Air War College is a 24-month course that includes lectures and strategy development in a classroom setting. This distance learning program contains some of the same information that is provided in the residency programs but is not considered as an equivalent to a residency program.

Problem Statement

Learners are empowered to take the knowledge of their learning and apply it to life-long learning experiences. This takes place when the instructor or facilitator can help the learner understand the learning process. The ability to recognize the learning strategy being used by an individual is critically important if the most productive learning is to take place. "An appreciation of one's learning style,

the development of strategies that promote learning, and an insight into metacognitive processes enable people to exert control over learning processes and outcomes" (Fellenz & Conti, 1989, p. 23). Yet, the use of learning strategies has never been identified as an educational issue with the military. Military education tends to be instructor or leader focused rather than learner focused. The military instructor oftentimes does not concentrate on learner modalities or strategies when preparing lesson plans or educational opportunities. These important areas of learning are excluded from the educational environment.

Military education is provided in several different forms ranging from self-directed distance learning to highly structured, formal learning environments. The time line for the self-directed distance learning can be anywhere between 9 weeks and 24 months with the formal classroom learning ranging between 7 weeks to 12 months. The issue that exacerbates the learning problem in the military is that education is oftentimes competitive with the results being used to predict and to promote the highest academic achievers. In this situation, learning strategies really become an important factor in the educational environment because the emphases should be on the learner and not the person providing the information. It is not good enough to learn what one needs to know, but the successful officer must learn more than others in the course. Their military

career is contingent upon learning the greatest amount of information in the least amount of time and then to be able to articulate that information in a standardized testing format.

Learning strategies are "the techniques and skills that an individual elects to use in order to accomplish a specific learning task....Such strategies vary by individual and by learning objective" (Fellenz & Conti, 1989, p. 7-8). Because of the content-centered structure of the Air Force educational system, it does not consider the techniques or skills that an individual uses and therefore only develops a certain type of officer. Those officers that fail to compete in this environment are oftentimes eliminated from the military, or they fail to be promoted to the next level of rank. The successful officer tends to learn fairly quickly in the classroom environment where the educator lectures to the learners. Air Force leadership tends to equate someone who learns the way they teach with the person who is the best leader in an operational environment.

Purpose of the Study

The purpose of this study was (a) to identify the learning strategies of United States Air Force adult learners in officer (leadership) positions; (b) to investigate the relationship of these learning strategies to career advancement, gender, age, education, and experience;

and (c) to explore patterns of learning of distinctive groups of learners that may exist. After the distinct groups of learners were identified, follow-up questioning was conducted to gather additional data to better describe the learning patterns of these groups.

Research Questions

This study investigated the learning strategies used in real-life learning situations by Air Force officers. The use of specific learning strategies was measured with SKILLS. The following research questions were addressed in this study.

1. What is the profile of learning strategies of Air Force Officers at the Pentagon.
2. Is it possible to use learning strategies scores as measured with SKILLS to discriminate between the most successful learners and least successful learners when measured by their ability to achieve higher rank and compete or receive professional military education?
3. Among Air Force officers, it is possible to use learning strategies scores as measured with SKILLS to discriminate between groups formulated by the following demographic variables of gender, age, and career advancement.
4. Is it possible to identify distinct clusters of learners in the US Air Force using SKILLS?

5. If distinct groups of learners exist, what differentiates one group from another?

Assumptions and Delimitations

It was assumed that the participants of this study answered the Self-Knowledge Inventory of Lifelong Learning Strategies and the demographic questionnaire honestly and accurately. For this study, SKILLS was administered over the electronic mail system at the Pentagon and sent to each participant at their work center. It was assumed that the participant's ability to interface with the electronic mail system did not have an affect on their responses to SKILLS or the demographic questionnaire. All participants in this study volunteered to respond, to complete the SKILLS instrument, and to participate in cluster group questionnaires.

The research was delimited to active duty Air Force officers who were working at the Pentagon in Washington D.C. This study was further delimited to officers currently holding the rank of major, lieutenant colonel, or colonel.

Definition of Terms

ACSC: An acronym for Air Command Staff College. Air Command and Staff College (ACSC), the Air Force's intermediate professional military education (PME) school, prepares field grade officers of all services (primarily majors and major selects) and US civilians to assume positions of higher responsibility within the military and other government arenas. (Air Command and

Staff College. On-line. Internet. Available from <http://www.au.af.mil/au/cat/acsc.htm>)

Adult: A person who has reached the maturity level where a personal assumption of responsibility for self and sometimes others takes place. (Hiemstra, On-line. Internet. Available from <http://www.distance.syr.edu/train1/htm>)

Adult Learner: Any adult who engages in some type of activity, formal or informal, for the acquisition of knowledge or skill, in an examination of personal attitudes, or in the mastery of behavior. (Hiemstra, On-line. Internet. Available from <http://www.distance.syr.edu/train1/htm>)

Adult Learning: The acquisition of knowledge, attitudes, and skills, often resulting in behavioral change of some sort in an adult. (Hiemstra, On-line. Internet. Available from <http://www.distance.syr.edu/train1/htm>)

Air University: The center for advanced education in the Air Force. It, provides this education through its professional and specialized education programs, research and doctrinal studies, and baccalaureate programs at civilian educational institutions. (Air University Commander's welcome. On-line. Internet. Available from [ht://www.au.af.mil/au/cat/intro.htm](http://www.au.af.mil/au/cat/intro.htm))

AWC: An acronym for Air War College. The War Department established the Air War College (AWC) in 1946 at Maxwell Field, Alabama, and the college has operated continuously since that time, except for a period of six months during the Korean conflict. The student body consists of a select group of senior military officers and civilians with diverse backgrounds who are brought together for 10 months of graduate-level study. (Air War College. On-line. Internet. Available from [ht://www.au.af.mil/au/cat/awc.htm](http://www.au.af.mil/au/cat/awc.htm))

Critical Thinking: A reasonable, reflective thinking that is focused on deciding what to believe or do. It includes identifying and challenging assumptions, challenging the importance of context, imagining and exploring alternatives, and reflective skepticism. (Brookfield, 1987, p. 12)

Electronic Mail: E-mail is used to communicate between any two people on the Internet. It differs from ordinary mail in that it is virtually instantaneous and very

inexpensive. (On-line. Internet. Available from [ht.//www.uwannawhat.com/ernet/EMailOverview.html](http://www.uwannawhat.com/ernet/EMailOverview.html))

Learning Strategies: the techniques and skills that an individual elects to use in order to accomplish a specific learning task. Such strategies vary by individual and by learning objective. Often, they are so customary to learners that they are given little thought; at other times much deliberation occurs before a learning strategy is selected for a specific learning task. (Fellenz & Conti, 1989, p. 1)

Memory: Learning strategies which help adults in learning situations. These include rehearsal of information, organization and elaboration of information, use of external aids, and the application of self-knowledge about memory and use of mnemonic techniques. (Fellenz, & Conti, 1993, p. 5)

Metacognition: Thinking about the process of learning and emphasizing self-regulatory tactics to insure success in the learning endeavor (Fellenz & Conti, 1989, p. 2).

Metamotivation: Tactics and techniques used by the learner to provide internal impetus in accomplishing learning tasks. These are based on a model developed by Keller (1987) which emphasizes focusing attention, fostering confidence, anticipating reward, and enjoying learning activities. (Fellenz & Conti, 1989, p. 8)

Professional Military Education (PME): The portion of military education that: (1) Provides the Nation with military personnel skilled in the employment of air and space power in the conduct of war and in missions short of war (e.g. peacekeeping, humanitarian assistance); (2) Provides officers and enlisted personnel with the skills and knowledge to make sound decisions in progressively more demanding leadership positions within the national security environment; (3) Develops strategic thinkers and war fighters. (Air Force Instruction 36-2301. On-line. Internet. Available from [ht.//.afpubs.hq.af.mil/elec-products/pubs-pages/36-pubs.html](http://.afpubs.hq.af.mil/elec-products/pubs-pages/36-pubs.html) July 1994, p. 1)

Resource Management: The identification of appropriate resources, critical use of such sources, and the use of human resources in learning. (Fellenz & Conti, 1989, p. 3)

Self-Directed Learning: A learning activity that is self-planned, self-initiated, and frequently carried out

alone. (Hiemstra, On-line. Internet. Available from <http://www.distance.syr.edu/train1/html.>)

SKILLS: An acronym for the Self-Knowledge Inventory of Lifelong Learning Strategies. This is a learning strategies inventory with established validity and reliability which asks respondents to rate 15 learning strategies in 4 of 6 scenarios commonly found in everyday life and which call for a learning effort on the part of the respondent. (Fellenz & Conti, 1989, p. 2)

SOS: An acronym for Squadron Officer School. The initial course in the Air Force officer professional military education (PME) System. SOS's goal is to help officers grow professionally. Officers step out of their specialties and broaden their focus on officership, the Air Focus core values, and on the Air Force as an institution in the profession of arms. (Squadron Officers School. On-line. Internet. Available from <http://www.au.af.mil/au/cat/sos.htm>)

CHAPTER 2

LITERATURE REVIEW

Educating military officers is becoming more and more important as our national security policy necessitates the use of military force in humanitarian and peace keeping efforts. Military force is also being used to support and defend our nation's foreign policy. Senior Air Force officers are faced with an ever increasing need to be able to assimilate information quickly and be able to make important decisions concerning that information.

It is quite clear that our national security becomes ever more dependent on the minds of men rather than their brute strength. Particularly is this evident in the United States Air Force which is faced with periodic crises and realignments of power politics as well as tremendous technological advances that constantly modify its mission, its capabilities, and its operations. (Davis, 1989, p. 35)

The power and complexity of the information age has brought with it many challenges for the Air Force officer. With so much information available and with every decision the senior officer makes being critical, learning has become an ever increasingly important task.

With the great deal of information that must be understood, more emphasis needs to be placed on the learner in the military educational system. Change is taking place

so quickly that learning efficiently has become a necessity. Such acceleration of change necessitates flexibility, the ability to learn and unlearn and relearn, and a willingness to experiment and take risks. Several of the increasingly complex problems and issues of today's world have no clear cut solutions in textbooks, databases, or authority figures (Dickinson, 1996, p. 1). Any learning strategy that the officer uses to understand information should be examined and if possible improved upon. However, little if any research has been done on the learning strategies of officers or how to improve those strategies.

Recent literature concerning military education focuses on the actual need for education and not on how to best facilitate that education. Many officers tend to devalue their professional military education (PME) and to view it as another hurdle to pass in order to be promoted. Many times there is a surge of course completions prior to promotion boards. This indicates that these officers considered PME important for advancement but not particularly relevant to function or even compete in their jobs (Davis, 1989, p. 35). This counterproductive attitude towards PME adds little value to the officer's competency. Adults learn by constructing meaning from their experiences, and situations which are not viewed as meaningful are typically rejected as a source of learning (Hermanson, 1996).

Officers are commissioned after completing a minimum of a bachelor degree and Air Force training. The Air Force training consists of leadership, military situational awareness, history, and force projection. Table 1 defines the current Air Force rank structure and the number of personnel currently occupying each rank.

Table 1. Air Force Rank Structure

Rank Structure	Grade	Current Number
1. Second Lieutenant	O-1	7145
2. First Lieutenant	O-2	7321
3. Captain	O-3	30305
4. Major	O-4	15933
5. Lieutenant Colonel	O-5	10346
6. Colonel	O-6	3951

Source: (Air Force Magazine, 1997, p. 26).

Each year a promotion board is held for each rank and all of the eligible officers are evaluated against their peers for a set number of promotion slots. If an officer is selected for promotion, the officer could wait up to 18 months before actually receiving the promotion. This is due to the large number of officers promoted each year. In this case the officer is designated a "select" for promotion purposes. For example, a lieutenant colonel select is a major who has been selected for promotion but who has not received the promotion yet.

Military Leadership Training

Officer professional development (OPD) is an integral part of the officer's career. It must be successfully completed in order for the officer to be competitive for promotion or advancement. OPD is essential to support the Air Force mission.

Officers who are professionally prepared to assume responsibilities that go with each promotion and assignment will be more effective at carrying out this mission. (Air Force Instruction 36-2611, 1996, p. 14)

Thus, officer education is viewed by Air Force leadership as something that adds value to completing the military operational mission. This is appropriate because the actual mission comes first and foremost for each branch of the military. Officer education also improves upon the individual's ability to execute the mission in the most productive manner possible.

The Air Force provides education for its officers through a formal classroom environment at Air University. Air University's schools include the Air War College; the Air Command and Staff College; and Squadron Officer School (Introduction to Air University, 1996 p. 1) It is very clear that "service members must place the nation's defense above self and possess an in-depth knowledge of war and the military sciences" (Air University Commander's Welcome, 1996, p. 1). Air University is chartered to provide this education for the Air Force.

Formal professional military education at Air University occurs at three distinctly different times in an officers career. Squadron Officer School, Air Command and Staff College, and Air War College are completed by the officer at different points in his or her career. Most officers compete for the honor to attend each different school in residency and complete the correspondence program in preparation for the residence school.

Squadron Officer School

Squadron Officer School is the first opportunity Air Force officers have to attend or participate in a professional military education program. SOS is highly structured and is designed to provide junior officers with the skills they will need for future leadership challenges.

SOS also provides Air Force captains the leadership tools they need to build military teams and lays a foundation for critical thinking in air and space power through education on air power history and doctrine. (Air Force Instruction 36-2611, 1996, p. 5)

SOS in residency is conducted at Maxwell Air Force Base in Alabama with most officers traveling there in order to attend.

There are approximately 5 SOS classes each year with each class consisting of 700 or more students. SOS is the first opportunity that many officers have to compete with their peers outside the officer's particular career field. The competition is for athletic honors and overall ranking

in the SOS class. This opportunity to compete is considered very important and is usually taken seriously.

Most junior officers have a great deal of interest in the selection process for Squadron Officer School. In the Air Force, second lieutenants, first lieutenants, and captains are considered junior officers. Each unit is allocated a certain number of positions for every class. The squadron commander nominates a percentage of the company grade officers (junior officers) in the unit to compete at a local selection board. The individual selection boards consider many areas including demonstrated leadership, past performance, and future leadership potential of each officer under consideration. If selected, the chosen officer normally has about 8 weeks to prepare for school.

The interaction between the instructors and students at SOS is relatively high. SOS instructors are typically senior captains with 7 to 10 years of active duty service. Each instructor is required to provide feedback and evaluations on the students he or she instructs. The selection process to become an SOS instructor is quite competitive with those officers who did well at SOS being chosen to return.

The rules for conduct and engagement are spelled out in the introduction package every officer receives before arriving at Air University. This package describes the mission and objectives for each officer during SOS. "The

mission of SOS is to improve the professional competence of company grade officers and inspire their dedication to the profession of arms" (Squadron Officer School, 1996, p. 1). The objectives which each officer is required to complete in order to graduate are derived from the SOS mission. Another area that SOS participants must focus on is officership. The Air Force definition of officership is an area that concentrates on values essential to successful Air Force officers (Squadron Officer School, 1996, p. 2).

The course curriculum at SOS consists of five general areas of officership which include officership values, officership application, leadership tools, air and space power, and electives. The overall program involves 212 academic hours. Within each of the five broad categories are several specific components.

Area 1: Officership Values (42 academic hours)
Officership values consists of three phases: Principles of officership, values analysis, and values in action. Principles of officership examines the historical origins of officership and core values and their evolution through time. Values analysis looks at such current issues such as discrimination and ethics and how they affect Air Force officers. Values in action uses case studies and inspirational speakers to provide real-life examples of officership values.

Area 2: Officership Application (86 academic hours)
This area allows the students to draw their officership talents together by applying knowledge they have gained in leadership tools, air and space power, and officership values.

Area 3: Leadership Tools (56 academic hours)
Leadership tools has four phases: Supervisory tools, principles of leadership, team leadership,

and communication skills. Supervisory tools introduce students to counseling and feedback techniques, military justice, and officer professional development. Principles of leadership teaches individual leadership and group interaction skills that contribute to the development of successful teams. In the team leadership phase, students learn about and apply individual and group leadership principles, concepts, and techniques to build effective teams.

Area 4: Air and Space Power (18 academic hours)
Air and space power concentrates on introducing students to the employment of air and space power. This area starts with an understanding of basic air and space doctrine, its historical development, and the nature of modern warfare.

Area 5: Electives (10 academic hours)
SOS offers a limited number of electives which allow students to tailor their SOS experience to their individual professional needs. Electives are in such subjects as history of strategic thought, performance appraisal writing, total force, and joint operations.
(Squadron Officer School, 1996, p. 2)

The staff at SOS have instituted a distinguished graduate (DG) program at the school in order to recognize the top 10% of each graduating class. This honor sets the recipient apart from his or her peers and is used in determining future promotions and job selections. Competition is very high for the DG recognition and in many ways undermines the real focus of the school. Competition drives many officers to do things they wouldn't do in other circumstances. Many times, officers who know they are not going to win will do less than their very best. Air University as well as the Air Force should focus on the professional education and development of the experiences that the officers need to excel in the work environment.

Air Command and Staff
College (ACSC)

Majors who have competitive records and possess significant leadership potential are selected to attend Air Command and Staff College in residency. Approximately 20% of all eligible officers will attend ACSC in residency between their 11 and 14 active duty year point. The nonresident program provides the same in-depth education for those officers not selected or for whatever reason cannot attend.

Those officers who were promoted below the zone to major are automatically placed on the selection list. Captains are evaluated for early advancement (below the zone) 2 years before they are eligible to compete for promotion. This evaluation is also conducted 1 year before the officer is eligible to promote. Approximately 2% of officers are selected for early promotion to major each year.

The curriculum at ACSC is highly structured and is derived from the mission and objective statements of the school. "ACSC's mission is to educate midcareer officers to develop, advance, and apply air and space power" (Air Command and Staff College, 1996, p. 1). In this school, there is an obvious shift from the mission of SOS to "improve the professional competence of company grade officers" to the ability to project and manage military power (Squadron Officer School, 1996, p. 2).

The course work at ACSC is considered graduate level work with a comprehensive project required in partial fulfillment for graduation. Most if not all officers already have a masters degree before they start ACSC so they are well prepared to participate in this progressive, fast-paced environment.

Joint training for those officers with exceptional potential is conducted after the officer attends ACSC. Joint professional military educational takes officers from each branch of military service and provides an opportunity to learn joint service operations.

It is essential that our Joint Professional Military Education (JPME) programs provide our warfighters with an understanding of strategic concepts in the future environment where military force will be applied, as well as in-depth understanding of individual Service systems and how the integration of these systems enhance joint operations. (Vision for Professional Military Education, 1996, p. 1)

This is the first opportunity to attend joint professional military education for the officer and is considered by many to be invaluable.

The course curriculum at ACSC consists of nine general areas of leadership which include command and leadership, strategic structures, joint operations and comparing concepts, war, conflict, and military objectives, operational structures, campaign 2000+, war theory, theater air campaign studies, and war termination. This course has

594 content hours. Within each of the nine broad categories are several specific components.

Area 1: Command and Leadership (55 academic hours)

This course enhances student leadership skills in three areas. Phase one, management skills, is a review of Air Force quality issues, statistical process important concepts, leading-edge concepts regarding management of change, chaos theory, effective writing and briefing, and managing diversity. Phase two covers fundamentals and theories of leadership ethics and values. Phase three is a 14-part series studying critical aspects of commanding a squadron.

Area 2: Strategic Structures (87 academic hours)

This course teaches coalition theory and introduces power projection instruments. It examines the process of making security assessments and analyses of hostile and friendly centers of gravity as well as the role of intelligence in the national security process.

Area 3: Joint Operations and Campaign Concepts (67 academic hours)

This course involves an in-depth study of service joint doctrine. After studying joint deliberate and crisis action planning, students use this knowledge to construct a campaign plan.

Area 4: War, Conflict, and Military Objectives (20 academic hours)

This course sets the stage for the remainder of the curriculum by clarifying the distinction between war and conflict and by introducing and defining the concepts essential to the study of the geopolitics of violence.

Area 5: Operational Structures (100 academic hours)

This course focuses on an adversary's operational centers of gravity and the process of identifying and targeting them as part of a cohesive campaign plan.

Area 6: Campaign 2000+ (51 academic hours)

This course defines possible future force structures needed to meet an undefined and technologically accelerating future in the hope

that the US can control rather than react to change.

Area 7: War Theory (56 academic hours)
A cornerstone of the ACSC curriculum, this course systematically examines warfare. Modern warfare is as much an intellectual endeavor as a technological one, and military theorists have long attempted to impose order and rationality on what is essentially an irrational enterprise.

Area 8: Theater Air Campaign Studies (134 academic hours)
The goal of this course is to produce students who can plan and execute an air campaign. It addresses the changing nature of war and future technologies and their effects on warfare.

Area 9: War Termination (24 academic hours)
This course addresses one of the most important, yet least understood, areas of war * termination. From prehostilities to the end of fighting, war termination is a critical issue for campaign planners at the strategic and operational levels.
(Air Command and Staff College, 1996, p. 1)

Air War College

The Air Force provides professional military education for its senior officers through the Air War College (AWC).

As the senior Air Force professional school, the AWC annually educates 250 resident and 4,000 associate students from all US military services, federal agencies, and 40 other nations. (Air War College, 1996, p. 1)

The resident program is a fast-paced, graduate-level program that lasts approximately 10 months. Officers and their families are relocated to Maxwell Air Force Base in Alabama to attend school. The associate program is designed for those students who are unable to attend AWC in residency. Those motivated to compete and learn in a fast-paced environment should derive a professionally gratifying

experience from either of the associate programs provided by the AWC Directorate of Associate Programs (Air War College 1996, p. 7). Many officers complete the associate program before attending AWC in residency because it demonstrates initiative and can make the officer more competitive for one of the highly selective residence slots.

Like any other part of the Air Force, AWC is highly structured with the mission and objectives clearly articulated for everyone to understand.

The mission of the Air War College is to prepare senior officers to lead in the strategic environment emphasizing joint operations and the employment of air and space power in support of national security. (Air War College 1996, p. 1)

Acceptance to the resident program is very competitive with approximately 12% of those eligible attending.

The course curriculum at AWC consists of five major areas of leadership which include the departments of conflict and change, leadership and ethics, international security studies, strategy, doctrine, and air power, and joint force employment. This course has 316 content hours. Within each of the five broad categories are several specific components.

Area 1: Department of Conflict and Change (50.5 academic hours)

The department of conflict and change prepares future senior leaders to analyze the features of individuals, groups, and states that have traditionally caused conflict, avoided fighting, or promoted peace; and to recognize the forces of change that will affect conflict and war in the future. The department also develops future

leaders strategic leadership skills required to meet the challenges of war and peace.

Area 2: Department of Leadership and Ethics (39 academic hours)

The mission of the Department of Leadership and Ethics is to prepare senior officers for leadership in the strategic environment through the study of individual and organizational ethics, principles, and examples. The aim of the departments curriculum is to shift the students focus from the tactical level of leadership-involving the leadership and management of individuals and small units as well as learning ethical standards-to the strategic level of leadership-involving the leadership and management of other leaders and large units as well as establishing ethical standards.

Area 3: Department of International Security Studies (26 academic hours)

The International Security Studies course provides senior officers with the analytic tools and information to understand and interpret the broad political and economic currents that impact global, regional, and national security conditions. This course emphasizes conceptual approaches to understanding how US national security is intertwined with the political and economic conditions and events in Europe, Asia, Russia, Latin America, the Middle East, and Africa.

Area 4: Department of Strategy, Doctrine, and Air Power (38 academic hours)

The mission of the Department of Strategy, Doctrine, and Air Power is to provide students with an understanding of the strategy formulation process and the role historically played by strategy, doctrine, and leadership in planning for the employment of military force with particular emphasis on air power.

Area 5: Department of Joint Force Employment (133.5 academic hours)

The mission of the Department of Joint Force Employment is to enhance the AWC students comprehension of joint and combined operations and to develop skills to enable the students to excel in any joint assignment. The department addresses several areas: the application of national security strategy and national military strategy

in attaining national security objectives in peacetime and in war; theater-level operations focusing on leadership and employment of multi-service and multinational forces used in joint and combined operations in war and military operations other than war; the interrelationship of national and defense planning systems; and awareness of DOD-wide requirements as well as individual service capabilities, problems, and needs. (Air War College, 1996, pp. 2-7).

Professional Military Education and Competition

The Air Force uses Squadron Officer School, Air Command and Staff College, and Air War College to give officers the opportunity to compete with one's peers. This environment is set up to separate and identify those officers who meet the highest professional military standards of conduct. The separation or classification is conducted on both a formal and an informal basis. Categorization is formally conducted by documenting the outcome of PME on the officer's performance reports. The performance report is kept for the entire career of the officer. Informally, the separation gives those selected to attend school an opportunity to interact with others who were selected for school. This is a very important point because through these associations with one's peers comes the networking and exposure that contributes to receiving the best career opportunities and advancements. Those officers who do not attend school will most likely never receive another chance to attend school in residency.

